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Observing Community Therapist Augmenting Adaptations of Trauma-Focused Cognitive Behavioral Therapy and their Implications for Clinical Process Outcomes with Racial/Ethnic

Minoritized Youth

A dissertation submitted in partial satisfaction of the requirements for the degree Doctor of Philosophy in Psychology

by

Stephanie Hsin-Tien Yu

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#### ABSTRACT OF THE DISSERTATION

Observing Community Therapist Augmenting Adaptations of Trauma-Focused Cognitive Behavioral Therapy and their Implications for Clinical Process Outcomes with Racial/Ethnic

Minoritized Youth

by

Stephanie Hsin-Tien Yu Doctor of Philosophy in Psychology University of California, Los Angeles, 2024 Professor Anna Shan-Lai Chung, Chair

Trauma-focused cognitive behavioral therapy (TF-CBT) is a leading youth trauma treatment that has been widely disseminated in public mental health systems to increase access to care among structurally marginalized youth and families. Community therapists frequently report adapting evidence-based practices (EBPs), including TF-CBT, when transported into public systems of care to enhance their fit for the diverse youth and families they serve. Studies of therapist-reported adaptations have identified Augmenting adaptations as those that add to or tailor the EBP in some way, such as *modifying the presentation* of EBP content, *integrating* supplemental content, and extending through *repetition*. Community therapists hold valuable local expertise about what may promote client understanding or engagement in their care context, especially when they identify with the communities they serve. Yet, there may be risks to intervention integrity when adaptations are unsystematic. There is a need to understand how distinct therapist adaptations may relate to implementation and clinical process outcomes.

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This dissertation study employed a multimethod approach to identify observable adaptations that community therapists make in sessions of TF-CBT. The aims were to: (1) characterize Augmenting adaptations and factors associated with them in a given session; (2) examine associations between Augmenting adaptations and adherence to TF-CBT at the session-level; and (3) examine associations between Augmenting adaptations and client engagement within and across sessions. A sample of 46 community therapists provided 190 TF-CBT session audio recordings delivered to 82 youth ( $M_{age}$ =10.30; 67.07% Hispanic and/or Latine, 21.95% Black, 7.32% Asian American/ Pacific Islander, 2.44% White, 1.22% Multiracial).

Two observational coding systems were developed to index Augmenting adaptations and adherence to TF-CBT. Two independent teams of nine coders each (18 total) were trained to rate the occurrence and extensiveness of each adaptation type and TF-CBT component, respectively, from session audio recordings ( $0 = no \ occurrence$ ,  $6 = great \ extent$ ). Approximately one-third of sessions were double-coded and intraclass correlations (ICCs) computed to assess interrater reliability. ICCs ranged from fair to excellent for Augmenting adaptation codes (M = .76) and from fair to excellent for adherence codes (M = .85). Therapist-reported client disengagement and client engagement behaviors observationally coded from a prior study were used to index client engagement outcomes. Multilevel modeling was conducted to investigate the aims, controlling for session, client, and therapist factors.

Aim 1 results indicated that community therapists made Augmenting adaptations in most sessions (n = 119; 62.63%), primarily at modest levels (M = 2.45; Range = 0 – 6). Client age was negatively associated with Modify Presentation extensiveness. Emergent life events and therapist perceptions of TF-CBT were positively associated with Integrate extensiveness, while sessions in which clients had multiple presenting problems and therapists were licensed were negatively

associated with Integrate extensiveness. In Aim 2, TF-CBT components were observed in all but two sessions, with acceptable session-level adherence as indicated by the max component score (M = 4.01, Range = 0 - 6). No Augmenting adaptations were related to adherence extensiveness, either when measured by the max component score or mean composite score. In Aim 3, Modify Presentation extensiveness was related to lower odds of therapist-reported client disengagement in a given session, while Integrate extensiveness was related to higher odds of therapist-reported client disengagement. Repeat extensiveness was positively associated with client engagement behaviors. The dissertation data could not support examination of lagged associations between Augmenting adaptations and client engagement in subsequent sessions. While findings suggest meaningful relationships between adaptation and engagement, it is imperative for future work to systematically disentangle the direction of these associations. Implications for EBP practice and implementation in the context of community mental health settings serving structurally minoritized youth and families will be discussed. The dissertation of Stephanie Hsin-Tien Yu is approved.

Lauren Brookman-Frazee

Lauren Christina Ng

Craig Kyle Enders

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University of California, Los Angeles

#### DEDICATION

I dedicate this dissertation to all the children, families, and communities who deserve healing through the highest quality mental health care that sees and celebrates their racial, ethnic, and cultural identities as strength. My deepest gratitude goes to the children, families, and therapists in the Los Angeles County Department of Mental Health who made this dissertation possible with their invaluable participation in the research.

To the 18 individuals who began as undergraduate students on this project: Kenya Rodriguez-Montalvo, Qiwen Jin, Alyssa De Los Santos, Qiran (Cheryl) Sun, Leila Malak, Mia Flores, Adriana Perez, Eman Magzoub, Xuanyao (Clark) Qian, Topaz Tabibi, Namrata Poola, Sebastian Luque, Brissa Bejarano, Erica Jones, Ana Berman, Umiemah Farrukh, Xinran (Wendy) Wang, and Qasim Farrukh. Your care and intention on this project were beyond what I could have imagined, driven by our shared passion for advancing racial equity through our research, and the personal significance of that mission to us all. This dissertation simply would not have been possible without you. It has been the sincerest joy and privilege of my career thus far to watch you all shine as you embark on your own paths. Never forget that you belong in whatever space you choose to be in.

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case – with all of its challenges and even bigger triumphs. Thank you both for holding space for me through it all, helping me grow tremendously as a clinician. To Dr. Craig Enders, thank you for your endless patience in answering my every question – big or small – with the utmost kindness. I have the deepest appreciation for your extensive knowledge and skill, and for how graciously you share it with us all.

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And finally, as a Chinese-Taiwanese American daughter of immigrants, my family and my community are my strength. I am forever dedicated to research that advances our community, as well as advances shared goals among structurally marginalized communities broadly whose liberation and fates are linked to ours. How I come to my work – and who I am accountable to in my work – with interracial and intersectional solidarity, is inextricably tied to who I am and the community that raised me. To the most important people in my life – my family, my friends, Chris (and Calpico) – you are the reason for it all. Mom and Dad, thank you for supporting and believing in me, and for teaching me to be steadfastly proud of my heritage. Hearing the stories of what you endured and overcame sparked the beginnings of my passion in this field. Jennifer, you are and always will be the person I look up to most. Jeremy, you are impossibly perfect and cool. To my fiancé Chris, I could not have done this degree without your sacrifice. Thank you for standing by me through every step. You would never agree, but this dissertation and PhD are as much yours as they are mine. I dedicate this dissertation to you all, and I hope I made you proud.

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### SELECTED PUBLICATIONS

- Motamedi, M., Lau, A.S., Byeon, Y.V., Yu, S.H., & Brookman-Frazee, L. (2023). Supporting emotionally exhausted community mental health therapists in appropriately adapting evidence-based practices for children and adolescents. *JBHS&R*, *50*, 468–485.
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- Yu, S.H., Chu, W., Ng, A.C., Byeon, Y.V., Chen, B., & Nguyen, J.K. (2023, July 14-15). The impact of anti-Asian racism on Asian Americans, Native Hawaiian, and Pacific Islanders (AANHPIs) during the COVID-19 pandemic: A mixed methods study. Paper symposium presented at the 7th Biennial Conference of the APA Division 45 Society for the Psychological Study of Culture, Ethnicity and Race, San Diego, CA
- Yu, S.H., Shanholtz, C., Rodriguez-Montalvo, K., Jin, Q., De Los Santos, A. Perez, A.I., Magzoub, E., Berman, A., Farrukh, U., Farrukh, Q., Wang, X., Kim, J.J., Brookman-Frazee, L., & Lau, A.S. (2023, November 16-19). *Characterizing Augmenting adaptations and their associated factors in sessions of community-implemented traumafocused cognitive behavioral therapy*. Paper symposium presented at the 57th Annual Convention of the Association for Behavioral and Cognitive Therapies, Seattle, WA
- Yu, S.H., Wright, B., Kodish, T., Lazaro, Y.M., Aguirre, D.G., & Lau, A.S. (2022, November). Determinants of treatment stigma and help-seeking behavior among Asian American and Latinx youth. Paper symposium presented at the 56th Annual Convention of the Association for Behavioral and Cognitive Therapies, New York City, NY

#### Introduction

Traumatic events are those that involve harm or threat of harm to an individual, such as physical, sexual, or psychological abuse, natural disasters, the experience or witnessing of domestic or community violence, and the sudden or violent loss of a loved one (McLaughlin & Lambert, 2017). Astoundingly, two of every three adolescents report experiencing at least one traumatic event by age 16 (Copeland et al., 2017). Youth exposed to trauma are at risk of developing significant emotional and behavioral problems resulting from trauma exposure, such as recurrently re-experiencing the trauma through unwanted and upsetting memories, flashbacks, or nightmares; persistent avoidance of reminders of the traumatic event; negative alterations in mood associated with the traumatic event; maladaptive and/or distorted thoughts related to the trauma (e.g., believing they are to blame for what happened); and hyperarousal or reactivity associated with the trauma (e.g., hypervigilance; McLaughlin & Lambert, 2017). Despite high rates of exposure, many youth do not receive effective treatment (Alegría et al., 2010; Garland et al., 2005; Merikangas et al., 2011; Rosenberg et al., 2020). Untreated trauma can have devastating long-term consequences for youth across important life domains, including physical and mental health, peer and interpersonal relationships, and academic achievement (Goodman et al., 2012; Graham-Bermann & Seng, 2005; Price et al., 2013).

# Racial and Ethnic Disparities in Experiences and Access to Treatment for Trauma-exposed Youth

Structurally marginalized youth, such as those who are socioeconomically or racially/ethnically marginalized, have elevated risk of trauma exposure (Andrews III et al., 2015; Brattström et al., 2015; Graham-Bermann & Seng, 2005; López et al., 2017; Roberts et al., 2011). The term structurally marginalized refers to individuals or communities that are

"distanced from access to power and resources" and "excluded from mainstream social, economic, cultural, or political life" through a social process, thereby placing accountability for disparities on *systems* of oppression by naming them (Racial Equity Tools, n.d.). Structural racism, for example, is one such system of oppression that normalizes and legitimizes the historical, cultural, institutional, and interpersonal dynamics that routinely devalue and disadvantage communities on the basis of race, in ways that confer chronic and cumulative adverse life outcomes (Alvarez et al., 2022; Racial Equity Tools, n.d.). These include but are not limited to lack of access to power, resources, and basic necessities; greater exposure to environmental toxins; "higher exposure to and more lethal consequences for reacting to violence, stress, and racism"; reduced access to quality healthcare access and coverage; inequities in educational and economic opportunities; and systemic forsaking from institutional bodies that hold the power to address these issues (Alvarez et al., 2022; Churchwell et al., 2020; Gee & Ford, 2011; Racial Equity Tools, n.d.).

When considering mental health inequities or disparities, it is important to name structural racism as a proximal cause of race-related differences (Harnett & Ressler, 2021). This may be particularly the case when examining racial/ethnic disparities in rates of trauma exposure (Allwood et al., 2021; Harnett & Ressler, 2021), which may inadvertently communicate deficitoriented beliefs about racial/ethnic minoritized communities, rather than contextualizing higher rates of trauma exposure within systems of oppression (Alvarez, 2020). From this lens, higher trauma exposure in racial/ethnic marginalized communities is likely linked to greater structural and socioeconomic deprivation across critical life domains due to systemic racism (Alvarez, 2020; Kalin, 2021). Indeed, one study found that neighborhood factors, such as neighborhood safety, and socioeconomic context factors (i.e., household education, marital status, and poverty),

appeared to account for racial/ethnic disparities in initial violence exposure, which in turn accounted for racial/ethnic disparities in increases in violence exposure across adolescence (Andrews III et al., 2019). With that in mind, research suggests higher rates of trauma exposure, polyvictimization, and revictimization, among Black and Latine youth compared to White youth (Andrews III et al., 2015; 2019; Douglas et al., 2021; Galvan & La Barrie, 2024; López et al., 2017; Santacose et al., 2021). Studies have also demonstrated that socioeconomic disadvantage is associated with trauma exposure (Enlow & Egeland, 2013), while the link between trauma exposure and trauma symptoms is greater among socioeconomically marginalized youth (Andrews III et al., 2015). Disproportionate rates of trauma exposure and sequelae are likely to be further exacerbated by racial, historical, and generational trauma experienced by Black, Latine, Asian American, and further minoritized youth (Anderson & Stevenson, 2019; Chavez-Dueñas et al., 2019; Comas-Díaz et al., 2019; Liu & Modir, 2020; Pumariega et al., 2022; Williams et al., 2021).

Meanwhile, structural racism and marginalization also have cascading impacts on access to mental healthcare broadly and trauma treatment specifically among racial/ethnic minoritized youth. Bravo and colleagues (2024) found that Latine youth overall and Black youth with suicidal thoughts and injurious behaviors specifically had significantly lower odds of utilizing trauma-related mental healthcare than White youth. Findings from a national study of Black, Latine, and White youth in the child welfare system suggested that exposure to maltreatment was related to internalizing and externalizing problems for youth of all racial/ethnic groups; however only for White youth was maltreatment exposure related to subsequent use of specialty mental health services (MHS) for both internalizing and externalizing problems (Martinez et al., 2013). For Black youth, only externalizing problems from maltreatment exposure were related to

specialty MHS use, while neither problem was linked to specialty MHS use for Latine youth. Other estimates of MHS use for youth in the child welfare system – many of whom have been exposed to trauma (Garcia et al., 2017; Griffin et al., 2011) – align with findings on racial/ethnic disparities in MHS for Black and Latine youth compared to White youth, with disparities widening over time (Garland et al., 2003; Kim & Garcia, 2016).

These same patterns are well-documented for access to mental health treatment broadly among racial/ethnic minoritized youth, with research consistently demonstrating that Black, Latine, and Asian American youth are less likely than White youth to receive outpatient mental health services in general (Alegría et al., 2010, 2015; Cook et al., 2014). Structural and contextual access barriers can at least partially account for these disparities in access to care, including inability to afford the costs of treatment, lack of adequate health insurance, limited transportation and time, as well as the dearth of culturally and linguistically concordant providers and care, cultural misalignment with mental health service systems that contribute to stigma, differing cultural beliefs about mental health and etiology, and a longstanding history of discrimination experiences in healthcare systems that lead to loss of trust, all which have been found to deter the use of mental health services (Barnett et al., 2020; Benjamins & Whitman, 2014; Buckingham et al., 2016; Guo et al., 2017; Lu et al., 2021; Metzger et al., 2023). Overall, addressing racial/ethnic disparities in access to trauma treatment for youth and adolescents remains a critical public health concern.

# Implementation of Trauma-Focused Cognitive Behavioral Therapy (TF-CBT) in Public Mental Health Services Serving Structurally Marginalized Youth and Families

Trauma-focused cognitive behavioral therapy (TF-CBT) is a leading trauma treatment for youth (Márquez et al., 2020). It is a conjoint youth-caregiver evidence-based practice (EBP) that

engages cognitive-behavioral principles and exposure techniques to treat children and adolescents impacted by trauma (Cohen et al., 2006). TF-CBT aims to address negative emotional and behavioral responses to traumatic event(s) by assisting youth to develop effective coping strategies, correct maladaptive or distorted thoughts, feelings, and behaviors related to the trauma, and process the trauma in a supportive environment, while also teaching non-offending caregivers skills to support their child and learn how to cope with their own reactions to their child's trauma (de Arellano et al., 2014). TF-CBT achieves these aims through delivery of the following components: Psychoeducation, Parenting Skills, Relaxation, Affect Identification/Expression/Modulation, Cognitive Coping, Trauma Narrative and Processing, Invivo Exposure, Conjoint Youth-Caregiver Session, and Enhancing Safety (PRACTICE; Cohen et al., 2006).

TF-CBT is among the most, if not the most, studied youth trauma treatments, with strong evidence to suggest its efficacy across diverse settings and communities. Meta-analyses and systematic reviews of controlled trials have found larger effect sizes for improving post-traumatic stress and related symptoms in TF-CBT for youth compared to usual care and other treatments for trauma (Bastien et al., 2020; Cary & McMillen, 2012; de Arellano et al., 2014; Lewey et al., 2018; Mavranezouli et al., 2020; Morina et al., 2016; Lenz & Hollenbaugh, 2015; Thielemann et al., 2022; Thomas et al., 2020). Given high levels of evidence supporting its efficacy, TF-CBT has been widely disseminated in public and community-based mental health systems serving children and adolescents nationwide (Amaya-Jackson et al., 2018; Ashwood et al., 2018; Hanson et al., 2019; Lang et al., 2015; Last et al., 2020; Stewart et al., 2021). Public mental health systems are more accessible and thus better-positioned to serve structurally

marginalized communities (Southam-Gerow et al., 2012). As such, system-driven implementation of TF-CBT in community settings may be one path towards improving access to effective trauma treatment for minoritized youth and families. Indeed, studies suggest that TF-CBT is effective for reducing trauma and related symptoms in youth when implemented in community settings (Ashwood et al., 2018; Amaya-Jackson et al., 2018; Last et al., 2023; Palfrey et al., 2023), some with treatment outcomes similar to those reported in efficacy trials of TF-CBT (Stewart et al., 2021; Webb et al., 2014), or even exceeding them when implemented alongside intentional community partnerships that attend to context, adaptation, and method in TF-CBT implementation and delivery (Orengo-Aguayo et al., 2020).

On the other hand, some implementation efforts in public mental health systems have highlighted the contextual challenges of implementing TF-CBT in community mental health systems that were not the original settings through which TF-CBT was developed. Smaller effect sizes for symptom improvement were found in an implementation effort in Philadelphia compared to those in efficacy trials, which the authors posited may be attributable to notably greater levels of socioeconomic adversity, community violence exposure, chronic stressors, and ongoing re-traumatization – again tied to structural influences – among the communities served (Last et al., 2020). Last and colleagues noted that while outcomes were attenuated, it was remarkable that clients facing such significant adversity experienced symptom improvement through TF-CBT at all. Another study found significant improvements in PTSD and related symptoms for youth receiving TF-CBT through a community mental health service in Australia; however, 42% of clients required short and long-term follow-up care after the initial treatment episode to support the maintenance of treatment gains (Palfrey et al., 2023).

Given variability in outcomes for community-implemented TF-CBT, it is critical to understand how implementation efforts succeed on the ground, despite contextual challenges. Multiple influences are likely; TF-CBT may need to be tailored to flexibly meet the complex needs of youth and families served in community mental health contexts, or alternatively fidelity to TF-CBT delivery may be more challenging to maintain in comparison to controlled trials due to mismatch with the treatment setting. Fidelity is an implementation outcome that generally refers to the degree to which an intervention is delivered as intended by the treatment developers and protocol (Breitenstein et al., 2010). It is one of the most widely researched implementation outcomes, given that it has been found to be related to client treatment outcome in some studies (Amaya-Jackson et al., 2018; Espeleta et al., 2022; Marques et al., 2019), though the link has been found to be inconclusive in others (Rapley & Loades, 2017; Steil et al., 2023). Distinct from clinical outcomes, implementation outcomes are defined as "effects of deliberate and purposive actions to implement new treatments, practices, and services" (Proctor et al., 2011, p. 65). Importantly, implementation outcomes can function as direct indicators of implementation success, proximal indicators of implementation processes, or intermediate indicators that relate to service system and clinical outcomes (Proctor et al., 2011). Assessing implementation outcomes alongside clinical outcomes when EBPs are implemented in new settings can help to distinguish whether an EBP's implementation success or failure may be attributed to the effectiveness of the EBP within the new setting, or to how the EBP was deployed. Thus, viable assessment of EBP effectiveness is contingent on appropriate evaluation of fidelity (Carroll et al., 2007).

Overall, there is a need to identify best practices for supporting robust TF-CBT delivery in community mental health and other routine care settings, given contextual challenges of

transporting EBPs into environments and communities for whom they were not initially designed (de Arellano et al., 2014).

# Contextual Differences Challenging the Implementation and Delivery of TF-CBT in Public Mental Health Services for Youth

EBPs that have been developed and tested in controlled settings with largely homogenous research samples may be limited in their fit, feasibility, and acceptability when transported to community mental health systems (Alvidrez et al., 2019; Southam-Gerow et al., 2012). Youth receiving TF-CBT in these settings often experience greater chronic stressors (Mihelicova et al., 2018), structural socioeconomic adversity (Last et al., 2020), clinical complexity and comorbidities (McKay et al., 2005), community violence exposure (Andrews III et al., 2015), polyvictimization (Andrews III et al., 2015), and revictimization (Last et al., 2020; Mihelicova et al., 2018), stemming from systemic racism and oppression. These contextual differences may pose complications to TF-CBT delivery and barriers to engagement and treatment completion, particularly when therapists struggle to flexibly adapt. Studies have found that clients receiving trauma-focused psychotherapy, including TF-CBT, are more likely to end treatment prematurely (Sprang et al., 2013; Wamser-Nanney & Steinzor, 2016; Yasinski et al., 2018), with estimated attrition rates ranging between 33% and 77% (Wamser-Nanney & Walker, 2022). Alarmingly, research suggests attrition rates of up to 60%-90% across studies of youth trauma treatment in public mental health settings (McKay et al., 2005; Ormhaug & Jensen, 2018; Saxe et al., 2012). Indeed, predictors of TF-CBT attrition include greater socioeconomic marginalization (Wamser-Nanney, 2020; Wamser-Nanney & Steinzor, 2016), multiple traumas (Jensen et al., 2014; Skar et al., 2022; Wamser-Nanney & Steinzor, 2016), externalizing behaviors (Sprang et al., 2013;

Wamser-Nanney, 2020), as well as older client age (Esterer et al., 2023; Ormhaug & Jensen, 2018; Wamsey-Nanney, 2021).

Furthermore, greater racial/ethnic diversity of clients served in community settings warrants increased consideration of cultural and linguistic responsiveness in TF-CBT delivery and implementation (Alvidrez et al., 2019; Southam-Gerow et al., 2012). Culturally responsive treatment attends to the unique cultural identities of the client and provider, as well as their dynamic interplay in treatment, while integrating cultural values, language and meanings, race and identity, acculturation, and minoritized stress experiences into treatment (Cabassa & Baumann, 2013; Sue et al., 1991; Zigarelli et al., 2016). Outcomes are likely affected by the extent to which therapists can assess and attend to aspects of culture, race, and identity that may impact the process and content of treatment with diverse youth and families (Chu et al., 2022). Therapists who practice cultural humility by inviting opportunities to learn from their clients as experts in their own contexts, cultures, and experiences may be better able to build rapport, accommodate client preferences, modify treatment strategies to enhance their fit, and avoid stereotypes (Cabassa & Baumann, 2013; Sue et al., 1991; Zigarelli et al., 2016). Similarly, having the capacity to provide linguistically appropriate care for the local community context can ensure treatment access for youth and caregivers with immigrant backgrounds (Kouyoumdjian et al., 2003; Meléndez Guevara et al., 2020; Young & Rabiner, 2015).

It is notable that racial/ethnic minoritized youth, including Black, Latine, Asian, and Multiracial youth, were found to be more likely to prematurely end treatment in some studies (Scheeringa & Weems, 2014; Sprang et al., 2013; Wamser-Nanney, 2020; Wamser-Nanney & Steinzor, 2016), but not others (Wamsey-Nanner & Walker, 2022). It is unclear if and how therapists delivering community-implemented TF-CBT are attending to these contextual

differences, and the extent to which they address concerns of fit that impact clinical process and outcomes. Further study of best practices in TF-CBT delivery with racial/ethnic marginalized youth served in community settings is needed to fill these gaps (de Arellano et al., 2014).

These same contextual and systemic barriers in community mental health settings also relate to organizational challenges in public systems of care that may impact implementation success. For example, resource limitations and limited workforce capacity may constrain the implementation of complex multicomponent EBPs such as TF-CBT. Therapists in community settings also tend to differ in professional background, theoretical orientation, and long-term exposure to EBPs, as well as have higher job demands (e.g., caseload, casemix) that may relate to job performance and burnout (Kim et al., 2018; Lasalvia et al., 2009; Rossi et al., 2012).

Indeed, contextual factors at multiple levels are thought to impact therapist fidelity to EBP delivery in community settings generally (Durlack & DuPre, 2008; Eslinger et al., 2020; Schoenwald et al., 2005, 2010), and to TF-CBT specifically (Allen & Johnson, 2012; Donisch, 2018; Powell et al., 2020; Purinton, 2020; Woody et al., 2015a). Robust training and educational implementation strategies, including multiple in-person learning sessions, active teaching techniques, supportive coaching and supervision, and ongoing consultation, have been linked to high therapist-reported fidelity to TF-CBT delivery (Amaya-Jackson et al., 2018; Cohen et al., 2016; Ebert et al., 2012; Lang et al., 2015; Murray et al., 2013; Powell e tal., 2020). However, resources to support extensive training, supervision, and ongoing consultation are less likely to be available in community implementation-as-usual contexts (Aarons et al., 2009; Beidas et al., 2016; Brunette et al., 2008; Reding et al., 2018; Regan et al., 2017).

A handful of studies have examined client factors associated with TF-CBT fidelity (Heier, 2018). Amaya-Jackson et al. (2018) found that higher clinical complexity and severity of trauma

symptoms were related to higher levels of fidelity to TF-CBT delivery; however, the authors suggested that this may have been related to strong reliance on consultation when delivering TF-CBT with more complex cases. Thus, the ability to retain high fidelity in this context may have been contingent on resources for providing ongoing consultation. A study examining Cognitive Therapy for PTSD with adults suggested that treatment was less trauma focused when clients had multiple traumas and were socioeconomically and structurally marginalized, such that a significant amount of session time was often devoted to addressing other immediate concerns (e.g., housing; Ehlers et al., 2013).

In terms of therapist factors, one study found that therapist belief in their ability to deliver TF-CBT skillfully was related to higher fidelity to TF-CBT (Purinton, 2020). Other studies collectively suggest variability in how therapist characteristics relate to fidelity, which may be dependent on the context. For example, while one set of studies found licensure and clinician experience to be positively associated with aspects of TF-CBT fidelity (Cohen et al., 2016; Woody et al., 2015b), clinician experience was inversely related to TF-CBT fidelity in another (Purinton, 2020). Yet another study found that therapists who struggled with fidelity during TF-CBT implementation were more likely not to have had prerequisite clinical, case conceptualization, and CBT training (Amaya-Jackson et al., 2018). Meanwhile, other studies have not found professional discipline (e.g., social work, clinical psychology) or years of experience to be related to TF-CBT implementation outcomes (Allen & Johnson, 2012; Cohen et al., 2016). Studies have also found mixed results for the relationship between therapist age and fidelity, such that older age has been associated with lower fidelity to TF-CBT (Purinton, 2020), but also higher TF-CBT knowledge scores in response to clinical vignettes (Woody et al., 2015a), and no relationship to TF-CBT implementation (Allen & Johnson, 2012).

In sum, multiple factors may complicate the delivery of TF-CBT in community mental health contexts, both in terms of the clinical needs of diverse clients and the implementation needs of community therapists. These contextual differences between community settings and efficacy trials indicate the need for responsive implementation strategies, such as incorporating the expertise of local community partners to understand what intervention adaptations may be needed (Orengo-Aguayo et al., 2020). Thus, it is a priority to better understand how community therapists manage challenges associated with transporting EBPs like TF-CBT into public systems of care, as well as study how their adaptations may impact implementation and clinical process outcomes.

#### Studies of "Design-time" and "Run-time" Adaptations to Evidence-based Practices

Community therapists delivering EBPs, including TF-CBT, often adapt intervention elements to enhance fit for their local contexts and for the diverse youth and families they serve (Barnett et al., 2018; Kim et al., 2020; Lau et al., 2017). Adaptation is "a process of thoughtful and deliberate alteration to the design or delivery of an intervention," with goals of enhancing fit or effectiveness (Wiltsey Stirman et al., 2019, p.1). However, it is unclear whether therapist adaptations to TF-CBT within implementation-as-usual contexts conform to this definition. Moreover, the extent to which different types of therapist adaptations to TF-CBT preserve adherence to its core components and ultimately work to enhance clinical process outcomes requires further study. Implementation scientists have underscored the need to systematically document EBP adaptations and assess their impacts on implementation and client outcomes across contexts and populations (Chambers & Norton, 2016). As such, there has been progress in describing adaptation processes, developing adaptation taxonomies, and understanding reasons for adaptation (Escoffery et al., 2018). For example, Stirman and colleagues' Framework for

Reporting Adaptations and Modifications-Enhanced (FRAME; Wiltsey Stirman et al., 2019) can be used to codify adaptation types, their intended purpose, how they arise (i.e., planned or unplanned), who initiates them (e.g., therapist or developer), and whether they are *fidelityconsistent* (i.e., maintain integrity to the EBP's core functions) or *fidelity-inconsistent* (i.e., omit key functions or loosen the intended structure of delivery).

Research to date has primarily focused on the potential benefits of researcher-led, "design-time" adaptations, or those made by intervention developers or researchers prior to introducing an EBP into a new setting or population (Alvidrez et al., 2019; Barrera Jr. et al., 2017; Chorpita & Daleiden, 2014; Hall et al., 2016). There has been particular focus on researcher-led cultural adaptations guided by cultural adaptation frameworks. Edge et al. (2018) conducted a scoping review on cultural adaptation frameworks and extracted nine themes: language, concepts, family, communication, content, cultural norms and practices, context and delivery, therapeutic alliance, and treatment goals. While some studies have found no benefit of design-time, cultural adaptations to care outcomes (Huey & Polo, 2008), other meta-analyses and reviews have suggested outcomes favoring EBPs adapted by researchers to meet the cultural needs of racial/ethnic minoritized communities (though few relative effectiveness trials exist; Benish et al., 2011; Chowdhary et al., 2014; Degnan et al., 2018; Hall et al., 2016; van Mourik et al., 2017).

Specific to trauma-focused cognitive behavioral therapies, studies have suggested benefits of interventions culturally adapted during design-time that have been disseminated domestically for Indigenous youth (Goodkind et al., 2010), Latine youth (Hoskins et al., 2018), and refugee youth from 15 different countries (Schottelkorb et al., 2012), as well as internationally for child survivors of Restavek in Haiti (Wang et al., 2016), war-affected boys

and former child soldiers from the Democratic Republic of the Congo (McMullen et al., 2013), war-affected Congolese girls exposed to sexual abuse (O'Callaghan et al., 2013), orphaned youth in Tanzania (O'Donnell et al., 2014), and Jordanian (Damra et al., 2014) and Zambian youth (Murray et al., 2013). However, studies varied widely in their methodology, measurement approach, and depth of describing the adaptation process. Thus, more research is needed to systemically understand the process and impact of adapting TF-CBT across different contexts, both locally and globally (Ennis et al., 2020). A systematic review of adaptations to traumafocused interventions for youth found that the most common design-time adaptations to content consisted of adding and tailoring components, while the most common contextual changes were to the format and personnel involved in delivering the intervention (Lange et al., 2022). Meanwhile, the most common reasons for adaptation were for culture (e.g., tailoring to adapt language, examples, analogies), feasibility (e.g., shortening number of sessions, telehealth delivery), and fit (e.g., adding elements for traumatic loss). However, the authors point to limited research on therapist adaptations made to trauma-focused interventions in their day-to-day practice (Lange et al., 2022).

Researchers have only more recently begun to characterize these spontaneous, "run-time" therapist adaptations to EBPs, or those made locally by community providers after an EBP has been introduced into a new setting, community, or population. There has been some progress made towards documenting reasons for and predictors of provider adaptations across different implementation contexts (Aarons et al., 2019; Dyson et al. 2019; Meza et al., 2019; Wiltsey Stirman et al., 2015). Studies suggest that providers report making modifications to EBPs based on their own preferences, needs, and therapeutic style (Aarons et al., 2019; Bromley, 2023; Meza et al., 2019), as well as to address client and caregiver needs (e.g., age, culture, clinical

presentation, increase caregiver participation, prioritize client relationship; Aarons et al., 2019; Bromley, 2023; Meza et al., 2019; Dyson et al., 2019; Luis Sanchez et al., 2022). Meza et al. (2019) further found that clinician confidence in their ability to deliver CBT and their intent to modify was related to the number of clinician-reported modifications made (Meza et al., 2019). Beyond provider report, Kaiser and colleagues (2023) coded transcripts of an evidence-informed family therapy intervention ("Tuko Pamoja"/"We are Together") for ad-hoc adaptations and found primarily treatment-promoting or neutral adaptations, though some adaptations were identified as treatment-interrupting. Examples of adaptations included those that incorporated religious content or used tailored examples and role models.

A small number of studies have documented provider modifications to TF-CBT specifically. Therapists delivering TF-CBT to unaccompanied migrant children arriving to the United States reported modifications related to "discussing mental health beliefs, navigating roles and relationships, tailoring treatment examples, exploring coping strategies, and addressing immigration factors" (Patel et al., 2022). Another study suggested that therapists delivering TF-CBT to unaccompanied refugee youth in Germany primarily adapted to address "crises of the week" (Unterhitzenberger et al., 2021).

Community providers hold valuable local expertise about the communities they serve and accrue important practice-based evidence about what may promote engagement and response to EBPs (Alvidrez et al., 2019). Thus, there is a need to better understand the landscape of run-time adaptations that community therapists make, as well as how different types of adaptations may impact EBP delivery and clinical process outcomes when implemented into public systems of care (Chorpita & Daleiden, 2014). In sum, the systematic study of community therapist adaptations to EBPs broadly, and to TF-CBT specifically, as well as their relations to

implementation and clinical process outcomes, can advance implementation and adaptation science and practice, but is currently limited (Chambers & Norton, 2016; Kirk et al., 2020).

# Studies of Run-time Community Therapist Adaptations to EBPs in the Current Study Context

The current dissertation study employs data collected from the Knowledge Exchange on Evidence-Based Practice Sustainment (4KEEPS) study, or "*Sustainment of Multiple EBP's Fiscally Mandated in Children's Mental Health Services*" (R01-MH100134, MPIs Lau & Brookman-Frazee), within the Los Angeles County Department of Mental Health (LACDMH). The LACDMH is the largest public mental health system in the United States.

In 2010, the LACDMH launched the Prevention and Early Intervention (PEI) initiative through a fiscal mandate that amended the contracts of 120 child mental health agencies by restricting reimbursement of services to 52 approved child EBPs (Ashwood et al., 2018; Sherin, 2020). This initiative was supported by the Mental Health Services Act (Proposition 63), a voter-approved ballot initiative in California that levied a 1% tax on personal income over \$1 million to support the expansion and implementation of mental health services. The LACDMH also provided implementation support (i.e., training and consultation) to facilitate the rapid scale-up of six selected child EBPs (Cognitive Behavioral Intervention for Trauma in Schools, Child-Parent Psychotherapy, Managing and Adapting Practice, Seeking Safety, Positive Parenting Program, and TF-CBT; Regan et al., 2017). The primary goal of the 4KEEPS study was to examine the sustainment of these six EBPs within this implementation-as-usual context. Trainings began in April 2010 and 26,339 children were served within PEI programs in the 2010-2011 fiscal year. Between October 2016 to October 2019, LACDMH served 207,520 youth ages 0 – 18, with 90.90% of youth of racial/ethnic marginalized communities (65.22% [97,773]

Hispanic/Latine, 15.73% [23,576] Black, 2.63% [3,937] Asian American/Pacific Islander, 0.29% [432] Indigenous/Alaska Native, and 7.03% [10,542] Multiracial; Chen et al., 2023).

Prior research stemming from the 4KEEPS study has focused on better understanding therapist run-time adaptations to EBPs as described or reported by therapists. Building on an earlier version of the Framework for Reporting Adaptations and Modifications-Enhanced (FRAME; Wiltsey Stirman et al., 2013), Lau et al. (2017) extracted two factors from a survey measure of therapist-reported adaptations to EBPs delivered over the last two months. Therapists more frequently reported making "Augmenting" adaptations, which reflect the therapist engaging with the EBP to tailor or add to it in some way, such as *modifying the presentation* of EBP strategies, *integrating supplemental content or strategies*, and *lengthening or extending the pacing* of the EBP. Therapists reported making fewer "Reducing" adaptations, which reflect the therapist disengaging from the structure or elements of the EBP in some way, including *removing or skipping* EBP strategies, *adjusting the order* of sessions or strategies, and *shortening or condensing the pacing* of the EBP. Reducing adaptations may be more akin to *fidelity-inconsistent* modifications as described in the FRAME that remove elements or loosen the EBP's structure (Wiltsey Stirman et al., 2015; 2019).

Qualitative interviews in the same LACDMH service context explored how and when therapists described making adaptations to EBPs (Barnett et al., 2018). Findings suggested that therapists more commonly reported making Augmenting adaptations compared to Reducing adaptations. Therapists also cited contextual reasons for why they made adaptations, the majority of which involved attending to client characteristics such as culture, client/caregiver literacy, developmental appropriateness, and clinical presentation. Therapists further reported making adaptations to promote youth and caregiver engagement, address family functioning, and

respond to emergent life events – defined as acute life stressors disclosed during therapy sessions that are suggested at times to interfere with effective EBP delivery (Guan et al., 2019). Within the same study, Barnett et al. (2018) examined the co-occurrence of different adaptation-types and contextual reasons. Findings suggested that therapists most frequently described *modifying presentation* to address client culture, literacy, and developmental appropriateness, as well as to promote engagement. Therapists most often described *integrating supplemental content* to address client culture, developmental appropriateness, clinical presentation, and family/caregiver functioning. Therapists most often described *lengthening or extending* to address client literacy, clinical presentation, and family functioning. Finally, fewer therapists described making Reducing adaptations, but did so reportedly to address client clinical presentation, as well as in the advent of an emergent life event.

A third study from the 4KEEPS context examined therapists' open-ended descriptions of how they adapted individual therapy sessions for any of the six child EBPs that received LACDMH implementation support (Kim et al., 2020). Session-level coding of therapists' adaptation descriptions resulted in an elaborated classification of adaptations building on the previously described Augmenting and Reducing factors from Lau et al. (2017). Findings revealed an additional subtype of Reducing adaptation (*pausing evidence-based practice*) and a third category of "Generalizing" adaptations that involved broadening the application of an EBP to a novel population, service setting, or clinical problem focus (i.e., "off label" use) than originally indicated in the EBP's protocol (Kim et al., 2020). Augmenting adaptations were again the most frequently described, especially *modifying presentation* of EBP content and *integrating supplemental content*. The study also examined therapist, client, and session factors associated with the different types of adaptations therapists described making in a given session. Therapist

openness to EBPs, younger client age, and internalizing problems were associated with higher odds of making Augmenting adaptations at the session-level, while client externalizing problems were associated with lower odds of making Reducing adaptations.

A fourth study expanded on these findings by examining the implications of Augmenting, Reducing, and Generalizing adaptations on how extensively therapists were observed to deliver EBP strategies (Yu et al., 2021). Extensiveness is an important provider implementation outcome defined as the degree to which therapists are delivering common EBP strategies used across multiple interventions for a specific mental health target (Brookman-Frazee et al., 2020; McLeod et al., 2015). Understanding how extensively community therapists deliver essential EBP strategies offers a metric for assessing the impact of EBP implementation efforts, given that EBP strategy delivery is typically low in routine care (Brookman-Frazee et al., 2010; Garland et al., 2010). Results indicated that sessions in which therapists described *modifying presentation* adaptations were associated with more extensive delivery of EBP technique strategies, whereas extending adaptations were linked to lower extensiveness of EBP strategy delivery. Qualitative analyses were then conducted to explore themes for how and why therapists made these adaptations to provide potential explanation for the model results. Themes revealed that therapists often described modifying presentation of EBPs in creative ways to meet diverse clients' developmental and cultural needs, whereas *extending* adaptations described slowing down pacing primarily by repeating content when clients had difficulty learning skills. Findings suggest potential associations between therapist adaptations and EBP delivery, as well as possible directions for enhancing therapist implementation support.

However, therapist descriptions of adaptations are subject to self-report biases and may implicate other therapy processes responsible for implementation outcomes (Barnett et al., 2018).

Moreover, how such adaptations impact clinical process outcomes was not examined. Thus, multimethod research is needed to objectively discern what therapist adaptation behaviors contribute to implementation and clinical process outcomes. Few studies have examined therapist run-time adaptations using observational methods. Only one known trial of Cognitive Processing Therapy in a community setting revealed that higher numbers of observed *fidelity-consistent* therapist adaptations were associated with greater reductions in posttraumatic stress and depressive symptoms in adults (Marques et al., 2019). Further research is needed to examine distinct types of observable adaptations and their impacts on implementation and clinical process outcomes, and to extend findings across implementation contexts and populations such as with racial/ethnic minoritized youth (Barrera Jr. et al., 2017, Wiltsey Stirman et al., 2017).

### Examining Fidelity and its Relationship to Therapist Adaptations in EBP Delivery

As previously defined, fidelity is an implementation outcome that generally refers to the degree to which an intervention is delivered as intended by the treatment developers and protocol (Breitenstein et al., 2010). Researchers have suggested a possible tension between adaptation and fidelity due to concerns that adaptations may compromise the key ingredients that make an EBP work (Elliott & Mihalic, 2004). These earlier debates centered on the concern that EBP adaptations may erode intervention fidelity at the expense of treatment outcomes (Elliott & Mihalic, 2004). However, there is increasing recognition that EBP adaptations are inevitable and can be complementary to fidelity, such that they may preserve the EBP's core components even when delivery is tailored to unique client needs (Anyon et al., 2019; Pérez et al., 2016). Furthermore, adaptations may add value to EBP implementation efforts even if there are some costs to fidelity – for example by increasing reach through enhanced client engagement (Kirk et al., 2020; von Thiele Schwarz et al., 2019). Indeed, one study found that an agency-level,
fidelity-inconsistent adaptation to an evidence-based lifestyle intervention was related to greater cardiovascular risk reduction for adults with severe mental illness (Aschbrenner et al., 2020).

Different types of adaptations are also likely to have different impacts on implementation and clinical process outcomes. For example, *surface structure* adaptations, described most frequently in studies of design-time culturally adapted EBPs, are those that match materials and messages to surface-level characteristics of clients, and are suggested to be less likely to compromise core EBP components (Castro et al., 2010; Chowdhary et al., 2014; Resnicow et al., 2000). In contrast, *deep structure adaptations* are those that integrate treatment strategies to target cultural, social, historical, environmental, and psychological considerations unaddressed in standard EBPs (Baumann et al., 2015; Resnicow et al., 2000). It is less clear how *deep structure adaptations* might impact the delivery of an EBP's core functions or ingredients (Baumann et al., 2015; Resnicow et al., 2000). When the core ingredients that make an EBP work are unknown, it is recommended that modifications are *fidelity-consistent* and guided by theory, changing only the "customizable" or surface-level aspects of EBPs (Kirk et al., 2020). It is important then to explore the extent to which observable therapist adaptations to EBPs are *fidelity-consistent* by examining their relationships with fidelity.

#### Measuring Adherence to TF-CBT Delivery

There has been variability in the operationalization and conceptualization of fidelity across studies. Schoenwald (2011) described three primary components of fidelity: (1) therapist *adherence*, defined as the degree to which key intervention components are delivered; (2) *competence*, defined as the level of quality and skill with which an intervention is delivered; and (3) *treatment differentiation*, defined as how much treatments differ from one another on key dimensions. Among these components, adherence has been identified as the "bottom-line

measurement" of intervention fidelity (Caroll et al., 2007, p.4), and has also been related to improved treatment outcome in some studies of trauma treatment (Marques et al., 2019). Therefore, adherence was selected to index fidelity in the current dissertation study.

Important considerations must be taken into account when operationalizing adherence at the session-level. According to Carroll et al. (2007), adherence is further comprised of four subcategories: (1) content, or the core components of the intervention, (2) frequency, or the rate of occurrence of the intervention (e.g., weekly, biweekly), (3) duration, or the length of treatment delivery (i.e., number of sessions), and (4) coverage, or the extent to which those who are meant to be participating in or receiving intervention benefits are doing so. Session-level adherence measures are likely to focus primarily on content, given that frequency, duration, and coverage cannot be adequately accounted for without the full episode of care.

Some studies have suggested high fidelity to TF-CBT delivery in community settings when assessed via therapist self-report measures (Amaya-Jackson et al., 2018; Cohen et al., 2016; Donisch, 2018, Ebert et al., 2012; Lang et al., 2015). While these reports are encouraging, research is mixed on the concordance between therapist and observer reports of EBP fidelity, with some studies finding therapists to over-report delivery of components compared to observers (Becker-Haimes et al., 2022; Chapman et al., 2013; Heier, 2018; Hulburt et al., 2010) and others finding self-report ratings to be well aligned with those of observer reports (Hogue et al., 2013). Observational coding is considered the "gold standard" for fidelity assessment (Schoenwald & Garland, 2013), given the ability to objectively code therapist and/or client behaviors for the presence and frequency of EBP components, as well as extensiveness and quality of EBP delivery, processes, and techniques (McLeod & Weisz, 2010). However, achieving observational coding with high reliability is time and labor-intensive compared to

therapist-report, and thus often not feasible in routine practice environments (Schoenwald, 2011). As such, only a handful of studies of TF-CBT implementation in community settings have examined fidelity by observer-report. Two prior studies have observed fidelity or adherence to TF-CBT specifically at the session-level (Hanson et al., 2016; Heier, 2018).

Hanson et al. (2016) reported on fidelity assessment of TF-CBT delivered by 31 therapists to 94 clients in an implementation-as-usual context. Fidelity was assessed by observer report on the extensiveness (i.e., thoroughness or intensity) of delivering TF-CBT PRACTICE components on a six-point scale. Findings suggested that across the course of treatment, clients were more likely to receive Psychoeducation, Relaxation, Affective Expression and Modulation, Cognitive Coping, Trauma Narrative, and Other Topics (i.e., crisis management), but less likely to receive Parenting Skills and In Vivo Exposure. Mean extensiveness ratings for each component calculated over the course of treatment were relatively low and variable, ranging from 0.24 (Parenting Skills) to 1.46 (Trauma Narrative, Other Topics). Notably, the study also assessed session-level results but concluded that their observer measure did not perform well as a measure of session-level adherence given low reliability and "poor targeting of times to individual sessions" since most TF-CBT components do not occur every session (Hanson et al., 2016, p. 12).

Another study examined fidelity to TF-CBT within a feasibility trial from 53 TF-CBT sessions delivered to 21 youth by eight therapists across three juvenile correctional facilities (Heier, 2018). Fidelity was indexed by observer measures of therapist adherence, technical competence, and nonspecific competence at the session-level. For the adherence subscale, observers rated the percentage of session time devoted to each PRACTICE component (1 = N/A, 2 = Brief Review Only, 3 = 1-25%, 4 = 25-50%, 5 = >50%), where the component with the

greatest amount of time devoted in the session was selected for analysis. Each PRACTICE component and nonspecific item (e.g., Homework Assignment) was assessed on a 4-point Likert scale, indicating competence. Findings suggested average ratings of 4.24 for the adherence subscale, 2.62 for the technical competence subscale, and 2.87 for the nonspecific competence subscale. The use, frequency, and extensiveness of specific components varied. Across the session sample, Relaxation was the most frequently delivered component, followed by Affect Identification and Cognitive Coping equally, and then Affect Modulation, whereas In-vivo Exposure and Safety Planning were not delivered in any of the sessions in the sample. In terms of technical competence, therapists were rated to deliver Affect Expression & Modulation the most adequately, and Trauma Narrative & Processing and Parent Involvement the least adequately.

Overall, Hanson et al. (2016) indicated low reliability of their session-level measure and opted to analyze their findings for the course of treatment. On the other hand, Heier (2018) had acceptable reliability of their adherence subscale at the session-level, with mean intraclass correlations of .66 for their adherence subscale (% time each session was devoted to each PRACTICE component), and .54 for their technical competence subscale (1 = *poor* to 4 = *excellent*), demonstrating feasibility of a session-level adherence measure. Furthermore, these studies of observer-reported adherence indicate variable implementation of TF-CBT PRACTICE components across settings, both at the session-level and for the course of treatment. Such findings are corroborated by other studies based on therapist report. Woody et al. (2015a) found variable delivery of trauma components (e.g., lower delivery of Trauma Narrative and Cognitive Coping) following trainings of TF-CBT even when therapist intentions to use the model were high. In another study, only 66% of clinicians following training in TF-CBT reported likelihood

of using every component, with higher preference for Relaxation and Psychoeducation, and lower preference for Parenting Skills, Trauma Narrative, and Cognitive Coping (Allen & Johnson, 2012). Trauma Narrative specifically has been suggested by clinicians to be one of the most difficult components of TF-CBT to implement (Ascienzo et al., 2020), and may be underdelivered in routine care settings despite high intentions to implement (Frank et al., 2021).

# Examining Client Engagement Behaviors and their Relationship to Community Therapist Adaptations in EBP Delivery

A common reason community therapists provide for making adaptations is to enhance engagement and fit of EBPs for the diverse youth and families they serve (Barnett et al., 2018; Barrera Jr. et al., 2017; Kim et al., 2020; Yu et al., 2021); yet limited research has explored the relationship between therapist adaptations and client engagement outcomes.

Client engagement has been defined as a dynamic process comprising an individual's social, cognitive, affective, and behavioral commitment to treatment, with different dimensions of commitment reciprocally influencing one another (Becker et al. 2018). Engagement as a process is suggested to involve interactions between the individual, family, provider, service organization, and overall environment the client is situated in (Becker et al., 2018). Low engagement in youth mental health treatment is a dire public health concern given that it is related to worse treatment outcomes. More than 50% of youth end treatment prematurely, with even higher rates of dropout suggested for trauma-focused treatments (Sprang et al., 2013; Wamser-Nanney & Steinzor, 2016; Yasinski et al., 2018) and in community mental health settings (Becker et al., 2018).

Engagement in treatment has primarily been operationalized in research as client attendance or attrition (Chacko et al., 2016; Lakind et al., 2021; Lindsey et al., 2014). However,

problems with client engagement may manifest prior to issues with client attendance, and attendance alone is not necessarily associated with treatment outcome, nor always indicative of a client's actual level of engagement (Becker et al., 2018). Thus, engagement can be further organized into two components: attitudinal and behavioral engagement (Haine-Schlagel & Walsh, 2015). Whereas attitudinal engagement generally comprises a client's "buy-in" (i.e., expectations and perceived benefits of treatment, therapeutic relationship), behavioral engagement refers to observable client behaviors, such as active participation in session activities, discussions, and homework completion (Haine-Schlagel & Walsh, 2015). Fewer studies have examined within- and between-session client engagement behaviors (Lindsay et al., 2014), which may more reliably reflect engagement (Holdsworth et al., 2014), as well as signal an engagement problem before it is too late (i.e., prior to dropout or attendance issues arising). One systematic review examining engagement outcomes in 262 behavioral parent training studies found that only 10% provided data on in-session engagement, indexed by homework completion and ratings of participation (Chacko et al., 2016).

A handful of studies have begun to examine observable engagement behaviors and other in-session process variables, along with their associations with client outcomes in TF-CBT. Yasinski et al. (2018) found that higher observed youth and caregiver avoidance behaviors and therapist-client relationship difficulties were associated with later dropout in TF-CBT. Lack of caregiver attendance in the first session and lower youth-reported perceptions of their caregiver's approval of treatment were associated with later dropout from trauma treatments, including TF-CBT (Ormhaug & Jensen, 2018). In-session caregiver blame/criticism and avoidance were associated with greater in-session child distress (Canale et al., 2022). Other studies have examined therapist and client behaviors related to therapeutic alliance and their impacts on

clinical outcomes. Ovenstad et al. (2020) found that greater focus on trauma was associated with higher youth-reported therapeutic alliance in TF-CBT when youth were observed to be passively disengaged in initial sessions; furthermore, therapist rapport-building behaviors were associated with stronger alliance for both engaged and disengaged youth. Taken together, these studies highlight the importance of attending to youth and caregiver in-session engagement behaviors in understanding TF-CBT outcomes.

Furthermore, there is some research to suggest that therapist adaptations may be related to client engagement behaviors, as well as to engagement overall. In one study, observer-rated therapist flexibility, defined as "therapist attempts to adapt treatment to a child's needs," within a clinical trial of a youth anxiety intervention was significantly related to increases in later child engagement as rated by observers, and in turn, improvements in diagnosis and impairment (Chu & Kendall, 2009). Another study examined the implementation of three youth trauma treatments, including TF-CBT, in a wraparound foster care program (Weiner et al., 2009). Findings suggested no differences in treatment retention and outcome across racial/ethnic groups, which authors speculated were partially attributed to culturally sensitive adaptations that therapists made (e.g., alternate methods of delivering trauma narrative, Spanish translation). Though associations between community therapist adaptations and client engagement in TF-CBT within public children's mental health services have yet to be explored, these studies lend support to suggest a potential relationship.

Data from studies of design-time cultural adaptations also suggest benefits for client engagement in both youth and adult interventions (Butler & Titus, 2015; McCabe et al., 2020). When engagement was indexed as enrollment, attendance, and attrition in clinical trials of culturally adapted parent training, a systematic review suggested that studies had relatively high

enrollment and attendance (e.g., 84% enrollment, 95% attendance, 5% attrition) compared to studies of non-adapted parent training with diverse communities (e.g., 45 – 60% enrollment, 45 – 55% attendance; Butler & Titus, 2015). However, studies directly comparing client engagement behaviors in adapted versus non-adapted therapy are needed. In one randomized controlled trial, culturally adapted parent training did not significantly differ from non-adapted parent training in terms of dropout for Mexican American families (McCabe & Yeh, 2009).

A meta-analysis of 15 studies examined client experiences in culturally adapted interventions as a function of their therapists' multicultural competence (Soto et al., 2018). Four of these studies evaluated client participation indicated by premature termination and/or dropout, while the other 11 evaluated client symptom change. Findings suggested that clients' perceptions of their therapist's multicultural competence were associated with engagement and clinical outcomes in treatment. While these findings support the notion that multicultural competence and cultural responsiveness are likely to be beneficial for client engagement, the authors comment on the overall lack of research on clients' experiences in therapy related to cultural responsiveness, and the need for further study (Soto et al., 2018). To address this knowledge gap in the literature, direct study is needed to examine associations between observed therapist adaptations and client engagement behaviors within and across sessions. The current study will focus on in-session client engagement behaviors indexed by: (1) whether or not therapists reported client and caregiver disengagement in the session, and (2) the extent to which clients were observed to ask the therapist questions, participated in therapy activities, and demonstrated commitment to therapy in session.

## **The Current Dissertation**

Given variability in TF-CBT implementation success across public systems of care, quality improvement remains an essential target. Less research has explored community therapist adaptations observationally, and how these adaptations are related to clinical process outcomes such as adherence and client engagement. Using session audio recordings, the current dissertation study examined therapist adaptation behaviors within TF-CBT delivery in a naturalistic implementation-as-usual context to better understand therapist efforts to promote client engagement and response. This study is novel in its use of observational coding to capture adaptations made by community therapists that can be reliably differentiated by observers. A focus on TF-CBT – a single, multicomponent EBP – permitted examination of therapist adaptations to a widely disseminated, effective intervention for a common presenting concern in children's mental health.

# Considerations for Observing Run-time Community Therapist Adaptations to TF-CBT at the Session-level

There were important considerations for developing an observational coding system for adaptations, particularly when using session-level data. First, definitional considerations were central in determining what constitutes an adaptation to TF-CBT, an intervention that affords flexible, creative, and culturally responsive delivery of components (Cohen et al., 2012). Adaptation as previously defined involves an alteration to the design or delivery of an intervention. Building on this definition, adaptation could also be designated when a therapist goes beyond activities and content explicitly prepared in the intervention manual but remains consistent with the intervention model. For example, the TF-CBT manual encourages therapists to use games to teach skill components and provides examples (Deblinger et al., 2012). However,

if a therapist designs their own game or activity to deliver content, this could be defined as an adaptation because the therapist has invested their own effort in tailoring intervention delivery. Thus, certain adaptations are inclusive of what would be aligned with the developer's intent, while illustrating therapist engagement with the EBP. These may be denoted as Augmenting adaptations in Lau et al. (2017) and fidelity-consistent adaptations in Wiltsey Stirman et al. (2019)'s FRAME.

Second, observational coding of adaptations must focus explicitly on observable therapist behaviors and not on inferences about therapist intentions. Previous 4KEEPS studies classified only therapist descriptions or self-report of adaptations to EBPs, which often described actions alongside their stated purpose. In contrast, observers in the current study did not have access to therapist meta-cognition about their EBP delivery. Observational coding thus required clear definitions of adaptation subtypes to permit coders to reliably differentiate explicit behaviors.

Finally, several adaptation subtypes from adaptation frameworks that were code-able in therapist reports or descriptions were not measurable at the session-level. Given that data employed in the current study were at the session-level rather than treatment episode-level, it was not possible to code adaptations that required access to the full episode of care. For example, coders would be unable to determine whether an EBP component was removed from treatment entirely (i.e., *removing or skipping EBP strategies*), or if it might be delivered in another session (i.e., *adjusting the order of sessions or strategies*). Coders would also be unable to determine adaptations related to the pacing of the intervention (e.g., *lengthening or extending the pacing, shortening or condensing the pacing*). Thus, adaptation subtypes like *remove, adjust order, lengthen pacing*, and *shorten or condense pacing* were not included in the observational coding system.

Building on the typology used to code therapist descriptions of session-level EBP adaptations in Kim et al. (2020), an observational coding system was developed for the dissertation study guided by these considerations for observing adaptations at the session-level. We elected to focus on observing session-level Augmenting adaptations given described challenges associated with observing Reducing adaptations at the session-level. There was also particular interest in Augmenting adaptations since prior studies suggest a possible relationship between subtypes of Augmenting adaptations (i.e., modifying presentation) and client engagement (Barnett et al., 2018) and extensiveness of EBP delivery (Yu et al., 2021).

# **Dissertation** Aims

The current dissertation study employed a multimethod approach to observe community therapist adaptations that occur naturalistically within an implementation-as-usual context. The central aims were to: (1) characterize the landscape of Augmenting adaptations community therapists make within TF-CBT sessions and factors associated with them, (2) examine the association between observed Augmenting adaptations and adherence to TF-CBT delivery at the session-level, and (3) examined the associations between observed Augmenting adaptations and client engagement within and across sessions.

By harnessing strategies community therapists use to engage diverse youth through adaptation, the current study expands our knowledge on effective TF-CBT delivery to inform training and implementation support when working in public care systems serving structurally marginalized communities. Moreover, the dissertation study produced rich therapy process data by validating two observational coding systems measuring therapist adaptation and adherence to TF-CBT delivery. The aims of the study are aligned with the National Institute of Mental Health

(NIMH) Strategic Research Priority 4.1 to identify strategies improving access, quality, and equity of mental health services for diverse populations.

## Method

## **Dissertation Context**

The current dissertation used data collected from the NIMH-funded Knowledge Exchange on Evidence-Based Practice Sustainment (4KEEPS) study, or "*Sustainment of Multiple EBP's Fiscally Mandated in Children's Mental Health Services*" (R01-MH100134, MPIs Lau & Brookman-Frazee), in partnership with the Los Angeles County Department of Mental Health (LACDMH). The LACDMH is the largest public mental health system in the United States and serves primarily racial/ethnic marginalized youth and families. The 4KEEPS study was an observational study of a reimbursement-driven implementation of multiple child EBPs within the LACDMH. The primary aim of the parent study was to examine factors associated with the sustainment of six child EBPs that received implementation support, including TF-CBT, six years after the initial implementation. For more details about LACDMH's implementation-as-usual context, please see *Studies of Run-time Therapist Adaptations to EBPs in the Current Study Context.* 

#### **Participants and Sample**

Session audio recordings and surveys were provided by community therapists from the LACMDH. In the parent study, 103 community therapists were recruited from on-site staff meetings in 24 community mental health programs within 14 publicly funded agencies. Community therapist participants were eligible to participate if they were employed as a staff or trainee therapist in one of the participating program sites and trained in and actively delivering at least one of the six EBPs of interest. Therapists were told that participation involved completion

of a comprehensive baseline survey, completion of session questionnaires, and submission of session audio recordings. Therapists were encouraged to submit session recordings that would showcase the range of experiences they had with EBP implementation in community settings, including sessions that involved challenges or difficulties with implementation.

Among these 103 therapists in the full sample, 68 were trained in TF-CBT and 62 reported having delivered TF-CBT with a client within the past two months. Inclusion criteria for the current study were determined at the session-level and included: (1) sessions in which TF-CBT was delivered (based on therapist report) and (2) sessions in which both a session audio recording and session survey were provided. One session for a client receiving TF-CBT was omitted due to the therapist identifying a different EBP for that session. Overall, these inclusion criteria resulted in a sample of 46 therapists who delivered TF-CBT to 82 youth clients with observations from 190 sessions. Therapist, client, and session characteristics are presented in Table 1.

On average, the therapist sample was 36.11 years of age (SD = 10.05) with 93.48% (n = 43) women and 6.52% (n = 3) men. Most of the therapists were Hispanic/Latine (n = 22; 47.83%), followed by White (n = 11; 23.91%), Asian American/Pacific Islander (n = 7; 15.22%), and Black/African American (n = 6; 13.04%). The majority of therapists held Master's degrees (n = 43; 93.48%) and were unlicensed (n = 35; 76.09%). Therapists held a diverse representation of primary theoretical orientations, with cognitive behavioral/behavioral being the most common (n = 32; 69.57%). The client sample of 82 youth (62.20% girls, 37.80% boys) were 10.30 years of age on average (SD = 3.22), and racially/ethnically diverse with 67.07% (n = 55) Hispanic/Latine, 21.95% (n = 18) Black/African American, 7.32% (n = 6) Asian American/Pacific Islander, 2.44% (n = 2) White, and 1.22% (n = 1) Multiracial.

Across the 190 TF-CBT sessions, most involved the youth client only (n = 134, 70.53%), with 44 (23.16%) involving the youth and caregiver together and 12 (6.32%) with the caregiver only. Most sessions were primarily delivered in English (n = 165; 86.84%), with 19 (10.00%) sessions primarily delivered in Spanish, and 6 (3.16%) sessions primarily delivered in Mandarin. Therapists self-reported making an adaptation in the majority of sessions (n = 104; 54.74%).

# Procedure

Informed consent of therapist participants was obtained by study research staff during agency staff meetings. Therapists then obtained written permission from clients' caregivers to audio record their therapy sessions where one of the six EBPs, including TF-CBT, was being delivered. Therapists completed baseline surveys responding to questions about their demographic and professional backgrounds and perspectives on EBPs. Therapists audio-recorded EBP sessions using study-issued iPods and completed online post-session surveys for the recorded sessions for up to three sessions for up to three clients each (maximum of nine sessions). Post-session surveys reported on client/caregiver and session characteristics. Therapists received \$20 for the baseline survey and \$5 for each session survey and each session audio recording provided. Furthermore, therapist participants were allowed to keep the study-issued iPod if they submitted at least six recordings. Data were collected between 2015 and 2017. All procedures were approved by the Institutional Review Boards at the University of California, San Diego, University of California, Los Angeles, and the LACDMH.

#### Measures

## Therapist Measures

**Therapist Characteristics.** Therapists self-reported their race/ethnicity, licensure status, and therapeutic orientation (coded as CBT/behavioral or not) on a therapist background questionnaire (see Appendix A).

**Perceived Characteristics of Intervention Scale (PCIS; Cook et al., 2015).** The original PCIS is a 20-item scale that assesses therapist perceptions of an EBP across domains of the EBP's *Relative Advantage* (e.g., "This practice is more effective than other therapies I have used"), *Compatibility* (e.g., "This practice is aligned with my clinical judgment"), *Complexity* (e.g., "This practice is easy to use"), and *Potential for Reinvention* (e.g., "This practice can be adapted to meet the needs of my clients"). To reduce response fatigue, eight of the original 20 PCIS items were selected for administration in the current study (see Appendix B). Therapists were asked to rate the extent to which they agreed with these eight items on a 5-point Likert scale (1 = not at all, 5 = a very great extent) to assess their perceptions of the EBP used. Although only sessions delivering TF-CBT are included in the current sample, therapists completed this survey for each session; thus, therapists' scores were averaged across the sessions they submitted to produce a mean score for each therapist. The PCIS had high internal consistency in the current sample (a = .94).

#### **Client Measures**

**Client Characteristics.** Therapists reported their clients' age, gender, race/ethnicity, and presenting problem(s) on the post-session survey (see Appendix C). For the client's presenting problem, therapists selected as many as indicated from options including anxiety, attention or hyperactivity problems, autism spectrum, mood, trauma, disruptive behavior or conduct problems, substance use, or other. Client presenting problem was then coded into a dichotomous variable indicating whether a client had one or multiple presenting problems.

## Session Measures

Session Characteristics. On each session survey, therapists reported the primary language used in the session (coded as English or non-English, i.e., Spanish or Mandarin) and who attended each session (coded as if a caregiver was present in the session or not). Therapists also self-reported the extent to which they were able to carry out their intended activities or focus for each session (0 = not at all, 5 = fully).

**Observed emergent life event.** The Emergent Life Events (ELE) Coding System was previously developed to identify the presence or absence of a client-raised ELE from session recordings within the larger sample (n = 680). ELEs have been defined as acute life stressors disclosed during therapy sessions, such as health concerns, loss of a loved one, housing or financial issues, risky behaviors, community or other violence exposure, or natural disasters (Lind et al., 2021). ELEs were included as a session-level control variable in the present study because they have previously been associated with lower observed delivery of EBP strategies by community therapists (Lind et al., 2021). ELEs qualified for inclusion in the coding system if they were events that: (1) occurred outside of therapy, (2) were disclosed during the session, (3) had at least a mild negative impact on the child or family, and (4) occurred within the past few weeks.

Please refer to Guan et al. (2017) and Lind et al. (2021) for more detailed descriptions of the coding system, including development, coder training and coding procedures, and interrater reliability for each code. In brief, three coders who were clinical psychology doctoral students were trained via group didactic sessions, individual practice sessions, and individual feedback meetings. Coders were required to achieve 80% reliability on at least six "gold standard" sessions before beginning independent coding. Consensus coding was employed such that two coders were assigned to rate ELEs for each session and met to reach consensus on ELE presence.

A third coder then independently rated the same session to assess for ELE presence. Cohen's kappas were computed between the consensus and third coder determinations to assess interrater reliability for ELE presence. Kappas were moderate to strong (0.79-0.86; Lind et al., 2021).

Therapist-described Session-level Adaptations. For each audio session recording provided, therapists self-reported on corresponding session surveys whether they made an adaptation in the session. Therapists who responded "yes" were then asked to describe how they adapted TF-CBT for the session in an open-ended prompt. Therapists were not provided with definitions or examples on what does or does not constitute an adaptation given the intent to capture therapist conceptions of adaptations. Therapist descriptions spanned three categories of Augmenting, Reducing, and Generalizing session-level adaptations, and were further coded into 13 subcategories in a prior study (Kim et al., 2020). Augmenting adaptation codes included: (a) Modifying the Presentation of the practice, (b) Integrating supplemental content or strategies, (c) Repeating components, (d) providing Psychoeducation, (e) Lengthening the pacing of the practice, (f) Translating materials, and (g) Combining the practice with other services.

Please refer to Kim et al. (2020) for more detailed descriptions of the development of the coding system, coder training and coding procedures, and interrater reliability for each code. In brief, three coders were trained via detailed review of the coding manual and group didactic sessions. Prior to independent coding of therapist descriptions, coders reached Cohen's  $\kappa = .65$  (p < .05) on "gold standard" therapist descriptions determined by the master coder. Coders assessed the occurrence or non-occurrence of the 13 adaptation codes for each therapist description, with 20% of descriptions double-coded. Cohen's kappas were calculated to assess interrater reliability. Among the Augmenting adaptation codes, the mean kappa was .59 (moderate); among Reducing

adaptation codes the mean kappa was .58 (moderate); and among Generalizing adaptation codes, the mean kappa was .62 (substantial).

**Observed Session-level Augmenting Adaptations.** An observational coding system was developed for the current study to assess the occurrence and extent to which therapists made three different types of Augmenting adaptations (Modify Presentation, Integrate, Extend) indexed by six total adaptation subtypes. Coders noted the occurrence of each adaptation subtype and rated their extensiveness ( $0 = no \ occurrence$ ,  $6 = to \ a \ great \ extent$ ). The observational coding system was drawn from the typology used to code therapist descriptions of session-level EBP adaptations from Kim et al. (2020), which was originally adapted from an earlier version of the FRAME (Wiltsey Stirman et al., 2019). Codes from the prior adaptation typologies were included in the current observational coding measure if they were deemed to be observable at the session-level (see Considerations for Observing Run-time Therapist Adaptations to TF-CBT at the Session-level). This resulted in a compendium of Augmenting adaptations including: (1) Modify Presentation, represented by subtypes (1a) *tailor communication*, (1b) *delivery* technique, and (1c) personalize content; (2) Integrate, represented by subtypes (2a) integrate other treatment strategies and (2b) integrate other problem focus; (3) Extend, represented by (3a) repeat components or material (see Figure 1). The final adaptation codes and subcodes for the current study, along with definitions, are listed in Table 2.

Observer Adaptations Coding Procedure and Scoring. The Session-level Adaptations Coding Manual – Observer provided definitions, criteria, exemplars, and instructions for identifying therapist behaviors aligned with each of the six adaptation subtypes (see Appendix D). Coders listened to the session audio recordings in their entirety while taking detailed notes and timestamps on the Session-level Adaptations Observational Coding Form (see Appendix E).

In a single session recording, coders assigned a global rating for each of the six adaptation subcodes on the 7-point Likert scale ( $0 = no \ occurrence$ ,  $6 = to \ a \ great \ extent$ ). When assigning global ratings, coders considered the duration, frequency, and thoroughness (detail and depth) of the therapist behaviors representing each adaptation subtype.

For the larger adaptation codes represented by more than one adaptation subtype (i.e., Modify Presentation and Integrate), coders identified the adaptation subtype with the highest extensiveness rating to index that adaptation code. For example, in a session where tailor communication was rated as a "2" and delivery technique was rated as a "4," that session received a rating of "4" for Modify Presentation. An alternative approach would be to use a composite score (e.g., the mean); however, the highest rating was thought to better reflect adaptation extensiveness since it was not deemed necessary for a therapist to be doing all subtypes of an adaptation in order to be engaging that adaptation extensively. In other words, any form of a therapist using a Modify Presentation or Integrate adaptation subtype extensively represented the therapist Modifying Presentation or Integrating extensively; each adaptation code did not need all subtypes to be considered extensive. Computing a composite score would cause the overall extensiveness rating to be skewed by the less extensive subtypes.

*Observer Adaptations Coder Training.* The master coder (Stephanie Yu) trained a team of nine undergraduate students majoring in psychology or psychobiology to code therapist adaptations to TF-CBT via the observational coding system. At the time, the master coder was a doctoral candidate in clinical psychology who received training and ongoing consultation in TF-CBT from a certified trainer and consultant from the National Therapist Certification Program. The master coder furthermore delivered TF-CBT under the supervision of Dr. Lauren Ng and Dr.

Caroline Shanholtz, both licensed clinical psychologists with research and practice expertise in trauma treatment.

Among the nine students, three were native Spanish speakers who were bilingual in English and Spanish and two were native Mandarin speakers who were bilingual in English and Mandarin. Bilingual Spanish and Mandarin-speaking coders were intentionally recruited to code sessions in the current sample that were delivered in these languages. First, coders completed the 11-module online TF-CBT course, "TF-CBT Web 2.0," from the Medical University of South Carolina (MUSC) and passed the corresponding module quizzes (MUSC, 2017). While completing this course, the coding team met weekly with the master coder to review concepts, answer questions, and reinforce learning in TF-CBT. Coders also independently read the TF-CBT manual version used in the LACDMH Prevention and Early Intervention initiative (Hendricks et al., n.d.), reviewed commonly used TF-CBT PRACTICE resources (including materials provided by MUSC), and read the *Session-level Adaptations Coding Manual – Observer*.

Next, coders attended group didactic trainings led by the master coder to provide detailed review of the observer manual. The training was conducted over the course of five hours and provided thorough review of the coding process, code definitions, application of extensiveness ratings, and exemplars and non-exemplars of each code and subtype. Coders then practiced their application of the observer measure by coding against criterion rated, gold standard TF-CBT session audio recordings co-developed by the master coder and TF-CBT practice expert Dr. Caroline Shanholtz. After each gold standard session was coded, the master coder met individually with each coder to provide detailed feedback, answer questions, and discuss discrepancies with the gold standard coding. Coders then re-listened to timestamps where

discrepant codes were applied. During gold standard practice coding, the coding team met weekly to discuss common discrepancies and provide general feedback to reinforce learning. To advance to independent coding, coders achieved agreement within one-point on at least 80% of the global ratings for at least six gold standard TF-CBT session audio recordings. Even after achieving 80% agreement on at least six practice sessions, most coders opted to code against 2 – 3 more gold standard sessions for additional practice. On average, coders completed 10 gold standard practice sessions and achieved 85.28% agreement on codes prior to beginning independent coding.

Coders independently coded approximately 2 to 4 session audio recordings per week. To prevent coder drift, the master coder held weekly meetings to review interrater reliability ratings with the coding team, conducted booster trainings on adaptation subtypes with lower reliability ratings, and offered individual consultation to coders on the eligibility of session content for coding adaptation subtypes.

*Observer Adaptations Interrater Reliability.* To assess interrater reliability, 32.63% (n = 62) of sessions were randomly selected to be double coded by a second coder. Interrater reliability was monitored on an ongoing basis by examining one-way random intraclass correlation coefficients (ICCs) to track agreement on extensiveness ratings and Fleiss' Kappa coefficients to track agreement on code occurrence (i.e., presence of an adaptation, where "0" indicated non-occurrence and any extensiveness rating of at least "1" indicated occurrence). ICCs were in the fair to excellent range for the extensiveness ratings for adaptation codes and subcodes (Mean ICC = .76; Range = .48 - .92; Cicchetti, 1994). Fleiss' Kappas were in the range of moderate to near perfect agreement (Mean  $\kappa = .69$ ; Range = .45 - .90; Cohen, 1960; Fleiss, 1999). See Table 3 for ICCs and Kappas for each adaptation code and subcode.

For inclusion in subsequent analyses, we planned to retain adaptation codes and subcodes with interrater reliability ratings > .40. An ICC value above .40 is considered "fair" according to Fleiss (1999) and Cicchetti (1994). Furthermore, Trevethan (2017) recommends some degree of flexibility when interpreting ICC values across different contexts especially "in some disciplines and contexts, for example, where strong associations are not anticipated because of the range of variables that are expected to influence human thinking, physiological functioning or behavior" (p. 141). This is relevant to the constructs measured in the current study, which are likely to vary by a number of influences that could challenge coding (e.g., individual therapeutic approaches/styles, complex client clinical presentations). Thus, ICCs > .40 between observer coders would be deemed acceptable under these guidelines. Based on these guidelines, all adaptation codes and subtypes were retained for the analyses.

**Observed Session-level Adherence to TF-CBT.** An observational coding system was developed to assess the occurrence and extent to which therapists delivered the following PRACTICE components of TF-CBT: Assessment, Psychoeducation, Parenting Skills, Relaxation, Affect Identification/Expression/Modulation, Cognitive Coping, Trauma Narrative and Processing, In-vivo Exposure, Conjoint Youth-Caregiver Session, and Enhancing Safety, with the addition of Crisis Management. Components of TF-CBT adherence were adapted from the TF-CBT Brief Practice Checklist (BPC), a 10-item therapist self-report adherence measure indicating the occurrence of TF-CBT components that may be delivered in any given session (Egeland et al., 2019; Everhart Newman et al., 2018; Lang et al., 2015; TF-CBT.org, 2014). The TF-CBT BPC was adapted into an observer-rated measure with extensiveness ratings, which are common in child EBP adherence measures (Southam-Gerow et al., 2016), to assess the degree to

which a therapist delivered each of the 11 TF-CBT adherence checklist items during a session (0 = *no occurrence*, 6 = to a great extent).

#### **Observer Adherence Coding Procedure and Scoring.** The Session-level TF-CBT

Adherence Coding Manual – Observer provided definitions, criteria, exemplars, and instructions for identifying therapist behaviors aligned with each of the 11 adherence codes (see Appendix F). Coders listened to the session audio recordings in their entirety while taking detailed notes and timestamps on the Session-level TF-CBT Adherence Observational Coding Form (see Appendix G). For each session recording, coders assigned a global rating for each of the 11 adherence codes on the 7-point Likert scale (0 = no occurrence, 6 = to a great extent). When assigning global ratings, coders considered the duration, frequency, and thoroughness (detail and depth) of the therapist behaviors representing each adherence code.

Given that adherence data were at the session-level, we considered how best to compute a "total adherence" rating to represent overall extensiveness of TF-CBT adherence in a given session. One approach was to take the highest observed rating among the 11 codes (i.e., max component score). TF-CBT is a components-based intervention, where only one or two primary components would be expected in a session (Hanson et al., 2016). Thus, a max component score might best reflect adherence extensiveness in a single session since a therapist might focus on delivering 1-2 primary PRACTICE components but include briefer aspects of other components within the same session that were coded. It would not be expected or clinically indicated for therapists to be delivering all PRACTICE components extensively in any one session. This is consistent with a prior study examining session-level observed adherence to TF-CBT, which also used the component with the highest value to index session adherence (Heier, 2018). However, we also considered the value of an alternative approach using the mean of all observed TF-CBT

components in a given session as an adherence composite score. Although a mean composite score might be skewed by less extensive delivery of "non-primary" PRACTICE components used in the session, the mean score does 'give credit' for therapists' time and effort in delivering multiple TF-CBT components in a session. Measures of intervention adherence in the literature have more commonly used the mean across component items (Violante et al., 2024). Considering the benefits and limitations of both approaches, we opted to employ both the max component and mean composite scores to index adherence as implementation outcomes. The validity of the observer ratings of session-level adherence to TF-CBT was supported by positive correlations with therapists' self-reported ability to deliver EBP activities as intended in the session, for both the max component (r = .265, p < .001) and mean composite scores (r = .215, p = .003).

*Observer Adherence Coder Training.* The master coder (Stephanie Yu) trained a team of nine undergraduate students majoring in psychology (who did not engage in the adaptations coding) to code therapist adherence to TF-CBT delivery at the session-level via the observational coding system. Two independent teams of coders were trained to code for adherence and adaptations to prevent cross-contamination of codes. Again, three of the nine students recruited were native Spanish speakers who were bilingual in English and Spanish and two were native Mandarin speakers who were bilingual in English and Mandarin to code the sessions in Spanish and Mandarin.

First, coders completed the 11-module online TF-CBT course, "TF-CBT Web 2.0," from the MUSC and passed the corresponding module quizzes (MUSC, 2017). While completing this course, the coding team met weekly with the master coder to review concepts, answer questions, and reinforce learning in TF-CBT. Coders also independently read the TF-CBT manual used in the LACDMH Prevention and Early Intervention initiative (Hendricks et al., n.d.), reviewed

commonly used TF-CBT PRACTICE resources, and read the *Session-level TF-CBT Adherence Coding Manual – Observer.* 

Next, coders attended group didactic trainings led by the master coder to provide detailed review of the observer manual. The training was conducted over the course of five hours and provided thorough review of the coding process, code definitions, application of extensiveness ratings, and exemplars and non-exemplars of each code. Coders then practiced their application of the observer measure by coding against criterion rated, gold standard TF-CBT session audio recordings co-developed by the master coder and TF-CBT practice expert Dr. Caroline Shanholtz. After each gold standard session was coded, the master coder met individually with each coder to provide detailed feedback, answer questions, and discuss discrepancies with the gold standard coding. Coders then re-listened to timestamps where discrepant codes took place. During gold standard practice coding, the coding team met weekly to discuss common discrepancies or provide general feedback to reinforce learning. To advance to independent coding, coders achieved agreement within one-point on at least 80% of the global ratings for at least six gold standard TF-CBT session audio recordings. Even after achieving 80% agreement on six practice sessions, all coders opted to code three more gold standard sessions for additional practice. On average, coders achieved 88.59% agreement on nine practice sessions prior to beginning independent coding.

Coders independently coded 3 to 4 session audio recordings per week. To prevent coder drift, the master coder held weekly meetings to review interrater reliability ratings with the coding team and conduct booster training on adherence codes with lower reliability ratings. The master coder also provided individual consultation to coders on the eligibility of session content for adherence codes.

*Observer Adherence Interrater Reliability.* To assess interrater reliability, the master coder randomly selected 32.11% (n = 61) of sessions to be double coded by a second coder. Interrater reliability analyses were iteratively conducted via one-way random ICC for extensiveness, and Fleiss' Kappa for occurrence. ICCs were fair to excellent for the adherence codes (Mean ICC = .85; Range = .58 – 1.00; Cicchetti, 1994). Fleiss' Kappas indicated substantial to almost perfect agreement on the presence of the adherence codes (Mean  $\kappa = .82$ ; Range = .65 – 1.00; Cohen, 1960; Fleiss, 1999). See Table 4 for the ICCs and Kappas represented for each adherence code.

For inclusion in subsequent analyses, we planned to retain adherence codes with interrater reliability ratings > .40. An ICC value above .40 is considered "fair" according to Fleiss (1999) and Cicchetti (1994). Based on these guidelines, all adherence codes were retained for the analyses.

Therapist-reported Client Disengagement. On each post-session survey (see Appendix C), therapists completed a checklist to indicate whether clients: (1) demonstrated apathetic or disinterested behavior, or (2) avoided participating in therapy activities. These responses were aggregated into a dichotomous client disengagement variable where endorsing either or both indicated a client disengagement barrier.

Items were adapted from a 2-month retrospective 7-item report measure of client engagement challenges for a specific client (Lau et al., 2018). Lau et al. (2018) conducted a confirmatory factor analysis (CFA), which demonstrated good model fit for a two-factor structure measuring limited client engagement (three items) and expressed client concerns (four items). In the same 4KEEPS context, Gellatly et al. (2019) conducted a multilevel CFA to assess fit for a reduced four-item checklist measure, using the larger sample of sessions across all six

child EBPs (which includes the current study's sample of TF-CBT sessions). The CFA confirmed a two-factor structure for the reduced number of items per each subscale measuring limited client engagement (two items) and client expressed concerns (two items). The limited client engagement subscale was selected as an outcome for the current study given prior research suggesting that limited client engagement has been consistently linked to therapists' self-reported ability to deliver the EBP as intended (Gellatly et al., 2019; Lau et al., 2018), and that client expressed concerns may actually indicate a form of engagement in care where clients feel comfortable expressing their concerns (Haine-Schlagel & Walsh, 2015; Lau et al., 2018). The validity of the therapist-reported client disengagement subscale was supported by a negative correlation with observed session-level client engagement behaviors (r = -.16, p = .035; see *Observed Session-level Client Engagement Behaviors* below).

**Observed Session-level Client Engagement Behaviors.** Through an administrative supplement to 4KEEPS, an observational coding system was previously developed to capture youth engagement behaviors via session audio recordings of child EBPs, including for TF-CBT. Participatory Engagement Behaviors included three items: (1) "To what extent did the child ask the therapist questions," (2) "To what extent did the child participate in therapy activities," and (3) "To what extent did the child demonstrate commitment to therapy in the session." Codes were rated on a 5-point Likert scale (1 = *not at all*, 5 = *to a great extent*). Independent coders were trained via detailed review of the coding manual and group didactic sessions. Prior to independent coding, coders had to achieve 80% agreement within one-point on criterion-rated, gold standard sessions. Coding was completed with fair to good reliability (mean *ICCs* = .65; Cicchetti, 1994). Ratings were then summed to produce a total score across client engagement behaviors. As previously noted, the validity of the observed session-level client engagement

behaviors was supported by a negative correlation with the therapist-reported limited engagement subscale (r = -.16, p = .035).

#### **Analytic Plan**

All descriptive analyses were conducted in STATA/SE 15.1 (StataCorp, 2017) and all multilevel regression models were conducted in Blimp 3 (Enders et al., 2019; Keller & Enders, 2022). We used Bayesian estimation in Blimp 3, specifically a factored regression (sequential) specification, to handle missing data for the Perceived Characteristics of Intervention Scale variable (less than 5% missingness).

Although our data were clustered with sessions nested in clients nested in therapists, our data could not support multilevel modeling at three levels given that we had many therapists (level-3 units) with only a single child client who received TF-CBT (level-2 observation) and several child clients (level-2 units) with only a single session (level-1) observation. Thus, we examined the proportion of variance attributed to each level of data at two-levels (session and client) to determine our model structure for each of the aims. As a general approach across all models, session variables were group mean-centered and client and therapist variables were grand mean-centered. For group mean-centered session-level variables, their client-level averages were included in the models. For dichotomous variables, client-level averages can be considered compositional variables where a higher mean reflects a higher proportion of a group coded. Notably, there were two session-level variables where the source of variation was higher at level-2 than at level-1, due to the nature of the variables themselves. Primary session language had most of its variation at the client-level (ICC = .86) compared to the session-level (residual variation = .14) because the language used across sessions was typically but not always the same for a given client. For example, at times the therapist may have submitted a caregiver-attended

session for the client, during which the therapist used the caregiver's primary language, or used a different language in the session with the client if they were bilingual. Similarly, our variable indicating whether the caregiver was involved in a session had most of its variation at the client-level (ICC = .73) compared to the session-level (residual variation = .27). These variables were grand mean-centered due to having mostly cluster-level variation.

Next, as previously stated, given that Modify Presentation and Integrate adaption codes were each comprised of multiple adaptation subcodes, we retained the highest observed extensiveness rating among the subcodes to index the extensiveness of that adaptation code for model parsimony. For example, if *delivery technique* was coded as 4 and *personalize content* as 2 in a single session, the overall Modify Presentation extensiveness rating would be 4, since each adaptation code did not need all subtypes to be considered extensive. This approach was also supported by the distribution of adaptation subtypes where *delivery technique* (n = 71) was by far the most commonly observed of the Modify Presentation adaptation subtypes (*tailor communication* = 26; *personalize content* = 18). Similarly, for the Integrate code, *integrate other problem focus* (n = 31) was far more commonly observed than *integrate other treatment strategy* (n = 5).

Finally, we strove to be inclusive of the racially/ethnically diverse communities represented in our study, while balancing the limitations of our statistical tools in modeling uneven sample sizes. Given the uneven comparative sample sizes across race/ethnicity of clients (i.e., Hispanic/Latine = 55, Multiracial = 1), we created a dichotomous variable based on ethnicity to model this variable (Latine, Non-Latine). Similarly, given uneven comparative sample sizes for therapists (i.e., Hispanic/Latine = 22, Black/African American = 6), we created a dichotomous categorical variable to model this variable (Latine, Non-Latine). However, to

honor the racial/ethnic diversity of the clients and therapists in the study, we present disaggregated descriptive data on study variables including adaptation, adherence, and client engagement behavior extensiveness, as well as therapist-reported client disengagement frequencies, across client and therapist race/ethnicity in Table 5. Limitations of this approach are detailed in the Discussion.

# Aim 1. Characterize Community Therapist Augmenting Adaptations in Sessions of TF-CBT and Associated Factors

Descriptive analyses were conducted to characterize the frequency, mean extensiveness ratings, standard deviations, and ranges of the adaptation codes and subcodes. Fleiss' Kappas were additionally computed to examine the concordance between therapist-described (Kim et al., 2020) and observed adaptations where there were overlapping categories of codes. Three multilevel models were conducted to identify session, client, and therapist factors associated with extensiveness ratings of each of the three Augmenting adaptation types (Modify Presentation extensiveness, Integrate extensiveness, Repeat extensiveness). Session factors included whether an emergent life event was addressed in the session. Client factors included the client's age, gender, ethnicity, primary language, whether they had one or multiple presenting problems, and whether the caregiver was involved in treatment. Therapist factors included the therapist's ethnicity, licensure status, whether they self-reported practicing from a cognitive-behavioral therapeutic orientation, and their perceptions of TF-CBT as indexed by the PCIS. These factors were included in the models as predictors based on conceptual hypotheses about their relationships with adaptations.

We conducted three unconditional models with each of the adaptation types as the outcome and computed the ICCs for each model to examine clustering at the client-level.

Notable clustering was suggested at the client level for Modify Presentation (ICC = .27), Integrate (ICC = .08), and Repeat (ICC = 0.15). Thus, we employed a two-level structure for all models with sessions (level 1) nested in clients (level 2). Next, we conducted potential scale reduction factor diagnostics (Gelman & Rubin, 1992), which indicated that burn-in periods of 20,000, 25,000, and 25,000 iterations were sufficient for the Modify Presentation, Integrate, and Repeat models, respectively. Based on this information, we employed two Markov Chain Monte Carlo (MCMC) chains with random starting values to generate posterior summaries of 20,000, 25,000, and 25,000 estimates after the initial burn-in periods. The number of independent MCMC samples for all parameters exceeded the recommended value of 100 across all models, suggesting that these settings were sufficient (Enders, 2022; Gelman et al., 2014). Below is an example of a two-level linear mixed model for Aim 1 (Raudenbush & Bryk, 2002). Adaptation<sub>ij</sub> represents observed therapist adaptation extensiveness (i.e., Modify Presentation, Integrate, Repeat) within session *i* for client *j*.

Level 1: Adaptation<sub>ij</sub> =  $\pi_{0j} + \pi_{1j}$ (emergent life event<sub>ij</sub>) + e<sub>ij</sub>

Level 2:  $\pi_{0j} = \gamma_{00} + \gamma_{01}(\text{primary language}_j) + \gamma_{02}(\text{caregiver involved in treatment}_j) + \gamma_{03}(\text{client age}_j) + \gamma_{04}(\text{client gender}_j) + \gamma_{05}(\text{client ethnicity}_j) + \gamma_{06}(\text{client multiple presenting problems}_j) + \gamma_{07}(\text{therapist ethnicity}_j) + \gamma_{08}(\text{therapist licensure status}_j) + \gamma_{09}(\text{CBT/behavioral orientation}_j) + \gamma_{010}(\text{therapist perceptions of TF-CBT}_j) + \gamma_{011}(\text{client-average emergent life event}_j) + u_{0j} \\ \pi_{1j} = \gamma_{10}$ 

# Aim 2. Examine Associations between Augmenting Adaptations and Adherence to TF-CBT at

# the Session-level

Descriptive analyses were conducted to characterize the frequency, mean extensiveness ratings, standard deviations, and ranges of the 11 TF-CBT adherence codes.

Two multilevel regression models were conducted to examine associations between the three Augmenting adaptation types (Modify Presentation extensiveness, Integrate extensiveness, Repeat extensiveness) and adherence to TF-CBT delivery at the session-level, as measured by the max component and mean composite scores. We first examined the proportion of variance attributed to the client level by conducting unconditional models with the adherence outcomes and computing the ICCs. Notable clustering was suggested at the client level for the max component score as the outcome (ICC = .25) and the mean composite score as the outcome (ICC = 0.19). Thus, we employed a two-level structure with sessions (level 1) nested in clients (level 2). Control variables included in the models were selected based on their associations with the adaptation predictors as identified in Aim 1, which included a session factor (whether an emergent life event was addressed in the session), client factors (age, whether the client had one or multiple presenting problems), and therapist factors (licensure status, perceptions of TF-CBT). We also included demographic variables that we deemed important to the LACDMH context (e.g., client and therapist ethnicity, primary language). Variables not included were client gender, caregiver involvement in treatment, and therapeutic orientation. The client-level averages of Modify Presentation, Integrate, and Repeat extensiveness, as well as observed emergent life events, were also included in the models.

Next, we conducted potential scale reduction factor diagnostics (Gelman & Rubin, 1992), which indicated that burn-in periods of 25,000 and 35,000 iterations were sufficient for the max component and mean composite models, respectively. Based on this information, we employed two MCMC chains with random starting values to generate posterior summaries of 25,000 and 35,000 estimates after the initial burn-in period. The number of independent MCMC samples for all parameters exceeded the recommended value of 100, suggesting that this setting was

sufficient (Enders, 2022; Gelman et al., 2014). Below is an example of a two-level linear mixed

model for Aim 2 (Raudenbush & Bryk, 2002). Adherence<sub>ij</sub> represents observed therapist

adherence extensiveness to TF-CBT within session *i* for client *j*.

```
Level 1:

Adherence<sub>ij</sub> = \pi_{0j} + \pi_{1j}(modify<sub>ij</sub>) + \pi_{2j}(integrate<sub>ij</sub>) + \pi_{3j}(repeat<sub>ij</sub>) + \pi_{4j}(emergent life event<sub>ij</sub>) + e_{ij}

Level 2:

\pi_{0j} = \gamma_{00} + \gamma_{01}(primary session language<sub>j</sub>) + \gamma_{02}(client age<sub>j</sub>) + \gamma_{03}(client ethnicity<sub>j</sub>) + \gamma_{04}(client multiple presenting problems<sub>j</sub>) + \gamma_{05}(therapist ethnicity<sub>j</sub>) + \gamma_{06}(therapist licensure status<sub>j</sub>) + \gamma_{07}(therapist perceptions of TF-CBT<sub>j</sub>) + \gamma_{08}(client-average modify<sub>j</sub>) + \gamma_{09}(client-average integrate<sub>j</sub>) + \gamma_{010}(client-average repeat<sub>j</sub>) + \gamma_{011}(client-average emergent life event<sub>j</sub>) + u_{0j}

\pi_{1j} = \gamma_{10}

\pi_{2j} = \gamma_{20}

\pi_{3j} = \gamma_{30}

\pi_{4j} = \gamma_{40}
```

# Aim 3a. Examine Associations between Augmenting Adaptations and Client Engagement Behaviors Within Sessions

Two multilevel models were conducted to examine associations between the three Augmenting adaptation types (Modify Presentation extensiveness, Integrate extensiveness, Repeat extensiveness) and client engagement outcomes. Multilevel logistic regression was employed in the model with therapist-reported client disengagement as the outcome and multilevel linear regression was employed in the model with observed client engagement behaviors as the outcome. Given that client engagement behaviors were only coded for sessions in which the client was present, the sample size for this model was 169.

We first examined the proportion of variance attributed to the client level by conducting unconditional models with each client engagement variable as the outcome and computing the ICCs. Notable clustering was suggested at the client level for therapist-reported client disengagement (ICC = .63) and observed client engagement behaviors (ICC = .56). Thus, we

employed a two-level structure with sessions (level 1) nested in clients (level 2). As in the Aim 2 model, both models controlled for variables based on their associations with the adaptation predictors identified in Aim 1, including a session factor (whether an emergent life event was addressed in the session), client factors (age, whether the client had one or multiple presenting problems), and therapist factors (licensure status, perceptions of TF-CBT). We also included demographic variables that we deemed important to the LACDMH context (e.g., client and therapist ethnicity, primary language). The client-level averages of Modify Presentation, Integrate, and Repeat extensiveness, as well as observed emergent life events, were also included in the models.

Next, we conducted potential scale reduction factor diagnostics (Gelman & Rubin, 1992), which indicated that burn-in periods of 60,000 and 45,000 iterations were sufficient for the multilevel logistic and linear regression models, respectively. Based on this information, we employed two MCMC chains with random starting values to generate posterior summaries of 60,000 and 45,000 estimates after the initial burn-in period. The number of independent MCMC samples for all parameters exceeded the recommended value of 100, suggesting that this setting was sufficient (Enders, 2022; Gelman et al., 2014). Below is an example of a two-level mixed model for Aim 3a (Raudenbush & Bryk, 2002). Client Engagement<sub>ij</sub> represents the client engagement outcomes in session *i* for client *j*.

Level 1: Client Engagement<sub>ij</sub> =  $\pi_{0j} + \pi_{1j}(\text{modify}_{ij}) + \pi_{2j}(\text{integrate}_{ij}) + \pi_{3j}(\text{repeat}_{ij}) + \pi_{4j}(\text{emergent life event}_{ij}) + e_{ij}$ 

Level 2:  $\pi_{0j} = \gamma_{00} + \gamma_{01}$ (primary session language<sub>j</sub>) +  $\gamma_{02}$ (client age<sub>j</sub>) +  $\gamma_{03}$ (client ethnicity<sub>j</sub>) +  $\gamma_{04}$ (client multiple presenting problems<sub>j</sub>) +  $\gamma_{05}$ (therapist ethnicity<sub>j</sub>) +  $\gamma_{06}$ (therapist licensure status<sub>j</sub>) +  $\gamma_{07}$ (therapist perceptions of TF-CBT<sub>j</sub>) +  $\gamma_{08}$ (client-average modify<sub>j</sub>) +  $\gamma_{09}$ (client-average integrate<sub>j</sub>) +  $\gamma_{010}$ (client-average repeat<sub>j</sub>) +  $\gamma_{011}$ (client-average emergent life event<sub>j</sub>) +  $u_{0j}$ 

$$\pi_{1j} = \gamma_{10}$$
  

$$\pi_{2j} = \gamma_{20}$$
  

$$\pi_{3j} = \gamma_{30}$$
  

$$\pi_{4j} = \gamma_{40}$$

# Aim 3b. Examine Associations between Augmenting Adaptations and Client Engagement Across Sessions

To examine associations between Augmenting adaptations and client engagement across sessions, we conducted a multilevel logistic regression model with therapist-reported client disengagement as the outcome and a multilevel linear regression model with observed client engagement behaviors as the outcome, similar to our Aim 3a models. Both models also controlled for a session factor (whether an emergent life event was addressed in the session), client factors (age, ethnicity, whether the client had one or multiple presenting problems, primary language), and therapist factors (ethnicity, licensure status, perceptions of TF-CBT). Aim 3b models differed from our Aim 3a models in that lagged variables were created for each of the adaptation types (i.e., Modify Presentation, Integrate, Repeat), such that adaptations' extensiveness in session i - 1 were associated with subsequent client engagement outcomes in session *i*. Additionally, Aim 3b models controlled for days between sessions given that therapists submitted sessions inconsistently across time; thus sessions were unequally spaced. Clients for which only one session recording was submitted by a therapist were dropped from the models (n = 18). Sessions in which only caregivers were involved in the session (n = 12) were also dropped from the models given that our research question required continuity of session participants across sessions. The sample sizes were 161 and 152 for the multilevel logistic regression and multilevel linear regression models, respectively. Below is an ideal example of the two-level mixed model for Aim 3b (Raudenbush & Bryk, 2002). Client Engagement<sub>ii</sub> represents the client engagement outcomes in session *i* for client *j*.

Level 1: Client Engagement<sub>ij</sub> =  $\pi_{0j} + \pi_{1j}(\text{modify}_{i-1j}) + \pi_{2j}(\text{integrate}_{i-1j}) + \pi_{3j}(\text{repeat}_{i-1j}) + \pi_{4j}(\text{emergent life event}_{ij}) + \pi_{5j}(\text{days}_{ij}) + e_{ij}$ 

# Level 2:

$$\begin{split} \pi_{0j} &= \gamma_{00} + \gamma_{01}(\text{primary session language}_j) + \gamma_{02}(\text{client age}_j) + \gamma_{03}(\text{client ethnicity}_j) + \\ \gamma_{04}(\text{client multiple presenting problems}_j) + \gamma_{05}(\text{therapist ethnicity}_j) + \\ \gamma_{06}(\text{therapist licensure status}_j) + \gamma_{07}(\text{therapist perceptions of TF-CBT}_j) + \\ \gamma_{09}(\text{client-average integrate}_j) + \\ \gamma_{010}(\text{client-average repeat}_j) + \\ \gamma_{011}(\text{client-average emergent life event}_j) + \\ u_{0j} \\ \pi_{1j} &= \\ \gamma_{10} \\ \pi_{2j} &= \\ \gamma_{20} \\ \pi_{3j} &= \\ \gamma_{30} \\ \pi_{4j} &= \\ \gamma_{40} \\ \pi_{5j} &= \\ \gamma_{50} \end{split}$$

However, when conducting potential scale reduction factor diagnostics (Gelman & Rubin, 1992), the multilevel logistic regression model was unable to converge even at burn-in periods as high as 150,000-200,000 iterations, which would be considered much too high to be deemed acceptable. This issue remained even after dropping most of the control variables from the model. Similar issues emerged for the multilevel linear regression model. Thus, it was concluded that our data could not support our proposed Aim 3b model examining lagged analyses with observed therapist adaptations in one session predicting client engagement in the next session.

#### Results

#### **Correlations between Session-level Study Outcomes**

Table 6 summarizes the correlations between session-level study outcomes, which were primarily in the expected directions. Modify Presentation extensiveness (r = .15, p = .038; r = .16, p = .027) and observed child engagement behaviors (r = .20, p = .008; r = .18. p = .017) were positively correlated with adherence extensiveness as measured by the max component score and mean composite score, respectively. Integrate extensiveness (r = .19, p = .007; r = .16, p = .029) and therapist-reported client disengagement (r = .17, p = .022; r = .16, r = .024)
were negatively correlated with adherence extensiveness as measured by the max component score and mean composite score, respectively. Therapist-reported client disengagement and observed child engagement behaviors were negatively correlated (r = -.16, p = .035)

# Aim 1. Characterize Community Therapist Augmenting Adaptations in Sessions of TF-CBT and Associated Factors

#### **Descriptives**

Across all 190 sessions, at least one Augmenting adaptation was observed in 62.63% (n = 119) of sessions. Modify Presentation was the most commonly observed of the adaptation types in 89 (46.84%) sessions with a mean extensiveness rating of 2.93 (SD = 1.23; Range: 1-6). Integrate adaptations were observed in 34 (17.89%) sessions with a mean extensiveness rating of 3.24 (SD = 1.48; Range: 1-6). Repeat adaptations were observed in 27 (14.21%) sessions with a mean extensiveness rating of 1.96 (SD = 0.85; Range: 1-4). Table 7 summarizes the means and extensiveness ratings for each adaptation code and subcode, and provides an exemplar from coders' notes representing each subcode.

#### Therapist-Observer Concordance of Reported Augmenting Adaptations

Fleiss' Kappas were additionally computed to examine the concordance between therapist-described adaptations coded in Kim et al. (2020) and observer-coded adaptations from the current study, where there were overlapping categories of codes. First, we examined concordance between therapist self-described adaptations that were coded as *modify presentation* with (1) all observer-reported Modify Presentation adaptations (i.e., inclusive of *tailor communication, delivery technique*, and *personalize content* subtypes;  $\kappa = .10$ ), and (2) *delivery technique* subcodes only ( $\kappa = 0.22$ ), given similarities in their definitions. Next, we examined concordance between therapist-described adaptations that were coded as *integrating* 

supplemental content and strategies with (1) all observer-reported Integrate adaptations ( $\kappa = .09$ ) and (2) integrating additional treatment strategy subcodes only ( $\kappa = .39$ ). All other therapistdescribed adaptations were deemed too definitionally different from observer-coded adaptations in the current study to examine their concordance. For example, therapist-described *repeat* adaptations would have included repetition of sessions across the episode of care; however, Repeat adaptations in the current study were only examined at the session-level. Kappas ranged between poor to fair agreement. Figure 2 displays the contingency tables for the therapistdescribed and observer-reported Modify Presentation and Integrate adaptation subcodes with the highest concordances. For Modify Presentation, the false negative rate when comparing therapist to observer report was 70.45% while the false positive rate was 15.38%. For Integrate, the false negative rate was 20.00%, while the false positive rate was 5.41%.

#### Session, Client, and Therapist Factors Associated with Observed Augmenting Adaptations

Table 8 displays the results of the multilevel regression models examining associations between session, therapist, and client factors with each of the three Augmenting adaptation types. Client age ( $\beta = -0.21$ , SD = 0.09, 95% CI [-0.37, -0.03], p = .02) was negatively associated with Modify Presentation extensiveness in a given session. Therapist positive perceptions of TF-CBT ( $\beta = 0.18$ , SD = 0.09, 95% CI [0.01, 0.34], p = .039) and sessions in which an emergent life event was observed to be addressed ( $\beta = 0.19$ , SD = 0.07, 95% CI [0.04, 0.32], p = .009) were positively associated with Integrate extensiveness in a given session, while those in which the therapist was licensed ( $\beta = -0.20$ , SD = 0.08, 95% CI [-0.35, -0.04], p = .01) and the client had multiple presenting problems ( $\beta = -0.16$ , SD = 0.08, 95% CI [-0.31, -0.01], p = .037) were negatively associated with Integrate extensiveness. No session, client, or therapist factors were associated with Repeat extensiveness.

# Aim 2. Associations between Augmenting Adaptations and Adherence to TF-CBT at the Session-level

#### **Descriptives**

Out of the 190 sessions, at least one TF-CBT PRACTICE component was observed in all but two sessions (n = 188; 98.95%). There was only an opportunity to observe two of the components (i.e., Parenting Skills, Conjoint Caregiver-Youth Session) in sessions where caregivers were in attendance (n = 56; 29.47%). Assessment was observed in 38 (20.00%) sessions with a mean extensiveness rating of 2.50 (SD = 1.31; Range: 1-5). Psychoeducation was observed in 60 (31.58%) sessions with a mean extensiveness rating of 2.73 (SD = 1.61; Range: 1-6). Parenting Skills were observed in 10 sessions (17.86% of sessions in which caregivers were involved), with a mean extensiveness rating of 3.10 (SD = 1.52; Range: 1-5). Relaxation was observed in 36 (18.95%) sessions with a mean extensiveness rating of 3.17 (SD = 1.56; Range: 1-6). Affect Identification/Expression/Modulation was observed in 98 (51.58%) sessions with a mean extensiveness rating of 3.36 (SD = 1.48; Range: 1-6). Cognitive Coping was observed in 36 (18.95%) sessions with a mean extensiveness rating of 3.44 (SD = 1.48; Range: 1-6). Trauma Narrative was observed in 51 (26.84%) sessions with a mean extensiveness rating of 4.00 (SD =1.18; Range: 1-6). In-vivo Exposure was observed in three (1.58%) sessions with a mean extensiveness rating of 3.33 (SD = 2.08; Range: 1-5). Conjoint Caregiver-Youth Session was observed in two sessions (3.57% of sessions in which caregivers were involved), with a mean extensiveness rating of 2.50 (SD = 0.71; Range: 2-3). Enhancing Safety was observed in 15 (7.89%) sessions with a mean extensiveness rating of 2.80 (SD = 1.37; Range: 1-5). Crisis Management was observed in 16 (8.42%) sessions with a mean extensiveness rating of 3.06 (SD

= 1.53; Range: 1-5). Table 4 summarizes the means and extensiveness ratings for each adherence code.

# Associations between Observed Augmenting Adaptation Extensiveness and Adherence to TF-CBT at the Session-level

Table 9 displays the results of the multilevel regression models examining associations between the observed Augmenting adaptations and adherence to TF-CBT at the session-level. No observed adaptation types were associated with adherence to TF-CBT when indexed by either the max component score or the mean composite score. For the model using the mean composite adherence score, client age was positively associated with adherence extensiveness ( $\beta$ = 0.25, *SD* = 0.13, 95% CI [0.01, 0.51], *p* = .046), while clients with multiple presenting problems were associated with lower adherence extensiveness compared to clients with just one presenting problem ( $\beta$  = -0.24, *SD* = 0.11, 95% CI [-0.46, -0.04], *p* = .023). There were no significant associations between session, client, or therapist factors and the max component adherence score.

# Aim 3a. Associations between Augmenting Adaptations and Client Engagement Within Sessions

Table 10 displays the results of the multilevel regression model examining associations between the observed Augmenting adaptation types and client engagement.

*Therapist-reported client disengagement.* In the multilevel logistic regression model (n = 190), a one unit increase in Modify Presentation extensiveness was associated with a 60% decrease in the odds of therapist-reported client disengagement in a given session (OR = 0.40, SD = 0.17, 95% CI [0.16, 0.80]), while a one unit increase in Integrate extensiveness was associated with approximately twice the odds of therapist-reported client disengagement (OR = 0.40, SD = 0.17, 95% CI [0.16, 0.80]), while a one unit increase in Integrate extensiveness was

2.05, SD = 0.99, 95% CI [1.07, 4.75]). Primary language was also associated with therapistreported client disengagement, such that delivering a session in Spanish or Mandarin compared to English was associated with a 95% decrease in the odds of therapist-reported client disengagement in a given session (OR = 0.05, SD = 0.25, 95% CI [0.002, 0.64]).

Observed client engagement behaviors. In the multilevel linear regression model (n = 169), only Repeat extensiveness was positively associated with observed child engagement behaviors ( $\beta = 0.13$ , SD = 0.06, 95% CI [0.01, 0.26], p = .038).

#### Discussion

The present dissertation employed a multimethod approach to identify observable Augmenting adaptations that community therapists make in sessions of TF-CBT implemented in a community mental health setting. The aims were to characterize Augmenting adaptations and factors associated with them; and examine relationships between those adaptations and important clinical process outcomes at the session-level, specifically adherence to TF-CBT delivery and client engagement. Overall, it was feasible to observe some, but not at all, types of adaptations at the session-level. In particular, Modify Presentation, Integrate, and Repeat augmenting adaptations were feasible to observe with reliability, as indicated by ICCs and kappas in the fair to excellent range.

In the current study, our operational definition of adaptation included content or activities that therapists incorporated beyond what was explicitly prepared in the manual but were consistent with the intervention model. Thus, while TF-CBT as an intervention encourages the use of games and activities to teach skill components, adaptations were coded in instances when therapists drew from their practice-based knowledge to impart the intervention in ways that were not provided in the manual. Relevant examples include a therapist making a "relaxation tool"

pinwheel to teach the skill of deep breathing or integrating a "21 Days to Make a Habit" strategy to motivate their client towards a goal (see Table 6). That Augmenting adaptations were identified in most sessions suggests high therapist engagement with the intervention, such that LACDMH therapists were investing time and effort to augment their delivery of TF-CBT. Aligned with prior studies from therapist report (Kim et al., 2020; Lau et al., 2017), Modifying Presentation was the most commonly identified adaptation, followed by Integrating.

One notable finding was that there was some signal of concordance (albeit small associations) between some types of observer-reported and therapist-described Augmenting adaptations. Specifically, for Modify Presentation, Fleiss' Kappas demonstrated fair concordance between the *delivery technique* observational adaptation subcode and therapists' written descriptions that were coded in a previous study as Modify Presentation ( $\kappa = .22$ ; Kim et al., 2020). The integrating supplemental content and strategies subcode also demonstrated fair concordance with therapist adaptation descriptions that were coded as *integrate treatment* strategy ( $\kappa = .39$ ). This echoes findings from other studies (Johnson et al., 2020), suggesting that low therapist-observer agreement is a common challenge in adaptation research. Several factors likely contribute to this discrepancy, including lack of access to therapist metacognition in observer reports and differing definitions of adaptations between observers and therapists. For example, at least one therapist-described adaptation in Kim et al. (2020) included providing psychoeducation about grief. This description was coded as an integrating adaptation, given that the aims of the study were to capture therapist-perceived adaptations. However, providing psychoeducation about traumatic grief was not included as an Integrate adaptation in the current study because it is considered part of the TF-CBT protocol (Cohen et al., 2017). Indeed, therapists in the current sample described integrating more supplemental content and strategies

than observers identified, though false positive rates were low. Furthermore, community therapists may be so accustomed to personalizing treatment delivery that they may not always report their efforts to tailor a practice for their client as an adaptation, as demonstrated by high false negative rates for Modify Presentation (i.e., observers identifying more delivery technique adaptations than therapists described).

Ultimately, it is possible that observer and therapist reports of adaptations may simply be capturing different, though both meaningful and related, processes. In terms of Augmenting adaptations in the current study, observers may have been capturing more of what can be thought of as creative extensions or adjustments to the TF-CBT protocol/manual. Meanwhile, therapist report may be more revealing of therapist metacognition into their own perceptions of what is needed to make EBPs work in a community mental health context, including when their delivery of TF-CBT departs from their original session agenda. Given these notable differences in the potential inputs to these measurements, it is encouraging then that there was fair concordance between therapist-observer report for some of the codes, particularly since therapist narratives in the LACDMH context were used to design the codebook in the current study.

Aim 1 findings from the current study elucidated session, client, and therapist factors associated with different types of Augmenting adaptations. First, as the age of the client in the session increased, the extensiveness of Modifying Presentation in the session decreased. This finding suggests that therapists may have been modifying more extensively in sessions with younger clients, aligning with therapist qualitative interviews about their reasons for making Augmenting adaptations to address developmental appropriateness (Barnett et al., 2018). The finding is further corroborated by other studies in the LACDMH context examining therapist adaptation descriptions. In one study, the odds of a therapist-described Augmenting adaptation

decreased as a function of client age (Kim et al., 2020). Moreover, a qualitative analysis of therapist adaptation descriptions suggested that therapists tended to modify language for their clients' developmental level to facilitate understanding and engagement (Yu et al., 2021).

Indeed, findings from the current study suggested that community therapists in the LACDMH context frequently modified their sessions of TF-CBT, often through creative methods of changing their delivery technique (i.e., using art activities, toys/games, and visuals), tailoring their communication of concepts, and personalizing content to the specific client. This is notable given that TF-CBT was developed for children and has a strong evidence-base, particularly among school-aged youth (Cohen et al., 2012; McGuire et al., 2021). Younger clients may benefit from increased tailoring of surface-level characteristics of the intervention to enhance engagement, understanding, and fit (D'Arrigo et al., 2020; Kendall et al., 2023; Kingery et al., 2006; 2015). However, given findings that older client age is associated with higher likelihood of attrition from TF-CBT (Esterer et al., 2023; Ormhaug & Jensen, 2018; Wamsey-Nanney, 2021), it may be necessary to consider how presentation of TF-CBT can be tailored to improve engagement among older adolescents. One study found that attending to adolescents' experiences, exploring their motivation, and having less structure in earlier sessions of CBT for depression were related to greater client involvement in later sessions (Jungbluth & Shirk, 2009). Attending more to process and alliance when working with older adolescent clients, as well tailoring presentation of TF-CBT based on their personal experiences and motivations, may be strategies to encourage their engagement in sessions, as well as in treatment overall.

Second, findings suggested several factors associated with Integrate extensiveness. Sessions in which an emergent life event was addressed and the therapist had more positive attitudes of TF-CBT were positively associated with Integrate extensiveness. Given that

community mental health settings often serve structurally marginalized client communities with high rates of chronic stressors (Mihelicova et al., 2018), it stands to reason that therapists may be integrating additional content and/or treatment strategies beyond the TF-CBT protocol when they perceive a need to shift the session's focus to address an acute client stressor. Additionally, therapists with more positive attitudes of TF-CBT may be able to weave in supplemental content and treatment strategies more seamlessly when they deem it necessary or helpful. Notably, one dimension assessed in the Perceived Characteristics of Intervention Scale captures therapists' perceptions that the intervention is flexible and can be adapted to fit their treatment setting and to meet the needs of their clients. Studies suggest that community providers value intervention flexibility and perceive it to enhance the feasibility of the intervention for the complexities of their settings (Chung et al., 2014; Nelson et al., 2006). Meanwhile, positive attitudes towards a specific EBP are related to increased use (Reding et al., 2014). It is possible that in these instances, providers who regard an intervention highly may be able to deliver it with greater flexibility and real-time improvisation as needed. This aligns with prior findings that therapists who were more open to EBPs were more likely to make adaptations, including Augmenting (Kim et al., 2020) and fidelity-consistent modifications (Wiltsey Stirman et al., 2015).

On the other hand, findings suggested that sessions in which the therapist was licensed were negatively associated with Integrate extensiveness, compared to sessions in which the therapist was unlicensed. One possible interpretation may be that unlicensed therapists, who are earlier on in their career stage, may be more open to change and motivated to integrate multiple EBPs and strategies in their delivery. This aligns with a prior finding that therapists with fewer years of professional therapy experience were more likely to report making an Augmenting adaptation (Lau et al., 2017). However, other studies have found no association between

clinician years of experience and number of modifications (Meza et al., 2019; Dyson et al., 2019), while experienced psychologists working with socioeconomically marginalized clients have also been found to use their grassroots, practice-based knowledge to tailor their practices, such as by addressing power dynamics and contextual stressors related to poverty (Borges & Goodman, 2019). It may be that relationships between clinical experience and adaptation may have more to do with the clinical and community context.

Results also suggested that sessions in which the client had multiple presenting problems were negatively associated with Integrate extensiveness, compared to sessions in which the client had just one identified presenting problem. This finding seems counterintuitive, as therapists working with clients with greater clinical complexity could find more and not less need to augment their sessions with additional content. It is possible that therapists delivering the TF-CBT protocol to clients with more clinically complex presentations need specific support to integrate supplement content and strategies for comorbid presentations along with trauma. TF-CBT trainings and consultations can include modules for how to integrate strategies for clients with common comorbidities (e.g., substance use, disruptive behavior). There are existing recommendations by the TF-CBT developers for integrating additional treatment approaches into TF-CBT delivery, including to address behavioral problems (Cohen et al., 2010), substance use (Cohen et al., 2003), complex trauma (Cohen et al., 2012), and childhood traumatic separation (Cohen & Mannarino, 2019). There have also been suggested benefits of an adapted version of TF-CBT, in which components from other approaches (e.g., Acceptance and Commitment Therapy, Dialectical Behavioral Therapy) were intentionally integrated into treatment based on match with symptoms (Herbert & Paton, 2024). Moreover, steps have been made towards developing frameworks and resources to integrate racial socialization into TF-CBT to address

racial trauma (Chavez-Dueñas et al., 2019; Metzger et al., 2020; Metzger et al., 2023; Phipps & Thorne, 2019).

Finally, none of the session, client, or therapist factors examined were associated with Repeat extensiveness in the current study. It is possible that the lack of significant associations may have more to do with limitations in how repetition was measured in the current study at the session-level. To avoid relying on assumptions, a coding rule was implemented wherein raters could only code a Repeat adaptation if a therapist explicitly stated that they were repeating, revisiting, or reviewing modules or materials. Thus, repetitions might have been missed if not explicitly stated in the recording.

To support Aim 2, an observational measure was developed to index adherence to TF-CBT at the session-level, providing a glimpse into how LACDMH therapists were delivering TF-CBT in a community mental health setting. Among the sessions provided, community therapists were rated to deliver TF-CBT components with an average component extensiveness of 4.06 (*SD* = 1.39, *Range* = 0-6) when measured by the max component score and of 3.35 (*SD* = 1.27, *Range* = 0-6) when measured by the mean composite score. Despite the contextual challenges of implementing complex, multicomponent EBPs into environments and communities for whom they were not initially designed, therapists were thus observed to deliver TF-CBT with adequate session-level adherence. Findings were aligned with another session-level measure of adherence to TF-CBT, which also found adequate adherence ratings when delivered in a juvenile legal facility (i.e., M = 4.24, SD = 0.83, Range=1-5). Adequate adherence has also been suggested in other TF-CBT implementation efforts when measured by trainers via the TF-CBT Fidelity Consultation Metric (Mode = 3.6; Range = 0-4; Amaya-Jackson et al., 2018) and as self-reported by therapists via the TF-CBT Brief Practice Checklist (Lang et al., 2015; Webb et al., 2014). In

the LACDMH context, TF-CBT was among a handful of EBPs selected for implementation support, including training and consultation, to facilitate its rapid scale-up as a part of the PEI initiative. Thus, findings that TF-CBT can be delivered with acceptable adherence in a community setting are promising – though these findings should be interpreted with caution given that these TF-CBT sessions represented only a small sampling of overall delivery within the LACDMH (see Limitations). Notably, it is possible that community therapists may have been less adherent across the treatment episode, compared to what could be detected at the session-level.

Somewhat aligned with prior studies (Hanson et al., 2016; Heier, 2018), Affect Identification/Expression/Modulation, Psychoeducation, and Trauma Narrative were among the most frequently identified TF-CBT components. That Trauma Narrative was among the most frequently identified components is encouraging, given that it has been suggested by clinicians to be one of the most difficult or uncomfortable components of TF-CBT to implement (Ascienzo et al., 2020; Allen & Johnson, 2012), and as a result may be delivered less frequently despite high intentions (Frank et al., 2021; Woody et al., 2015a). Similarly aligned with prior studies, Conjoint Caregiver-Youth Session, In-Vivo Exposure, and Parenting Skills were among the least commonly identified components in the current study (Hanson et al., 2016; Heier, 2018). In-Vivo Exposure is the only optional module of TF-CBT (Cohen & Mannarino, 2015), which may explain its lower frequency. However, caregiver involvement is a key aspect of the TF-CBT protocol, which prescribes parallel child and caregiver sessions on a weekly basis, in addition to at least two conjoint sessions (Hanson et al., 2016). It may have been that therapists tended to submit fewer caregiver sessions, or that it was challenging to engage caregiver participation, as has been previously noted in prior studies of TF-CBT (de Arellano et al., 2014) and as suggested

by the lower than optimal rates of caregiver session attendance in the implementation context under study (Barnett et al., 2020; Wright et al., 2019).

No Augmenting adaptations were related to TF-CBT adherence in a given session whether indexed by the max component or mean composite score, despite bivariate correlations suggesting a positive relationship with Modify Presentation extensiveness and a negative relationship with Integrate extensiveness. These findings support the notion that Augmenting adaptations may be able to conserve intervention integrity, preserving adherence to core TF-CBT components even when delivery is tailored. It is important to note that the current study focused on Augmenting adaptations that primarily add to or tailor the intervention in some way. Thus, Augmenting adaptations may be characterized more so as *surface structure* adaptations that match materials and messages to diverse clients, which are likely to have fewer risks to adherence. Reducing adaptations that take away from an intervention, such as omitting or reducing time spent on components or loosening the structure of the intervention, are much more likely to have detrimental impacts on intervention adherence (Wiltsey Stirman et al., 2019). Nevertheless, it is heartening to see that LACDMH therapists may have been Augmenting their sessions of TF-CBT without untoward consequences for their observed adherence. Again, these findings should be interpreted cautiously given that these session recordings showcase just a snapshot of treatment delivery and do not represent the full treatment episode. Findings also suggested that therapists were able to maintain higher adherence (when measured by the mean composite score) with older child clients. While TF-CBT is considered a level 1, "wellestablished" intervention for school-aged children, a systematic review suggests that the evidence base is still growing to support its efficacy among preschool-aged children, and that TF-CBT is currently considered a level 2, "probably efficacious" treatment for that age group

(McGuire et al., 2021). Clinicians in this context may have been better equipped, due to the available resources, to maintain adherence among their school-aged and/or adolescent clients. It may be expected for adherence to be lower among preschool-aged children, who may naturally require more stimulation outside of TF-CBT activities to maintain their attention. Meanwhile, clients with multiple presenting problems may have presented a challenge to therapists maintaining adherence to TF-CBT in the current context, which is aligned with prior findings on increased complexity and multiple problems impacting adherence for other types of treatments (Schoenwald et al., 2004). Taken together with previously stated findings on lower Integrating extensiveness in sessions with clients with multiple presenting problems, therapists may have struggled to maintain adherence to TF-CBT generally, as well as integrate strategies in real-time to address other presenting concerns. Interestingly, Amaya-Jackson et al. (2018) found that higher clinical complexity was related to higher levels of fidelity to TF-CBT delivery in another implementation context, which the authors attributed to clinicians' strong reliance on consultation for these cases. Specific training and consultation on delivering TF-CBT with integrated components to address comorbid presenting concerns are likely particularly indicated in community mental health settings, where clinical complexity tends to be higher.

Our Aim 3 findings suggested significant associations between in-session Augmenting adaptations and client engagement. Sessions with higher Modifying Presentation extensiveness were associated with lower odds of therapist-reported client disengagement, while Integrating extensiveness was associated with higher odds of therapist-reported client disengagement. It is possible that correlations between these adaptations and adherence extensiveness may have been more a function of other clinical processes (e.g., client dis/engagement), that were in turn associated with each of the adaptation types. Meanwhile, Repeat extensiveness was positively

associated with observed client engagement behaviors in session. A limitation of our dataset, however, was that we were only able to examine within-session associations, which occludes the examination of temporality and direction of effects. One interpretation could be that Augmenting adaptations are eliciting client engagement responses. As such, therapists may be modifying presentation of TF-CBT content in ways that enhance fit with their clients, thereby promoting engagement. Furthermore, therapists may be repeating activities or content they think their clients enjoy, which may in turn relate to higher client engagement behaviors. Through this same lens, it is possible that the specific strategies or content that therapists are integrating outside of the TF-CBT protocol may be perceived as less engaging to clients. However, another set of interpretations may be that client engagement may be eliciting adaptation. For example, therapists may be investing less effort to modify presentation of content when they perceive clients to be disengaged, or repeating more frequently when clients are engaged (e.g., asking questions to clarify treatment content). In the same vein, therapists may be integrating additional content or strategies when they perceive that their clients are disengaged from the TF-CBT protocol. While these findings suggest meaningful relationships between therapist adaptations and client engagement, it is imperative for future work to systematically disentangle the direction of these associations. Given the limitations of our dataset in having inadequate sessions per timepoint for each client, we were unable to clarify the direction of these findings in lagged models.

Finally, results suggested that sessions in which the primary language used was Spanish or Mandarin were associated with lower odds of therapist-reported client disengagement, compared to sessions in which the primary language was English, though no association was found for observed client engagement behaviors. Given the landscape of the LACDMH context,

in which approximately 90% of families and clients are racial/ethnic minoritized and many are likely bilingual or English Language Learners, it stands to reason that engagement in session was benefited when therapists were able to provide linguistically responsive services. Across mental health and healthcare systems, it is crucial that providers represent the racial/ethnic, cultural, and linguistic diversity of their client communities to better engage families in care.

#### Limitations

There were several limitations of the current dissertation that should be considered when interpreting the findings. First, the development of an observational coding system to measure adaptations is a novel contribution to the literature and thus a strength of the current study; however, there are limitations to this approach. For example, we did not have access to therapist metacognition of their own practice, including whether they deviated from their initial session agenda. Furthermore, coders could only rate adaptations based on what was explicitly stated in the session recording. Therefore, it is plausible that additional adaptations were present but not accounted for in the coding if they were not observable, which may be particularly relevant for adaptations like Repeating.

Second, the specific adaptations represented in the current dissertation are by no means a comprehensive representation of all the different types of run-time adaptations that can be made. Therapists were asked to submit up to three sessions for up to three clients to balance the recruitment of a sufficient sample size while not overburdening therapists participating in the study, as is important when conducting research within a community partnership. While we were able to examine associations of interest at the session-level, we were not able to do so for the full course of treatment. As a result, some adaptations from prior adaptation frameworks, and as described by therapists, were unfortunately deemed not to be codable at the session-level because

they would require the full episode of care. In particular, coders would have no way of knowing whether a specific EBP component was entirely removed from the treatment episode or simply delivered at another point in time (i.e., Reducing/reordering). We were also not able to identify Augmenting adaptations related to intervention pacing, such as lengthening or extending. Likewise, we were unable to code comprehensively for cultural and *deep structure* adaptations, which tend to cultural, social, historical, and environmental considerations at the process-level, without making assumptions about therapist intentions. While coders did observe Augmenting adaptations that addressed culturally salient topics in their coding (i.e., when clients and therapists named these explicitly in their conversations), reliably observing *deep structure* adaptations would require the ability to identify processes and dynamics that may be more difficult to observe (e.g., communication style), especially among undergraduate coders.

Third, while we were able to granularly examine in-session behaviors, we were limited in our ability to explore the causality, directionality, and/or dynamic nature of the relationships found, which may be particularly critical for understanding therapeutic processes, where relationships between clinical process factors (e.g., therapist adaptations) and client and implementation outcomes are likely reciprocal and dynamic. Fourth, our relatively small sample size impacted some of our analytic decisions. Notably, our data could not support multilevel modeling at three levels – despite having session-level data nested in clients nested in therapists – given that there were many level-3 units with only a single level-2 observation and several level-2 units with only a single observation. Relatedly, our data could not support the inclusion of random slopes in our models, despite that we might have expected the relationships examined in our models to vary by individual client. Our data also could not support examination of study associations across sessions for similar reasons.

Fifth, the current study was limited to some degree by non-random sampling. While efforts were made to reduce selection bias by encouraging therapists to submit sessions that showcase a wide range of EBP delivery experiences (including difficulties with implementation), it is possible that therapists may have submitted sessions in which they thought they delivered TF-CBT particularly well, such as with high adherence to the protocol or with greater perceived creativity. Furthermore, to be included in the study, caregivers had to provide permission for their child's sessions to be recorded and included in a research study. Therapists may have been more likely to approach caregivers/families whom they thought would be the most amenable to giving permission, which also could have introduced bias among the clients sampled. Sixth, the LACDMH context is culturally rich and diverse with approximately 90% of families served identifying as racial/ethnic minoritized, and the majority of both clients and therapists identifying as Latine. Given the uneven sample sizes across racial/ethnic groups, however, we could not fully disaggregate by racial/ethnic group when including client and therapist race/ethnicity variables in our models. We aimed to highlight and honor the heterogeneity within our samples by presenting the descriptives of the study's primary constructs by race/ethnicity (see Table 5). However, a larger sample size may have enabled better data disaggregation within our models, which is needed in future studies to ensure that we do not lose the nuances and complexities of cultural, racial, and ethnic differences across communities.

Finally, there was relatively lower agreement between coders for the Repeat, Personalize Content, and Assessment codes compared to the other adaptation and intervention adherence codes. Although ICCs and Kappas in our study were acceptable under conventionally cited cutoffs (Cohen, 1960; Rietveld & van Hout 1993), some may suggest employing more conservative cutoffs. Overall, future research could address some of these limitations by

recruiting larger sample sizes, exploring relationships between observed adaptations and their relationships with clinical process outcomes reciprocally and longitudinally, and employing observational coding across the full course of treatment to provide additional insights.

#### Conclusions

Despite limitations, the present study offers a meaningful contribution to the literature on how community therapists augment their delivery of TF-CBT when implemented in a community mental health setting serving diverse, structurally marginalized communities. Furthermore, it contributes new information on the relationships between these adaptations and clinical process outcomes at the session-level. There is increasing recognition that adaptations are inevitable when EBPs are transported to settings and communities for whom they were not initially designed. Findings support the notion that some adaptations may be complementary to adherence, preserving the EBP's core components even when delivery is tailored. Adaptations may also add value to EBP implementation efforts, for example by increasing reach through enhanced client engagement. Future research can build on current study findings by assessing relationships between adaptations, clinical process outcomes, and client symptom improvement, as well as exploring observer and therapist-reported adaptations in tandem as unique data sources tied to different processes and meanings that may inform one another. Such findings may inform future EBP implementation and training, such as using a compendium of community therapist adaptations based on local therapist expertise to support an intervention's effectiveness when implemented in a local practice setting. By observing how community therapists make adaptations to TF-CBT, we hope that this study holds translational value for improving community EBP implementation and delivery for diverse, structurally marginalized youth and families.

# Figures

# Figure 1

Augmenting Adaptation Codes and Subcodes



# Figure 2

Contingency Tables Demonstrating Therapist-Observer Concordance on Modify Presentation and Integrate Subcodes

Modify Presentation ( <i>k</i>	<u>Observer-reported</u> Delivery Technique					
	No	Yes	Total			
<u>Therapist-described</u> Modify Presentation	No	88	62	148		
	Yes	16	26	42		
Total		102	88	190		

Integrate ( $\kappa = .39$ )	<u>Observer-reported</u> Integrate Other Treatment Strategies					
		No	Yes	Total		
<u>Therapist-described</u> Integrate Supplemental Content/Strategies	No	175	1	176		
	Yes	10	4	14		
Total		185	5	190		

Descriptives of Session, Client, and Therapist Characteristics	
Session	<i>n</i> = 190
Primary session language, No. (%)	
English	165 (86.84)
Spanish	19 (10.00)
Mandarin	6 (3.16)
Session participants, No. (%)	
Youth only	134 (70.53)
Caregiver involved	56 (29.47)
Observed emergent life event in session, No. (%)	33 (17.37%)
Therapist-reported client disengagement in session, No. (%)	31 (16.32%)
Client	<i>n</i> = 82
Age, M (SD), Range	10.30 (3.22), 4 – 17
Gender, No. (%)	
Girl	51 (62.20)
Boy	31 (37.80)
Race/Ethnicity, No. (%)	
Hispanic/Latine	55 (67.07)
Black/African American	18 (21.95)
Asian American/Pacific Islander	6 (7.32)
White	2 (2.44)
Multiracial	1 (1.22)
Multiple presenting problems	63 (76.83)
Therapist	<i>n</i> = 46
Race/Ethnicity, No. (%)	
Hispanic/Latine	22 (47.83)
White	11 (23.91)
Asian American/Pacific Islander	7 (15.22)
Black/African American	6 (13.04)
Licensed, No. (%)	11 (23.91)
Cognitive behavioral/behavioral orientation, No. (%)	32 (69.57)
Perceived Characteristics of Intervention Scale, M (SD), Range	4.06 (0.66), 2.75 – 5

Table 1

Augmenting Adaptation Codes, Subcodes, and Definitions

## 1. Modify Presentation Adaptations

Modify Presentation adaptations are those that adapt the method or presentation of treatment delivery during the session.

### 1a. Tailor Communication

The therapist tailors the language or terminology used to communicate the TF-CBT content, materials, or messages.

#### 1b. Delivery Technique

The therapist changes the technique or method by which they deliver, present, or communicate the TF-CBT content, materials, or messages in a way that is not explicitly provided by the manual.

### **1c.** Personalize Content

The therapist flexibly personalizes presentation of TF-CBT content in a way that is responsive to the child or family's lived experiences, preferences, culture, or religion/spirituality.

### 2. Integrate Adaptations

Integrate adaptations are those that incorporate content from other evidence-based practices (EBPs), problem foci, or other additional content that is not specified as part of the primary EBP, TF-CBT.

### 2a. Integrate Other Treatment Strategies

The therapist integrates treatment strategies or approaches from other evidence-based practices (EBPs), or additional coping methods that are not specified as a part of the TF-CBT protocol. In other words, TF-CBT is the starting point, but the therapist integrates aspects of different therapeutic strategies in their treatment delivery (e.g., joint play therapy).

## 2b. Integrate Other Problem Focus

The therapist integrates another problem focus or topic into the session that is not directly addressed by the manual. The problem focus may be either therapist or client-driven and may or may not still be complementary or aligned/consistent with EBP delivery.

#### 3. Extend Adaptations

Extend adaptations are those that extend the pacing of the EBP session or activity such that it takes longer to deliver than suggested by the manual/protocol.

### **3a.** Repeat Components or Material

The therapist repeats the same module, activity, or material within a session that is normally delivered only once. This may be either therapist or client-driven (e.g., client has difficulty understanding a concept). This may also include times when the therapist explicitly reviews or practices a module, activity, or material they first introduced or taught in a previous session.

Interrater reliability analyses for observed adaptations codes and subcodes

Adaptations	ICCs	Fleiss' Kappas
1. Modify Presentation	.844	0.643
1a. Tailor Communication	.851	0.642
1b. Delivery Technique	.779	0.738
1c. Personalize Content	.849	0.446
2. Integrate	.912	0.871
2a. Integrate Other Treatment Strategies	.664	0.650
2b. Integrate Other Problem Focus	.917	0.903
3. Extend		
3a. Repeat Components or Material	.475	0.610

Descr	iptives and	' interrater r	eliability	analyses	for ob	served	adherence to	TF-CBT	delivery
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<b>TF-CBT PRACTICE Components</b>	Extensiveness,	Frequency	ICCs	Fleiss'
-	M (SD)	(out of 190),		Kappas
		n (%)		
1. Assessment	2.50 (1.31)	38 (20.00)	0.575	0.667
2. Psychoeducation	2.73 (1.61)	60 (31.58)	0.881	0.749
3. Parenting Skills	3.10 (1.52)	10 (17.86*)	0.926	0.880
4. Relaxation	3.17 (1.56)	36 (18.95)	0.856	0.707
5. Affect Identification/Expression/	3.36 (1.48)	98 (51.58)	0.778	0.670
Modulation				
6. Cognitive Coping	3.44 (1.59)	36 (18.95)	0.913	0.856
7. Trauma Narrative	4.00 (1.18)	51 (26.84)	0.940	0.955
8. In-Vivo Exposure	3.33 (2.08)	3 (1.58)	1.00	1.00
9. Conjoint Caregiver-Youth Session	2.50 (0.71)	2 (3.57*)	0.806	1.00
10. Enhancing Safety	2.80 (1.37)	15 (7.89)	0.938	0.900
11. Crisis Management	3.06 (1.53)	16 (8.42)	0.768	0.649
Max Component	4.01 (1.39)			
Mean	3.35 (1.27)			

\* These percentages were calculated out of the 56 sessions in which caregivers were involved

Descriptives of study outcomes by client and therapist race/ethnicity

Client Race/Ethnicity, no. (%) by sessions	<b>Modify</b> <b>Presentation</b> <i>M</i> (SD)	<b>Integrate</b> M (SD)	<b>Repeat</b> M (SD)	Adherence Max Component M (SD)	Adherence Mean M (SD)	Therapist- reported Disengagement n (%)	Observed Engagement Behaviors M(SD)
Hispanic/Latine, 124 (65.26)	1.24 (1.68)	0.66 (1.49)	0.27 (0.80)	4.09 (1.30)	3.37 (1.19)	15 (12.10)	4.13 (1.84)
Black/African American, 40 (21.05)	2.00 (1.68)	0.38 (1.13)	0.23 (0.66)	3.90 (1.60)	3.38 (1.54)	13 (32.50)	4.19 (1.55)
Asian American/Pacific Islander, 17 (8.95)	0.76 (1.68)	0.59 (1.37)	0.24 (0.66)	3.47 (1.55)	3.10 (1.40)	2 (11.76)	3.12 (1.27)
White, 6 (2.44)	0.67 (1.21)	0.50 (1.22)	0.67 (0.82)	4.17 (1.33)	3.17 (0.93)	1 (16.67)	4.00 (1.26)
Multiracial, 3 (3.16)	3.33 (1.53)	0.00 (0.00)	0.67 (0.58)	4.67 (0.58)	3.93 (0.51)	0 (0)	6.33 (0.58)
Therapist Race/Ethnicity, no (%) by sessions							
Hispanic/Latine, 93 (48.95)	1.45 (1.74)	0.53 (1.40)	0.34 (0.87)	4.02 (1.34)	3.37 (1.23)	12 (12.90)	4.08 (1.78)
White, 43 (22.63)	1.47 (1.68)	0.79 (1.41)	0.28 (0.70)	4.19 (1.18)	3.45 (1.20)	12 (27.91)	4.69 (1.69)
Asian American/Pacific Islander, 29 (15.26)	0.86 (1.68)	0.52 (1.38)	0.14 (0.52)	4.17 (1.51)	3.70 (1.43)	2 (6.90)	3.62 (1.24)
Black/African American, 25 (13.16)	1.52 (1.71)	0.48(1.36)	0.20 (0.65)	3.44 (1.64)	2.69 (1.19)	5 (20.00)	3.71 (2.01)

Divariate conclutions between session-level study outcomes										
	1	2	3	4	5	6	7			
1. Modify Presentation extensiveness										
2. Integrate extensiveness	02									
3. Repeat extensiveness	.05	02								
4. Adherence (max component)	.15*	19**	.05							
5. Adherence (mean)	.16*	16*	02	.83**						
6. Therapist-reported client	07	06	01	17*	16*					
disengagement	07	.00	.01	1/	10					
7. Child engagement behaviors	.12	.03	.13	.20**	.18*	16*				
* 05 *** 01										

Bivariate correlations between session-level study outcomes

\**p* < .05, \*\**p* < .01

	Adaptation Types	<b>Frequency</b>	Extensiveness	Excerpt from Coder Notes
		(out of 190),	<i>M</i> (SD)	
		n (%)		
1.	Modify Presentation	89 (46.84)	2.93 (1.23)	
1a.	Tailor	27 (14.21)	1.89 (1.09)	"Therapist refers to the emotion sad as 'blue
	Communication			monster' and angry as 'red monster' since
				they're using masks to talk about emotions. The
				inerapist says, we have a little blue monster, a
				mealum blue monsier, and a blg blue monsier,
				the caregiver and client "What makes you
				medium sad monster?"
1b.	Delivery Technique	72 (37.89)	3.03 (1.21)	"In the activity of making a relaxation tool, the
101	2 on for for forming we	(2(0)))	0100 (1121)	therapist helped the client to build a pinwheel.
				After building the relaxation tool, the therapist
				asked to client to practice deep breathing using
				it. The therapist also asked the client to give it a
				name and list situations where it could be
		17 (0.05)		useful."
Ic.	Personalize Content	17 (8.95)	2.29 (1.36)	Therapist uses Bob the Builder' example and
				that Bob has and says that stress toolbox is
				similar. The therapist uses an analogy of tools to
				explain adding tools to the client's relaxation
				toolbox."
2.	Integrate	34 (17.89)	3.24 (1.48)	
2a.	Integrate Other	5 (2.63)	3.60 (1.14)	"Therapist uses the '21 Days to Make a Habit'
	Treatment Strategies			activity model to create a plan to raise grades
			2 4 2 4 7 4	and make an academic goal."
2b.	Integrate Other	31 (16.32)	3.19 (1.54)	"Therapist dedicated a huge amount of time to
	Problem Focus			taiking about what being a good friend is like
				given that the client was back in school but wasn't making new friends. The theranist utilized
				pictures to discuss if certain behavior was a good
				choice or bad choice. For example, they
				discussed whether hugging, sharing, and saying
				mean things were good choices or bad choices."
3.	Extend			
3a.	Repeat Components	27 (14.21)	1.96 (0.85)	"The therapist listed several activities they've
	or Material			already done' for the client to choose. The client
				chose jour of them, which were 'Get that Fly off
				Up Tour Nose, Shreich Like a Cai, Wing Up or High ' and 'Chew at That Carrot' to practice
				righ, and Chew at that Cartor to practice.

*Frequencies, mean extensiveness ratings, and exemplars of adaptation codes* 

*Note:* Exemplars represented by excerpts from coder notes may have been co-coded for multiple adaptation-types.

Multilevel regression models predicting observed therapist adaptation extensiveness

	M	<b>lodify</b>	Presentation	1	Integrate				Repeat			
	β	SD	95% CI	р	β	SD	95% CI	р	β	SD	95% CI	р
Session	•				•							
Primary session language (ref: English)												
Non-English (Spanish or Mandarin)	-0.13	0.08	[-0.28, 0.04]	.13	0.05	0.08	[-0.10, 0.20]	.53	-0.06	0.08	[-0.22, 0.11]	.50
Session participants (ref: Client only)												
Caregiver involved	-0.001	0.08	[-0.17, 0.16]	.99	0.08	0.08	[-0.08, 0.24]	.34	-0.09	0.09	[-0.26, 0.08]	.29
Observed emergent life event (ref: No)												
Yes	0.03	0.07	[-0.10, 0.16]	.65	0.19**	0.07	[0.04, 0.32]	.009	-0.03	0.07	[-0.17, 0.11]	.67
Client-average observed emergent life event (ref: No)												
Yes	-0.02	0.10	[-0.21, 0.19]	.89	0.17	.10	[-0.03, 0.35]	.09	-0.06	0.10	[-0.25, 0.15]	.60
Client												
Age	-0.21*	0.09	[-0.37, -0.03]	.02	0.01	0.08	[-0.15, 0.17]	.87	-0.16	0.09	[-0.32, 0.02]	.07
Gender (ref: Girl)												
Boy	-0.11	0.09	[-0.28, 0.06]	.22	0.10	0.08	[-0.06, 0.26]	.22	0.17	0.09	[-0.01, 0.33]	.06
Ethnicity (ref: Not Latine)												
Latine	0.09	0.10	[-0.11, 0.28]	.37	-0.11	0.09	[-0.27, 0.07]	.24	0.09	0.10	[-0.10, 0.27]	.35
Multiple presenting problems (ref: No)												
Yes	0.07	0.09	[-0.10, 0.23]	.41	-0.16*	0.08	[-0.31, -0.01]	.037	-0.14	0.08	[-0.30, 0.04]	.11
Therapist												
Ethnicity (ref: Not Latine)												
Latine	0.07	0.09	[-0.12, 0.25]	.48	-0.13	0.09	[-0.30, 0.04]	.13	0.15	0.09	[-0.04, 0.32]	.11
Licensure status (ref: Unlicensed)												
Licensed	-0.10	0.09	[-0.27, 0.07]	.25	-0.20*	0.08	[-0.35, -0.04]	.01	0.01	0.09	[-0.15, 0.18]	.87
Therapeutic orientation (ref: not CBT)												
Cognitive behavioral/behavioral	0.04	0.08	[-0.12, 0.20]	.61	-0.002	0.08	[-0.15, 0.14]	.98	0.02	0.08	[-0.14, 0.18]	.81
Perceived Characteristics of Intervention Scale	0.08	0.10	[-0.12, 0.26]	.45	0.18*	0.09	[0.01, 0.34]	.039	0.16	0.09	[-0.02, 0.33]	.08

\**p* < .05, \*\**p* < .01

**Table 9**Multilevel regression model predicting observed adherence to TF-CBT at the session-level

	Adherence Extensiveness									
		Max Con	nponent Score		Mean Composite Score of Observ Components					
	β	SD	95% CI	р	β	SD	95% CI	р		
Augmenting Adaptation Types										
Session-level (Group mean-centered)										
Modify Presentation extensiveness	0.10	0.07	[-0.05, 0.24]	.20	0.08	0.07	[-0.07, 0.22]	.30		
Integrate extensiveness	-0.08	0.07	[-0.22, 0.06]	.27	-0.06	0.07	[-0.20, 0.08]	.39		
Repeat extensiveness	0.08	0.07	[-0.07, 0.22]	.30	0.04	0.07	[-0.10, 0.18]	.58		
Client-average (Level-2 mean)										
Modify Presentation extensiveness	0.20	0.22	[-0.24, 0.64]	.37	0.29	0.18	[-0.07, 0.65]	.12		
Integrate extensiveness	-0.37	0.23	[-0.77, 0.12]	.12	-0.29	0.20	[-0.65, 0.14]	.16		
Repeat extensiveness	0.01	0.17	[-0.33, 0.35]	.95	-0.09	0.16	[-0.40, 0.22]	.58		
Session										
Primary session language										
(ref: English)										
Non-English (Spanish or Mandarin)	-0.04	0.08	[-0.19, 0.12]	.63	-0.004	0.08	[-0.16, 0.15]	.97		
Observed emergent life event (ref: No)			L, ]				L - · · / · · · ]			
Yes	-0.06	0.07	[-0.20, 0.08]	.38	-0.05	0.07	[-0.19, 0.09]	.51		
Client-average emergent life event (ref: No)			[]				L,]			
Yes	-0.02	0.13	[-0.26, 0.24]	.89	-0.03	0.12	[-0.25, 0.22]	.84		
Client										
Age	0.21	0.14	[-0.06, 0.49]	.13	0.25*	0.13	[0.01, 0.51]	.046		
Ethnicity (ref: Not Latine)							- / -			
Latine	-0.25	0.14	[-0.56, 0.004]	.07	-0.17	0.13	[-0.45, 0.07]	.19		
Multiple presenting problems (ref: No)							. / .			
Yes	-0.21	0.12	[-0.45, 0.01]	.07	-0.24*	0.11	[-0.46, -0.04]	.023		
Therapist							- ,			
Ethnicity (ref: Not Latine)										
Latine	-0.17	0.15	[-0.48, 0.10]	.23	-0.11	0.14	[-0.39, 0.15]	.42		
Licensure status (ref: Not licensed)			-				-			
Licensed	-0.13	0.17	[-0.49, 0.20]	.42	-0.16	0.15	[-0.46, 0.14]	.28		
Perceived Characteristics of Intervention	0.05	0.15		75	0.00	0.12		00		
Scale (PCIS)	0.05	0.15	[-0.24, 0.36]	./5	-0.00	0.13	[-0.26, 0.27]	.99		
* <i>p</i> < .05, ** <i>p</i> < .01										

Multilevel regression models predicting client engagement at the session-level

	Ther	apist-rep Disengag (n = 1	orted Client gement 90)	Observed Child Engagement Behaviors (n = 169)				
	OR	SD	95% CI	β	SD	95% CI	р	
Augmenting Adaptation Types								
Session-level (Group mean-centered)								
Modify Presentation extensiveness	0.40	0.17	[0.16, 0.80]	-0.01	0.06	[-0.14, 0.11]	.86	
Integrate extensiveness	2.05	0.99	[1.07, 4.75]	-0.03	0.06	[-0.15, 0.09]	.62	
Repeat extensiveness	1.72	2.04	[0.43, 7.53]	0.13*	0.06	[0.01, 0.26]	.038	
Client-average (Level-2 mean)								
Modify Presentation extensiveness	0.28	1.07	[0.02, 2.76]	0.39	0.28	[-0.12, 0.96]	.15	
Integrate extensiveness	0.32	1.62	[0.02, 4.29]	0.20	0.31	[-0.39, 0.81]	.51	
Repeat extensiveness	0.35	11.26	[0.01, 12.81]	-0.09	0.22	[-0.56, 0.32]	.66	
Session Factors								
Primary session language (ref: English)								
Non-English (Spanish or Mandarin)	0.05	0.25	[0.002, 0.64]	0.09	0.09	[-0.08, 0.27]	.28	
Observed emergent life event (ref: Yes)								
No	0.17	0.42	[0.02, 1.33]	-0.02	0.06	[-0.14, 0.10]	.72	
Client-average emergent life event (ref: Yes)								
No	0.16	2.44	[0.01, 4.53]	-0.01	0.14	[-0.29, 0.27]	.93	
Client Factors								
Age	0.67	0.22	[0.33, 1.19]	-0.05	0.18	[-0.38, 0.32]	.81	
Ethnicity (ref: Latine)								
Not Latine	0.19	2.98	[0.01, 3.48]	-0.09	0.18	[-0.43, 0.26]	.62	
Multiple presenting problems (ref: Yes)								
No	0.16	1.86	[0.01, 3.90]	0.17	0.17	[-0.18, 0.51]	.32	
Therapist Factors								
Ethnicity (ref: Latine)								
Not Latine	1.20	12.83	[0.07, 22.76]	0.10	0.18	[-0.25, 0.46]	.56	
Licensure status (ref: Not licensed)								
Licensed	0.34	3.75	[0.01, 7.64]	0.10	0.21	[-0.25, 0.58]	.58	
Perceived Characteristics of Intervention Scale	1.31	4.31	[0.14, 11.94]	-0.07	0.20	[-0.54, 0.27]	.67	
* <i>p</i> < .05, ** <i>p</i> < .01								

#### Appendices

#### **Appendix A: Therapist Background Questionnaire**

#### A Little about You and Your Job

Please answer the following questions about yourself (check appropriate boxes and fill in responses as needed). Please answer all questions as completely as you can.

- 1. Please enter your staff code in the space provided. (Please be assured that we will NOT share your individual responses with anyone at your agency or DMH.)\_\_\_\_\_\_
- 2. Gender
  - Male
  - Female
- 3. Year of Birth (Enter four digit YEAR)
- 4. Are you Hispanic?
  - Yes
  - No
- 5. What is your race? (select one)
  - White
  - Black, African American
  - American Indian or Alaska Native
  - Asian American/Pacific Islander
  - Multiracial
  - Other, specify \_\_\_\_\_\_
- 6. In which language(s) other than English can you deliver clinical services? (select all that apply)
  - None
  - Spanish
- 7. Please select your primary mental health discipline (choose one only):
  - Marriage Family Therapy
  - Counseling
  - Clinical Psychology
  - School Psychology
  - Psychiatry
  - Social Work
  - Other, please specify\_\_\_\_\_\_
- 8. What is your highest level of education?
  - High School/GED
  - Associates Degree/Some College
  - Bachelor's Degree
  - Master's Degree
  - Doctoral Degree
  - Other: \_\_\_\_\_
- 9. Are you licensed?
  - Yes
  - No

- 10. For how many years have you practiced as a therapist? \_\_\_\_\_\_ years
- 11. How long have you worked at your present agency? \_\_\_\_\_\_years

12. Are you considered (select one)

- Trainee
- Staff
- Independent contractor

13. Please select the primary theoretical orientation that you incorporate in your practice (choose only one)

- Behavioral
- Cognitive Behavioral
- Humanistic
- Family systems
- Psychodynamic
- Other-please specify if possible\_\_\_\_\_\_

14. Please select the primary setting in which you work (select one)

- Outpatient
- Inpatient
- Residential Treatment Center
- Day Treatment Center
- Case Management
- Group Home
- Assessment/Evaluation Clinic
- Other, please specify\_

#### **Appendix B: Abbreviated Perceived Characteristics of Intervention Scale**

1. Please select the PEI practices in which you have been trained.

- Cognitive Behavioral Interventions for Trauma in Schools [CBITS]
- Child-Parent Psychotherapy [CPP]
- Managing and Adapting Practices [MAP]
- Seeking Safety [SS]
- Trauma Focused Cognitive Behavior Therapy [TF-CBT]
- Triple P Positive Parenting Program [Triple P]
- None of the above

#### Please check all types of training you have received for each practice (auto-population based on #1)

	Initial training workshop	Booster training workshop	Ongoing consultation with EBP developer/training team	In-house supervision specifically focused on practice	Web-based training	Other training (specify)
CBITS	•	•	•	•	•	•
СРР	•	•	•	•	•	•
MAP	•	•	•	•	•	•
Seeking Safety	•	•	•	•	•	•
TF-CBT	•	•	•	•	•	•
Triple P	•	•	•	•	•	•

2. Please select the practices that you have ever used with a client.

- Cognitive Behavioral Interventions for Trauma in Schools [CBITS]
- Child-Parent Psychotherapy [CPP]
- Managing and Adapting Practices [MAP]
- Seeking Safety [SS]
- Trauma Focused Cognitive Behavior Therapy [TF-CBT]
- Triple P Positive Parenting Program [Triple P]
- None of the above

3. Please rate the extent to which you agree with each item using the scale provided.

• This practice is more effective than other therapies I have used (auto-population based on #2)

	Not at all	Slight extent	Moderate Extent	Great Extent	Very Great Extent
CBITS	•	•	•	•	•
CPP	•	•	•	•	•
MAP	•	•	•	•	•
Seeking Safety	•	•	•	•	•
TF-CBT	•	•	•	•	•
Triple P	•	•	•	•	•

- a) This practice is more convenient than other therapies I have used
- b) Using this practice fits well with the way I like to work
- c) This practice is aligned with my clinical judgement
- d) This practice is clear and understandable
- e) This practice is easy to use
- f) This practice can be adapted to fit my treatment setting
- g) This practice can be adapted to meet the needs of my clients
- h) This practice detracts from truly connecting with my clients
- i) This practice is not useful for clients with multiple problems
- j) I am well prepared to believer this practice even with challenging clients
- k) I am confident in my ability to implement this practice

#### **Appendix C: Post-session Survey**

- 1. About which client are you responding? Please enter this client's initials in the space provided
- 2. Client's Gender
  - 1. Female
  - 2. Male
- 3. Client's Race
  - 1. African American
  - 2. Asian American/Pacific Islander
  - 3. Hispanic
  - 4. Native American
  - 5. Non-Hispanic White
  - 6. Other: \_\_\_\_\_
- 4. Client's Age
- 5. Date of the session
- 6. Time of the session
- 7. Length of session
- 8. Please select the primary language in which the session was conducted
  - 1. English
  - 2. Spanish
  - 3. Other, please specify
- 9. Please select the PEI practice for which you are billing this session.
  - 1. Cognitive Behavioral Interventions for Trauma in Schools [CBITS]
  - 2. Child-Parent Psychotherapy [CPP]
  - 3. Managing and Adapting Practices [MAP]; please specify the predominant problem focus
    - i. Anxiety
    - ii. Conduct
    - iii. Depression
    - iv. Trauma
    - v. Other, specify: \_\_\_\_\_
  - Seeking Safety [SS]
  - 5. Trauma Focused Cognitive Behavior Therapy [TF-CBT]
  - 6. Triple P Positive Parenting Program [Triple P]
- 10. Who was involved in the session on which you are responding?
  - 1. Parent/caregiver only
  - 2. Youth only
  - 3. Parent/caregiver and youth (conjoint)
  - 4. Individual time with youth and parent/caregiver
  - 5. Other participant: \_\_\_\_\_
- 11. What is the presenting problem for the youth who is the identified client?
  - 1. Anxiety
  - 2. Attention or Hyperactivity Problems
  - 3. Autism Spectrum
  - 4. Mood
  - 5. Trauma
  - 6. Disruptive Behavior or Conduct Problems
  - 7. Substance Use
  - 8. Other, please specify: \_\_\_\_\_

#### CHALLENGES THAT COME UP IN TREATMENT:

Please continue to respond to the following questions with **CLIENT** in mind.

- 5. In this session, did the client or caregiver: (Check all that apply)
  - □ Express concerns about the helpfulness/relevance/acceptability/feasibility of an intervention strategy
  - Demonstrate apathetic or disinterested behavior
  - □ Express hesitation to participate in therapy activities
  - Express difficulty mastering skills or understanding concepts covered in therapy
  - Report or demonstrate difficulties following through with therapist instructions for assignments between sessions
  - □ Not applicable (*Skip to #7*)
- 6. To what extent did these client or caregiver behaviors negatively interfere with the intended activities or content for the session?

Not at all	To a very	To a slight	To a moderate	To a great	To a very great
	slight extent	extent	extent	extent	extent
0	1	2	3	4	5

- 7. In this session, did you adapt \_\_\_\_\_ for this client?
  - Yes
  - No (Skip #8)
- 8. If yes, please describe how you adapted \_\_\_\_\_ for this session: (text box)

Appendix D: Session-level Adaptations Coding Manual – Observer

# **Session-level Adaptations Coding Manual – Observer**

Updated: 6/12/22 Coding Manual Developed by Stephanie H. Yu, M.A.

Structure adapted from AIM HI coding manual (Brookman-Frazee & Chlebowski, 2013) and Observer OPTION₅ for Youth Psychotherapy Context coding manual (Wright, 2020)

Content adapted from Session-Level Therapist Adaptations Coding Manual (Kim et al., 2020) and the Framework for Reporting Adaptations and Modifications-Expanded (FRAME; Stirman et al., 2019)

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# INTRODUCTION

This manual provides an overview of guidelines intended to help coders document the occurrence of specific in-session therapist behaviors in an efficient, standardized, and reliable manner. The organization of this manual provides general guidelines about coding, with definitions of adaptation codes synthesized from therapist report, implementation science frameworks, and the cultural adaptation literature (Kim et al., 2020; Lau et al., 2017; Stirman et al., 2019). The structure of the manual was adapted from three sources: 1) AIM HI observational coding system (Brookman-Frazee & Cheblowski, 2014), used in a randomized community effectiveness trial of AIM HI, a clinical intervention and therapist training model for children with autism spectrum disorder and challenging behaviors receiving community mental health services, 2) Evidence-based Practice Concordant care Assessment (ECCA) observational coding system (Lau & Brookman-Frazee, 2020), used in an observational study examining the extensiveness of EBP strategy use within sessions of multiple EBPs implemented in the Los Angeles County Department of Mental Health (LACDMH), and 3) Observer OPTION5 for Youth Psychotherapy Context coding manual, used to examine in-session shared decision-making between caregivers and therapists in the same LACDMH context (Wright, 2020). The manual serves as a companion guide for training new coders, as well as a reference document for trained coders to use while reviewing sessions. As such, this manual contains information to help the coder make decisions in an informed and reliable manner and provides a thorough description of each adaptation code.

# PURPOSE OF CODING

The purpose of the coding process is to measure and <u>characterize therapist adaptation</u> <u>behaviors directed at both youth clients and caregivers</u> during psychotherapy sessions. Coders will assess specific therapist behaviors in audio recordings of therapy sessions. After coders listen to an audio-recorded psychotherapy session, they will assign ratings and write detailed notes on a number of therapist adaptation behaviors and <u>provide timestamps</u> when an adaptation behavior has occurred.

**Importance of Reliability:** The goal of the coding process is to obtain valid and reliable descriptive data about therapist behaviors during the session. The potential validity of the codes is based, in part, on the extent to which the codes are used reliably by multiple coders. Validity means that the measure actually reflects the real-life phenomenon. Reliability refers to the degree to which independent observers provide the same (or similar) ratings of the events that they observe. For example, if two different coders were to use very different codes to describe the same event, the coding system would be unreliable and have little meaning or validity. Thus, it is critical to maximize the degree to which independent coders code sessions similarly. To achieve that objective, a number of different elements have been put in place to maintain the reliability of the codes including: (a) clear definitions of codes, (b) a structured coding process, (c) training and ongoing practice, and (d) continuous reliability review. Reliability is absolutely critical to the scientific process and most of the instructions in this manual are designed to help you code as efficiently and reliably as possible. If recordings are not coded reliably, the objectives of the study will be compromised.

# CODER TRAINING PROCESS

The training process includes the following steps:

- 1) Read *Treating Trauma and Traumatic Grief in Children and Adolescents* by Drs. Judith A. Cohen, Anthony P. Mannarino, & Esther Deblinger
- 2) Take 11-module TF-CBT training course (<u>https://tfcbt2.musc.edu/</u>) and complete all module quizzes
- 3) Independent Review of "Your Very Own TF-CBT Manual" (Hendricks et al., 2014), used in the LACDMH
- 4) Independent Review of the "Session-level Adaptations Coding Manual-Observer"
- 5) Initial Didactic Training (approximately 3 sessions):
  - a. Session 1: Introduction
    - i. Review background and purpose of coding
      - ii. Overview of coding procedures
    - iii. Discussion of confidentiality and potential reactions to session content
  - b. Sessions 2 and 3: Practice Coding
    - i. Review each code individually (including discussion of the behaviors that fall under each code and how the rating is determined for each code)
    - ii. Code sample sessions as a group using the Adaptations Coding Sheet
    - iii. Stop audio every 5 minutes coders indicate on Adaptations Coding Sheet which codes occurred in the segment, then discuss as a group
    - iv. At the end of the session, code individually/discuss as group individual ratings
- 6) Individual Practice Sessions: After the initial didactic trainings, each coder will independently code at least 6 practice sessions. After coding, the coder will meet with the master coder to assess reliability with the "gold standard" codes and discuss areas of discrepancies. Coders are considered "trained" when they reach an average of 80% agreement with gold standard codes across at least 6 different coding sessions (average 80% agreement across all coding sheets). Percent agreement is calculated as follows: number of agreements (within +/- 1 point) divided by the number of agreements and disagreements multiplied by 100. Once a coder is considered reliable, they will be assigned a minimum of 4 "real" audio-recorded sessions to code every week. If more than 2 weeks of coding are missed, coders are required to re-read the entire manual and attend a booster session to prevent drift (i.e., helps prevent coders from inadvertently imposing their own definitions and standards on items).
- 7) Ongoing "booster" sessions: Approximately every 1-2 months, interrater reliability for each code is assessed to identify problematic codes (kappa/ICC < 0.6). If/when these codes are identified, a revised coding manual along with a coder booster session is provided to clarify/address coding changes and questions. This manual is then updated to include clarifications given to coders.

# WORKING WITH SESSION RECORDINGS

#### **Definitions of Key Terms**

- a) "Client" the child or youth who is the target of treatment. For the purposes of this manual, "child" and "youth" will be used to refer to both children and adolescents. If multiple children are present within a session, be sure to identify the target client before the session
- b) **"Caregiver"** the primary caregiver (i.e., biological parent, foster parent, grandmother, aunt, or other caregiver) of the target client.
- c) *"Therapist"* the person who delivers therapeutic interventions; other terms include provider and clinician.

#### **Session Participants**

An individual is considered a session participant, if the therapist directs their attention to that individual for >10 minutes of the session.

If there is more than one child in the session (e.g., siblings or friends) you should code the target as "client" regardless of which child the intervention strategies are directed toward. Because these are audio recordings, it may be difficult to definitively identify the "target client" so please consult with the master coder if you are unsure. The same reasoning applies to adults. Code "client" when a strategy is targeted to any child in the room and code "caregiver" when it is targeted to any adult caregiver.

## Confidentiality

Session recordings include content that should be protected as private, confidential information. This is both a legal and ethical obligation.

- 1) When discussing a case with project team members or supervisors, do not use the participant's full name. Use their initials or participant ID.
- If you come across a name that you recognize, keep that information confidential. Please alert the master coder if you do. It is inappropriate to share any information about a family with any individual outside the research center.
- 3) Never e-mail identifying information about project participants. E-mail is not a safe way to transmit information and is an ethical infraction if used inappropriately.
- Never discuss any session content with people outside of the coding team. If you would like to process something you heard in session, please contact Stephanie Yu (stephaniehtyu@ucla.edu).

#### **Storing Coding Sheets**

You will take coding notes electronically:

- 1) Open the password-protected "Adaptations Coding Sheet" word doc on the LauLab01 server.
- You will store the word-doc version of the coding sheet in the folder labeled with your name on the LauLab01 Server. When you are ready, "Save As" and rename doc to "ADTHERAPIST ID\_RECORDING ID\_DATE CODED\_INITIALS" (Example: AD14\_601\_3.30.22\_SY)
- 3) Email Stephanie to let her know when you have finished coding the session (<u>stephaniehtyu@ucla.edu</u>)

# **GENERAL CODING GUIDELINES**

You will be coding an entire therapy session at a time which is usually 45-60 minutes long. Some may be briefer. However, the coding process can extend to up to 2 hours. Descriptive notes will be taken under the appropriate code. Please use the following process:

- Observe and Take Notes: Listen to the entire session while taking ongoing notes on the Adaptations Coding Sheet with examples of each element you observe to help guide your ratings. Pause the video at least every 5 minutes to allow for sufficient time to write examples of the adaptation behaviors observed. Do not attempt to score until after the entire session is reviewed. In your notes, mark the estimated timestamps of therapist adaptation behaviors. This will facilitate and make it easier to go back and review segments, if necessary.
  - Capture enough content of therapist statements to determine your ratings: It may not be necessary to capture each therapist statement verbatim, particularly for long statements or segments of a session that have lots of content to capture. In such instances, note an asterisk \* along with the segment of time you are capturing (e.g., 1:30 – 4:00 min mark) and provide a summary of the details of the discussion.
- 2) **Assign Ratings:** Review notes for each code and then assign a rating for each code.

#### Other Important Guidelines

- <u>Time Considerations</u>: Coding one session should take approximately 1.5 2 hours or more. Only begin coding a session if you know that you will have time to finish it. <u>Do not</u> <u>rush or fast forward through the session</u>. Each session will be very different so do not try to complete a particular session in any set amount of time or faster than previous sessions. Rushing may compromise the reliability of coding. In addition, coding for too long continuously, or while very tired may compromise reliability. We recommend that coders take at least a short break between sessions and not code more than 2 therapy sessions in one sitting.
- 2) <u>Code Audible Behaviors not Intentions:</u> Coders should only score what the therapist actually does in session, not what might have been done. Try not to speculate too much on what the therapist may have been intending to do, only focus on what they did or said. Only verbally heard therapist behaviors should be considered when scoring therapist adaptations. Here is as brief summary of important guidelines:
  - a. Code only therapist behavior that is heard.
  - b. Rate only what a therapist <u>does</u> and not what you believe the therapist might have <u>intended</u> to do.
  - c. Never <u>assume</u> or <u>interpret</u> what a therapist <u>might</u> be doing. If there is no behavioral evidence of an adaptation behavior in the form of something the therapist says, then <u>do not endorse</u> the corresponding item.
- 3) Jumping the Gun: Since observational ratings refer to the entire session, they should not be scored until the entire session has been heard. Therapist adaptation behaviors that occur later in the session may influence a coder's effectiveness estimation of an adaptation that takes place earlier. Re-estimation is important because it can result in a coder increasing or decreasing an extensiveness score. For example, an adaptation behavior not initially thoroughly executed is later revisited in a more thorough manner resulting in a higher code. Re-estimation can also work in the reverse.
- 4) **<u>Be Thorough:</u>** Make sure that you know each item. When coding, always have the manual present and refer to it whenever there is any confusion about rating an

adaptation behavior. Periodically (e.g., after coding every 6-8 sessions) review both the Session-level Adaptations Coding Manual and TF-CBT manual in detail. Review helps ensure reliable ratings and protects against coder drift (i.e., helps prevent coders from inadvertently imposing their own definitions and standards on items). Finally, because coding tapes is a demanding and work-intensive process, do not do other tasks when coding (e.g., texting, material preparation, etc.).

- 5) <u>Avoiding Potential Biases</u>: Coders should be careful to avoid instances of response bias, such as "halo" effects. Halo effects refer to situations where the coding for one item is biased or influenced by the coding of another item, or by a global judgment about the whole session. Potential biases come in many forms. Here are some relevant examples:
  - a. A coder decides they really like the therapist or believes the therapist is very competent. As a result, the coder gives high scores to too many items.
  - b. A coder observes early on that, if the session was stopped, the adaptation behaviors would receive low scores. Having formed a negative opinion, the coder does not give sufficient weight to adaptation behaviors that appears later in the session. The coder therefore marks most items as not occurring.
  - c. A coder intentionally decides or unintentionally rates adaptation codes as though two different items naturally go together.

To avoid halo effects, coders must follow the consistent criteria provided by this manual. Coders must code each item as a separate, independent entity that is not influenced by other items. Essentially, coders should treat each item as if it is completely uncorrelated with every other item even if that item appears to have similar characteristics.

- 6) <u>Coding Sensitivity</u>: When coding adaptation behaviors, use a fairly low threshold for deciding whether any given behavior was present. That is, if there is some evidence that the adaptation was present; code it as at least a 1.
- 7) <u>Call' em Like You See' em</u>: Although your threshold for determining that something is "code-able" should be relatively low, you should not assign a code unless what you are observing is squarely consistent with the definition of the adaptation code. Please remember that not every adaptation behavior can be scored and the goal is not to indicate every possible code that might possibly be consistent with what the therapist is doing. The selected behaviors are not an exhaustive list of all dimensions of therapist adaptation behaviors and therefore cannot capture every behavior. Coders should therefore not stretch the assessment of behavior just so it will fit into one of the items (even if it seems like a particularly potent therapeutic moment). When behavior is forced to fit certain items (or vice-versa), coder reliability is severely compromised. A coder can note particularly salient, but un-scorable therapist behaviors for future discussion in the notes section of the coding.
- 8) <u>Tendency to "Over-Code" When Fewer Strategies are Evident</u>: It may be tempting to "stretch" too far to code adaptation behaviors when there are few or none of our coded adaptations evident in particular 5-minute segments (or stretches of segments). There may be periods of time with no codes. Try to find the right balance of making sure you've identified strategies that were evident, but not forcing a code that doesn't really fit because you might be worried that you haven't coded enough.
- 9) <u>Coding "Is" not "Ought":</u> All coding focuses on behavior. Thus, coders should only capture what is *actually* done in session, not what might have been done or *should* have been done. Content should only be captured if it is represented in the therapist's behavior (e.g., what the therapist does or says). Here is a brief summary of important guidelines for coding "is", not "ought":
  - a. Code only behavior NOT your interpretation of behavior.

- b. Code only what is done, not what you believe the therapist should have done, and not what you believe the caregiver or therapist intended to do.
- c. Never assume or guess what a therapist might be thinking. If there is no behavioral evidence, in the form of something the therapist says or does, then do not capture.

#### **GENERAL CODING ADAPTATION GUIDELINES**

Detailed descriptions and some examples of each item/code will be presented in "Coding Adaptations Criterion." Code/Item descriptions are designed to provide coders with the guidelines required to promote effective understanding and reliable scoring for each item. As such, descriptions are intended to provide both a detailed introduction to the content of that item and a practical reference for trained coders to aid in the scoring process. Please note that ratings are not defined by the caregiver or client's response to the strategy or the apparent success of the strategy, but rather solely on what the therapist is doing. Therapist's consistent attempts should be coded as such, regardless of whether the therapist is ultimately successful.

#### **Extensiveness Ratings**

As described earlier, every 5 minutes (or less), coders will take notes about which (if any) of the adaptations the therapist used. These data will provide information about the occurrence of adaptations, and how frequently they were made. At the completion of the session, coders will assign a rating for each of the adaptations that were made in the session. This extensiveness rating is designed to reflect the thoroughness or intensity of the adaptation behavior, as described below. "Extensiveness" is coded on a 7-point Likert scale as follows:

0	1	2	3	4	5	6
Not at all			To a moderate	extent	Тс	a great extent

Rating	Description
0	Therapist did not make this adaptation.
1-2	Therapist adaptation was brief, made in a way that was minimal, cursory, or fleeting (e.g., involves short phrases or sentences)
3-4	Therapist adaptation was moderately explicit/obvious (e.g., made over the course of a single session activity that takes up a notable portion of the session).
5-6	Therapist adaptation was very explicit/obvious as shown (e.g., therapist spending considerable time and effort, where the adaptation was made throughout most of or the entire session).

"Extensiveness" reflects two related dimensions that coders must consider: the thoroughness of the adaptation and the frequency of the adaptation behavior.

- 1) **Thoroughness** is determined by:
  - a. The concentration of effort or commitment the therapists puts into the adaptation
  - b. The detail, depth, or intensity of the adaptation behavior
  - c. The extent to which the therapist follows through with the adaptation

Many contextual factors (e.g., client challenges, client emergency) can make it difficult for a therapist to make adaptations to TF-CBT delivery. Thus, thoroughness is not defined by the youth's or caregiver's response to or the apparent success of the

adaptation. For example, if a youth consistently gets off task and the therapist is attempting to make an adaptation to increase engagement, the therapist would get higher ratings if they consistently attempt adaptation behaviors to refocus the youth, regardless of whether the therapist is ultimately successful.

#### 2) **Frequency/Duration** is determined by:

- 1. Whether the adaptation occurred at all
- 2. The number of instances a therapist makes a specific adaptation
- 3. The amount of time a therapist spends on the adaptation

In other words, whereas thoroughness relates to how intensively a therapist pursues a specific adaptation, frequency relates to the number of times and/or the amount of time a therapist spends on an adaptation during a session.

Thoroughness and Frequency are often but not always highly correlated. Some adaptation behaviors could occur fairly briefly, but very thoroughly, and others could occur frequently, but not necessarily thoroughly. Generally, however, strategies that are pursued thoroughly are likely to be pursued frequently, or for a longer duration during the session, thus clearly generating a high extensiveness rating.

Coders must consider both dimensions (i.e., thoroughness and frequency) of extensiveness for all adaptation behaviors in each scoring session. To determine how much weight to assign the two dimensions (i.e., frequency and thoroughness) for each item, coders will have to rely on their training, item descriptions, familiarity with the scale, and experience in coding recordings. In sum, extensiveness ratings are assigned only at the end of the entire session and provide a reflection of the intensity for each adaptation behavior used in each session. These ratings will be used to examine the depth of the adaptations, in contrast to the frequency counts/time duration which reflect the breadth of adaptations made.

#### **Exemplars**

To assist raters to assess conversations and ultimately score sessions, we have provided some example phrases. These phrases are suggestions, not prescriptions for scoring. Each code's description in this manual includes examples of therapist descriptions of their behaviors, which are used as prototypes for categorizing in-session therapist adaptations. Exemplars are meant to help coders assign codes in a reliable manner by: (a) providing coders with an idea of what a given adaptation behavior might look like and (b) helping coders differentiate between similar items. Exemplars are presented as a single sentence, or as a brief series of sentences to help cue the coder to prototypical content of the code. Exemplars are not meant to reflect exact ratings.

Exemplars are also not meant to reflect extensiveness. They do not represent examples of highly extensive (e.g., "6"), considerably extensive (i.e., "3"), or any other extensiveness rating of therapeutic interventions. When observed therapist statements match exemplars, this suggests only that the code should be given for a particular adaptation behavior, but it does not indicate what extensiveness rating should be given.

#### Item Distinction

**Multiple Codes:** Sessions can and will often be co-coded for multiple adaptations. It is therefore important to consider all possible items when coding sessions so that the multiple aspects of adaptation behaviors can be captured. Use the provided information to guide your coding decisions and code the responses in context of this information.

**Items that Co-occur:** Many items assess adaptation behaviors that may tend to co-occur. For example, Delivery Technique and Personalize Content may co-occur if the therapist is using a Delivery Technique that is Personalized to the child client's interests. However, even though items tend to co-occur, extensiveness scores do not. Therapists can receive high extensiveness scores on one item and low extensiveness scores on a co-varying item, depending on the particular circumstances of the adaptation.

In sum, even though each adaptation item represents a unique feature of therapist behavior, item overlap exists and poses a challenge for coders who need to determine which item(s) to code. An Item Distinction subsection is included to help coders make some of these distinctions. This subsection contains information regarding how target items are to be distinguished from other similar items or items that tend to co-occur. Each entry describes how the target item differs in content, execution, and focus from other items. Exemplars are designed to highlight differences between target versus comparison items and are provided for most entries.

# **Sanctioned Adaptations**

Specific adaptations are recommended in some treatment manuals (e.g., TF-CBT). They still count as adaptations that we will code, but they are just sanctioned ones.

Example		Reason
"Use of psychoeducation and relaxation"	This is not an adaptation	For TF-CBT, psychoeducation and relaxation are considered core components of the practice, so here this would just be part of the therapy protocol, not an adaptation.
"Also, demonstrated belly breathing exercise using methods that would be easier for client to understand with the use of toys."	This is an adaptation if the toys therapist used were not explicitly described or suggested by the manual.	The adaptation is coded as Modify Presentation - Delivery Technique.

\***Note**: Exemplars throughout the manual are drawn from therapist reports of adaptations. These examples are used to help coders distinguish differing uses of codes. However, coding will require listening to session audio recordings, such that coders will need to independently identify instances of adaptation based on the content of the session audio recordings.

# USING THE ADAPATIONS CODING SHEET

- 1) <u>Coding Therapist Behaviors:</u> Codes for adaptations are focused on the therapist behaviors. They could be behaviors initiated by the therapist, or therapist response to the target client or caregiver.
- 2) <u>Timestamps</u>: Opportunities for adaptation behaviors vary greatly between therapists. It is very important that you take detailed notes with timestamps, so that we can review audio recordings when needed.
- 3) <u>Note Taking</u>: Note-taking is critical for measuring reliability. It is natural to take notes of therapist behaviors that may not actually be eligible for coding. If you take notes, but aren't counting those behaviors when applying your ratings, then please follow this notation process:

(X) TIME STAMP - Notes that I am not counting .... stuff that therapists says.....
 Provide rationale about why therapist behaviors are not eligible for coding

4) <u>No Occurrence of Specific Item</u>: If therapist behaviors for specific items do not occur in session, please write, "Not observed" in the notes box. This will help the master coder understand when items are coded "0."

#### 5) Tracking Session Participants on the Coding Sheet

• Specify who was present in session.

- Unfortunately, we must assume a gender.
- Track "minutes therapist directed attention to caregiver(s)" and "minutes therapist directed attention to child."
  - Rounding to nearest minute is acceptable
  - o Acceptable if time intervals overlap between caregiver & child
  - If therapist's attention to child is mostly consistent (e.g., with brief interaction with caregiver), then it can count as one continuous interval instead of breaking it up.

Example.				
Session Participants	Present?	Unfortunately, we must assume a gender	# minutes therapist directed attention to:	Total
	No = 0 Yes = 1	(e.g., boy, girl, mother, father, female teacher, etc.)	*If possible, write time intervals	Minutes
Child	1	Boy	12-15; 23-28; 36-37; 40 - 43	14 minutes
Caregiver 1:	1	Mother	0-23; 28-45	40 minutes
Caregiver 2:	1	Father	10-22; 30-40	18 minutes
Other Provider:	0	N/A	N/A	N/A
Other:	0	N/A	N/A	N/A

#### 6) <u>Reminders of General Coding Procedure & Considerations</u>

- Each session can be coded for multiple adaptations.
- Read the entire codebook before you start coding each time you sit down to code.
- Read the description for each code *each time you assign it to make sure it fits*. Also read other code description that you think could possibly fit the adaptation to help you make sure you've made the right distinction.
- Make note about anything that's uncertain for you in the coding sheet.
- Read the codebook again after you finish coding—if you realize that something may not fit after you've assigned it, go back and check.
- The criteria for coding an item into a specific category must be explicitly present for the item to be coded. **Do not make assumptions** about the items.

Example of Incorrect Assumption				
Example	Incorrect Assumption	Explanation		
"I was implementing Maintenance with CT and mother while at the same time engaging family in the last days of treatment. CT had specifically requested that I come to the house and play games with him since I had spent most of my time with the parents in the office working on interpersonal conflicts and parenting skills." (E.g., Therapist is playing a game with the client while in session, but not clearly using the game to explain or discuss concepts)."	Modify Presentation – Delivery Technique	While one might think this is a Modify Presentation adaptation (specifically Delivery Technique sub-type), it is not explicitly clear whether the therapist is actually using the game to present concepts to the client. The therapist may simply be playing a game with the client to engage/keep the client's attention.		

# ADAPTATIONS CODING CRITERION

Detailed descriptions and some examples of each item/code are presented. Code/Item descriptions are designed to provide coders with the guidelines required to promote effective understanding and reliable scoring for each item. As such, descriptions are intended to provide both a detailed introduction to the content of that item and a practical reference for trained coders to aid in the scoring process.

Ratings are not defined by the caregiver or client's response to the strategy or the apparent success of the strategy, but rather solely on what the therapist is doing. Therapist's consistent attempts should be coded as such, regardless of whether the therapist is ultimately successful.

## I. Modify Presentation Adaptations Coding Criterion

Modify Presentation adaptations are those made to the method or presentation of treatment delivery, including anything the therapist does that changes the presentation or delivery technique during the session. These are adaptations that can modify the language/terminology (e.g., simplifying), presentation (e.g., presenting, teaching, or delivering the content or material), or explanation of an evidence-based practice (EBP) or practice components (Barnett et al., 2018; Kim et al., 2020; Lau et al., 2017; Stirman et al., 2015; Stirman et al., 2019).

## Modify Presentation Adaptation (Types)

- 1. Tailor Communication
- 2. Delivery Technique
- 3. Personalize Content

## Item 1. Tailor Communication

The therapist tailors the language or terminology used to communicate the EBP content, materials, or messages.

**NOTE:** Direct translation of an entire session in a non-English language will not be considered an adaptation given that it is just delivering the session material in another language.

#### Examples:

- The therapist interchanges jargon for more developmentally appropriate words (e.g., using simpler language to describe practices).
- The therapist uses local colloquialisms, proverbs, or idioms to improve cultural or region-specific relevance and acceptability (e.g., the use of conceptually equivalent idioms of depression; cultural conceptual translation).
- The therapist weaves in translation of EBP content or messages in a non-English language throughout the session (i.e., perhaps as an engagement strategy).

0	1-2	3-4	5-6
Therapist did not make this adaptation.	Therapist adaptation was brief, made in a way that was minimal, cursory, or fleeting (e.g., tailors up to a few short	Therapist adaptation was moderately explicit/obvious (e.g., spends a moderate duration of time within a session	Therapist adaptation was very explicit/obvious (e.g., spends considerable time and effort to tailor communication to be

phrases using more culturally, developmentally, or other appropriate words).	activity tailoring communication to be more culturally or developmentally appropriate).	culturally or developmentally appropriate; may be throughout most of or the entire session). Therapist adaptation greatly alters the communication style of the entire session.
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# Exemplars of Tailor Communication Adaptations:

- "Translated content to Mandarin Chinese and used culturally-appropriate labels for emotions that ct was familiar with."
- "Most of my sessions are both Spanish and English to facilitate consumer to open up and be able to express her feelings and thoughts of her traumas."
- Therapist describes Cognitive Coping as being a thought explorer and frames activity in this language.

# Coding Tips:

 Using a developmentally appropriate word one time in the context of an activity does not constitute a **Tailor Communication** adaptation (Example: Calling a Relaxation exercise/guided imagery a "story" one time). A **Tailor Communication** adaptation would constitute the therapist framing the whole activity around the use of more developmentally appropriate terminology.

#### Item Distinction

- Vs. Delivery Technique. A Tailor Communication adaptation would be indicated by a change in the language that the therapist uses to convey TF-CBT content whereas a **Delivery Technique** adaptation would be indicated by a change in the method or technique that the therapist uses.
- Vs. Personalize Content. A Tailor Communication adaptation would be indicated by a change in the terminology or language that the therapist uses to communicate TF-CBT content whereas a Personalize Content adaptation is indicated by a change in the way that the therapist delivers TF-CBT content that is responsive to the child or family's lived experiences, preferences, culture, or religion/spirituality.

#### Item Co-occurrence

• **Tailor Communication** could co-occur with **Personalize Content** for example if the therapist **Tailors Communication** in a way that is explicitly aligned with the client's or family's culture.

# Item 2. Delivery Technique

The therapist changes the technique or method by which they deliver, present, or communicate the TF-CBT content, materials, or messages in a way *that is not explicitly provided by the manual*.

Examples: To help explain, practice, or present TF-CBT content, the therapist uses (not

<ul> <li>explicitly provided by the manual):</li> <li>hands-on activities (e.g., art, music, crafts), toys, or games</li> <li>video or other technology</li> <li>graphics or visual aids (e.g., adding visual aids for lower literacy levels)</li> <li>storybook</li> </ul>				
0	1-2	3-4	5-6	
Therapist did not make this adaptation.	Therapist adaptation was brief, made in a way that was minimal, cursory, or fleeting (e.g., briefly uses their own toys, games, visual aids, etc. as tools to assist in demonstrating a concept when not provided or suggested in the manual).	Therapist adaptation was moderately explicit/obvious (e.g., spends a moderate duration of time, or demonstrates a concept entirely using their own toys, games, visual aids, etc. when not provided or suggested in the manual).	Therapist adaptation was very explicit/obvious (e.g., explains most or all session concepts entirely using their own toys, games, visual aids, etc., when not provided or suggested in the manual; therapist adaptation greatly alters the delivery technique of the entire session when not provided or suggested in the manual).	
<ul> <li>Exemplars of Adaptations to Delivery Technique:</li> <li>"Also, demonstrated belly breathing exercise using methods that would be easier for client to understand with the use of toys."</li> <li>"I utilized audio video to assist client in understanding the 3 parts of anxiety &amp; teach about CBT."</li> <li>"I presented an art exercise during session to further present affect modulation and help client understand the process of identifying different types of feelings."</li> <li>"Client wanted to make bracelets, so I turned it into a relaxation technique that he could use to help decrease his aggressive tendencies. I helped him do some deep breathing exercises before we started and also progressive muscle relaxation techniques. While we were making the bracelets, I discussed other ways we could relax or do things with our hands to help us relax, not just making bracelets, but if he wanted to make bracelets that would also be a great relaxation technique."</li> <li>"Created an art activity to give a visual of cognitive restructuring."</li> <li>"Rather than following a script for relaxation and narrative: trauma I attempted to use puppets to allow my client to projectively process and integrate psychological themes of discomfort."</li> </ul>				

# Coding Tips:

• Note that many games, art activities, visual aids, and other hands-on activities that

might seem like a **Delivery Technique** adaptation are provided directly in the manual, by the TF-CBT certification organization, or by the Medical University of South Carolina training. These would not be considered adaptations given that the therapist was instructed to do so in the manual, or the therapist was provided these materials. A **Delivery Technique** adaptation would be indicated by something the therapist does beyond what is provided to them in the manual and other resources.

- If a therapist uses hands-on activities, games, toys, visual aids, music, art, video, etc. in session, these do not automatically constitute **Delivery Technique** adaptations. The therapist must be using these techniques or methods explicitly to deliver, present, or communicate TF-CBT or other EBP content, materials, or messages in ways that are not explicitly provided by the manual. For example, if a therapist is just playing a game with the client absent of any TF-CBT or other EBP content, this may just be for fun to engage the client or to build therapeutic alliance but would not be considered a **Delivery Technique** adaptation.
- Role play, practice, and modeling of skills would not be considered **Delivery Technique** adaptations given that these are typical skills used in EBP delivery.

#### **Item Distinction**

- Vs. Tailor Communication. A Delivery Technique adaptation would be indicated by a change in the method or technique that the therapist uses to convey TF-CBT content, whereas a Tailor Communication adaptation would be indicated by a change in the terminology or language that the therapist uses.
- Vs. Personalize Content. A Delivery Technique adaptation is distinct from a Personalize Content adaptation when the therapist makes a Delivery Technique adaptation independent of an explicitly stated interest, preference, or lived experience (e.g., culture, religion) of the client. In other words, the therapist makes an adaptation to how they delivered, presented, or communicated TF-CBT content but it was not made explicit whether this was a choice made personalized to the particular client's needs, lived experiences, preferences, or culture.
- Vs. Integrate Other Treatment Strategy. A Delivery Technique adaptation is indicated when a therapist changes the technique by which they deliver, present, or communicate TF-CBT content, materials, or messages. In many cases, it may be unknown whether a Delivery Technique adaptation would be applied alongside an Integrate Other Treatment Strategy adaptation because we might not know what usual care/typical delivery of that Other Treatment Strategy looks like. In these cases, we would not code it.
- Vs. Integrate Additional Problem Focus. A Delivery Technique adaptation is indicated when a therapist changes the technique by which they deliver, present, or communicate TF-CBT content, materials, or messages. In many cases, it may be unknown whether a Delivery Technique adaptation would be applied alongside an Integrate Additional Problem Focus adaptation because we might not know what usual care/typical delivery of that additional problem focus looks like. In these cases, we would not code it.

#### Item Co-occurrence

• **Delivery Technique** could co-occur with **Personalize Content** when the therapist applies an adapted **Delivery Technique** that is explicitly aligned with the client's or family's lived experiences, preferences, culture, or religion/spirituality.

# *Item 3.* Personalize Content

The therapist flexibly personalizes presentation of TF-CBT content in a way that is responsive to the child or family's lived experiences, preferences, culture, or religion/spirituality.

# Examples:

- Therapist personalizes teaching using child-specific interests.
- The therapist frames EBP content in a way that is congruent with the background and values of the client/family. For example, the therapists frames the intervention as something other than therapy (e.g., to address stigma).
- The therapist incorporates folk stories or examples that are relevant to the child's background (possible co-occurrence with **Delivery Technique**).

0	1-2	3-4	5-6
Therapist did not make this adaptation.	Therapist adaptation was brief, made in a way that was minimal, cursory, or fleeting (e.g., uses short phrases to personalize an intervention).	Therapist adaptation was moderately explicit/obvious (e.g., relates the content using examples specific to the client's background or personalized to the client's preferences over the course of a session activity).	Therapist adaptation was very explicit/obvious (e.g., relates content using examples specific to the client's background or personalized to the client's preferences throughout most or all of the session).

# **Exemplars of Personalizing Content:**

- "Related it to experiences an 11-year-old will encounter in the school and community setting. Cultural considerations (i.e., neighborhood violence, primary language used) due to the area client lives in and the school population."
- "Therapist applied the problem-solving practice for session using soccer rules and how the same rules can apply to home, school and everyday life."
- Framing the intervention as an educational or skill-building intervention (McCabe et al., 2005)

# Coding Tips:

A Personalize Content adaptation is not the therapist simply delivering TF-CBT in a way that addresses the client's specific trauma or addressing client factors that arise during session. This is considered typical of good TF-CBT delivery. A Personalize Content adaptation would be indicated if presentation of TF-CBT content was explicitly changed in a way that is responsive to the child or family's lived experiences, preferences, culture, or religion/spirituality.

# Item Distinction

• Vs. Tailor Communication. Whereas a Tailor Communication adaptation indicates a change in the terminology or language the therapist uses to communicate the EBP content, materials, or messages, a **Personalize Content** adaptation indicates a change in the way the therapist delivers TF-CBT content that is responsive to the child or family's lived experiences, preferences, culture, or religion/spirituality.

- Vs. Delivery Technique. Personalize Content would be indicated when the therapist personalizes teaching of content or TF-CBT material in a way that is aligned with the client's or family's lived experiences, preferences, culture, or religion/spirituality. A Delivery Technique adaptation is distinct from a Personalize Content adaptation when the therapist makes a Delivery Technique adaptation independent of personalization to this particular client's needs, lived experiences, preferences, or culture.
- Vs. Integrate Other Treatment Strategy. Personalizing or tailoring treatment content may seem to be a natural prerequisite of Integrating Other Treatment Strategies since a therapist would not likely Integrate Other Treatment Strategies unless it was indicated by the client's particular situation. The distinction is that a Personalize Content adaption refers specifically to personalization of TF-CBT content in a way that is responsive to the child or family's lived experiences, preferences, culture, or religion/spirituality.
- Vs. Integrate Additional Problem Focus. Personalizing or tailoring treatment content
  may seem to be a natural prerequisite of Integrating Additional Problem Focus since
  a therapist would not likely Integrate Additional Problem Focus unless it was
  indicated by the client's particular situation. The distinction is that a Personalize
  Content adaption refers specifically to personalization of TF-CBT content in a way that
  is responsive to the child or family's lived experiences, preferences, culture, or
  religion/spirituality.

#### Item Co-occurrence

- **Personalize Content** could co-occur with **Delivery Technique** when the therapist applies a **Delivery Technique** that is explicitly aligned with the client's or family's lived experiences, preferences, culture, or religion/spirituality.
- **Personalize Content** could co-occur with **Tailor Communication** for example if the therapist **Tailors Communication** in a way that is explicitly aligned with the client's or family's lived experiences, preferences, culture, or religion/spirituality.

# **II. Integrate Adaptations Coding Criterion**

Integrate adaptations are those that incorporate content from other EBPs, problem foci, or other additional content that is not specified as part of the EBP delivered in the session. The primary EBP of interest (i.e., TF-CBT) is used as a starting point, but other approaches or strategies are also used and integrated into the practice (Kim et al., 2020; Stirman et al., 2019).

# Integrate Adaptations (Types)

- 4. Integrate Other Treatment Strategies
- 5. Integrate Other Problem Focus

# Item 4. Integrate Other Treatment Strategies

The therapist integrates treatment strategies or approaches from other EBPs, or additional coping methods that are not specified as part of the primary EBP of interest, TF-CBT. In other words, TF-CBT is the starting point, but the therapist uses aspects of different therapeutic strategies in their treatment (e.g., joint play therapy).

## Examples:

- The therapist is delivering TF-CBT and incorporates another therapeutic approach (e.g., empty chair exercise [Gestalt approach]).
- The therapist uses joint play therapy in a session of TF-CBT.
- The therapist integrates spiritual or religious practices, coping skills, or change agents such as traditional healers, religious texts, or prayer.
- The therapist integrates culturally relevant or local remedies and practices to help the client (e.g., Tai Chi for relaxation; Degnan et al., 2010)

0	1-2	3-4	5-6
Therapist did not make this adaptation.	Therapist adaptation was brief, made in a way that was minimal, cursory, or fleeting (e.g., briefly integrates concepts from another treatment approach).	Therapist adaptation was moderately explicit/obvious (e.g., spends a moderate duration of time integrating another approach over the course of a session activity).	Therapist adaptation was very explicit/obvious (e.g., spends considerable time and effort integrating other treatment approaches throughout multiple activities, or throughout most of or the entire session).

# Exemplars of Integrating other Treatment Strategies

- *"Attentive listening, empty chair technique, explored triggers and discussed family relationships and dynamic."* (Primary EBP: Managing and Adapting Practice [MAP])
- "Therapist used MAP element Assertive Language and exposure used within meditation to assist CT in developing non-judgmental attitude towards thoughts." (Primary EBP: TF-CBT)
- *"Included interventions and teaching from 1-2-3 Magic Disciplinary system to illustrate and reinforce Triple P interventions."* (Primary EBP: MAP)

# Coding Tips:

• Mindfulness approaches such as meditation and yoga would not be indicated under the **Integrate Other Treatment Strategies** adaptation since these are explicitly suggested as Relaxation skills in the TF-CBT manual.

## Item Distinction

- Vs. Delivery Technique. A Delivery Technique adaptation is indicated when a therapist changes the technique by which they deliver, present, or communicate TF-CBT content, materials, or messages. In many cases, it may be unknown whether a Delivery Technique adaptation would be applied alongside an Integrate Other Treatment Strategy adaptation because we might not know what usual care/typical delivery of that Other Treatment Strategy looks like. In these cases, we would not code it.
- Vs. Personalize Content. Personalizing or tailoring treatment content may seem to be a natural prerequisite of Integrating Other Treatment Strategies since a therapist would not likely Integrate Other Treatment Strategies unless it was indicated by the client's particular situation. The distinction is that a Personalize Content adaption refers specifically to personalization of TF-CBT content in a way that is responsive to the child or family's lived experiences, preferences, culture, or religion/spirituality.
- Vs. Integrate Additional Problem Focus. An adaptation that Integrates Other Treatment Strategies is indicated by the therapist applying treatment strategies from other therapeutic approaches or frameworks or coping strategies that are still used to address client's primary presenting problems related to trauma. On the other hand, an adaptation that Integrates Additional Problem Focus is indicated by the therapist focusing on another problem outside of the client's primary presenting problem related to trauma.

#### Item Co-occurrence

- Integrate Other Treatment Strategy could co-occur with Personalize Content if for example additional coping strategies are delivered in the context of Relaxation that are personalized to the client's or family's culture or religion/spirituality.
- Integrate Other Treatment Strategy could co-occur with Integrate Additional Problem Focus if the therapist applies another evidence-based practice (EBP) strategy that is not within the TF-CBT framework, but is delivered in the context of addressing a problem outside of the client's primary presenting problem related to trauma.

# Item 5. Integrate Other Problem Focus

The therapist integrates another problem focus or topic into the session that is not directly addressed by the manual. The problem focus may be either therapist or client-driven and may or may not still be complementary or aligned/consistent with the EBP.

#### Examples:

• A therapist delivering TF-CBT adds a few sessions of CBT for insomnia for a client having difficulty sleeping (co-occurrence with **Integrate Additional Treatment Strategy**).

0 1-2 3-4 5-6	
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Therapist did not make this adaptation.	Therapist adaptation was brief, made in a way that was minimal, cursory, or fleeting (e.g., briefly discusses or integrates additional focus area[s]).	Therapist adaptation was moderately explicit/obvious (e.g., spends a moderate duration of time integrating additional focus area[s] over the course of a session activity).	Therapist adaptation was very explicit/obvious (e.g., additional focus area[s] are included over the course of multiple activities, or throughout most of or the entire session; therapist may assign homework dedicated to that additional
			problem focus).

# Exemplars of Integrating Other Problem Focus

- "The session structure was adjusted to account for client's cognitive abilities. The first portion was with the primary therapist and **speech language pathologist** and with the client, client's siblings, and caregiver." (Primary EBP: TF-CBT)
- Given client's increase in anxiety around upcoming court date, incorporated discussion about how court might be like for client in order to provide education to client and mother about how to feel safe in court. Provided developmentally appropriate education about court and attempted to normalize the experience using a puppet. Provided mother with homework to continue reiterating discussion of court and safety plan at home to help decrease clt's anxiety about court." (Primary EBP: TF-CBT; possible co-occurrence with **Delivery Technique**)

# Coding Tips:

• Addressing traumatic grief is explicitly part of the TF-CBT manual, so addressing grief in the context of client's trauma would not be considered an **Integrate Additional Problem Focus** adaptation.

# Item Distinction

- Vs. Integrate Additional Problem Focus. A Delivery Technique adaptation is indicated when a therapist changes the technique by which they deliver, present, or communicate TF-CBT content, materials, or messages. In many cases, it may be unknown whether a Delivery Technique adaptation would be applied alongside an Integrate Additional Problem Focus adaptation because we might not know what usual care/typical delivery of that Additional Problem Focus looks like. In these cases, we would not code it.
- Vs. Personalize Content. Personalizing or tailoring treatment content may seem to be a natural prerequisite of Integrating Additional Problem Focus since a therapist would not likely Integrate Additional Problem Focus unless it was indicated by the client's particular situation. The distinction is that a Personalize Content adaption refers specifically to personalization of TF-CBT content in a way that is responsive to the child or family's lived experiences, preferences, culture, or religion/spirituality.
- Vs. Integrate Other Treatment Strategy. An adaptation that Integrates Additional Problem Focus is indicated by the therapist focusing on another problem outside of the client's primary presenting problem. On the other hand, an adaptation that Integrates Other Treatment Strategies is indicated by the therapist applying treatment strategies from other therapeutic approaches or frameworks or coping

strategies that are still used to address client's primary presenting problems related to trauma.

## Item Co-occurrence

• Integrate Additional Problem Focus could co-occur with Integrate Other Treatment Strategy if the therapist applies another evidence-based practice (EBP) strategy that is not within the TF-CBT framework, but is delivered in the context of addressing a problem outside of the client's primary presenting problem related to trauma.

# **III. Extending Adaptations Coding Criterion**

The therapist extends the pacing of the EBP session or activity such that it takes a longer amount of time to deliver than suggested by the manual/protocol (Kim et al., 2020; Stirman et al., 2019). In the current study, we will assess this primarily by way of repetition given that this is an observable behavior.

## **Extending Adaptations (Types)**

6. Repeat Components or Material

# Item 6. Repeat Components or Material

The therapist repeats the same module, activity, or material within a session that is normally delivered only once for that session. This may be either therapist or client-driven (e.g., client has difficulty understanding a concept). This may also include times when the therapist explicitly reviews, practices, and/or reminds the client of a module, activity, or material they first introduced or taught in a previous session.

**NOTE:** Having the client practice a skill multiple times the first time the therapist introduces a concept would not be considered a repetition of components or material. However, if there is a break between when a therapist first delivers content or teaches a concept, and the therapist then repeats practice and/or teaching of the content/material, this could be considered repetition. We cannot assume that the therapist is repeating, revisiting, or reviewing modules or material unless it is explicit. If it is not explicit, it cannot be coded as such.

0	1-2	3-4	5-6
Therapist did not make this adaptation.	Therapist adaptation was brief, made in a way that was minimal, cursory, or fleeting (e.g., client expresses misunderstanding, so therapist briefly repeats material with a few short phrases).	Therapist adaptation was moderately explicit/obvious (e.g., client expresses misunderstanding, so therapist spends a moderate duration of time repeating explanation of a concept during a session activity).	Therapist adaptation was very explicit/obvious (e.g., therapist repeats an entire component or session activity, or needs to repeat throughout most or all of the session).

# Coding Tips:

- A brief summary reviewing what the therapist covered at the end of session would not be considered a **Repeat Components or Material** adaptation because the therapist may just be summarizing what was completed in the session for the client.
- A therapist repeating or reframing the way a question is asked when delivering content may seem like a **Repeat Components or Material** adaptation. However, this may actually be indicative of the therapist engaging the client in Socratic Questioning, a therapeutic method for "guided discovery in which the therapist poses questions to the client to help them explore their thoughts and beliefs, think critically about them to broaden their perspectives, and arrive at more realistic and adaptive points of view" (Vittorio et al., 2022). In many cases, this would not be considered a **Repeat Components or Material** adaptation.

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# **Appendix E: Session-level Adaptations Observational Coding Form**

SESSION-LEVEL ADAPTATIONS OBSERVATIONAL CODING FORM - NOTES									
Therapist ID:		Session ID:	Session Length:		Language: English (0) Spanish (1) Mandarin (2) Cantonese (3) Other (4)	Coder Initials:		Coding Date:	

**Instructions:** Use this form to take notes while you watch a therapy session recording. Pause the recording as needed and record notes with timestamps regarding therapist behaviors. After you watch the entire session, review your notes and assign ratings on the Ratings page.

TF-CBT Activities/Strategies Delivered in Session (e.g., Trauma Narrative)	Indicate Time (e.g., 00:00:00 – 00:26:36)
1.	
2.	
3.	
4.	
5.	

	Ι.	Modifying Presentation Adaptations
Item 1. Tailor Communication		
Item 2. Delivery Technique		
Item 3. Personalize Content		

	II.	Integrating Adaptations
Item 4. Integrate Other Treatment Strategies		
Item 5. Integrate Additional Problem Focus		

	III.	Extending Adaptations
Item 6. Repeat Components or Material		

Session Participants	Present? No = 0 Yes = 1	Caregivers/other providers (e.g., father, mother, etc.)	# minutes therapist directed attention to: *If possible, write time intervals	Total Minutes
Child				
Caregiver 1:				
Caregiver 2:				
Other Provider:				
Other:				

I. Modifying Presentation Adaptation Item	Rating (0-6)	How Many (0+)?	Total Time
Item 1. Tailor Communication			
<i>Item</i> 2. Delivery Technique			
Item 3. Personalize Content			
Modify Presentation Total (for "Rating," enter highest score of the 3 items)			

II. Integrating Adaptation Item	Rating (0-6)	How Many (0+)?	Total Time
Item 4. Integrate Other Treatment Strategies			
<i>Item</i> 5. Integrate Other Problem Focus			
Integrating Total (for "Rating," enter the highest score of the 2 items)			

III. Extending Adaptation Item	Rating (0-6)	How Many (0+)?	Total Time
Item 6. Repeat Components or Material			
Extending Total (enter same as above)			

Appendix F: Session-level TF-CBT Adherence Coding Manual – Observer

# Session-level TF-CBT Adherence Coding Manual – Observer

Updated: 4/24/23 Coding Manual Developed by Stephanie Yu, MA Co-Developed by Caroline Shanholtz, PhD & Gray Bowers, MA

Structure adapted from ECCA-Observer Coding Manual (Brookman-Frazee et al., 2020) and TF-CBT TPOCS Scoring Manual (Deblinger et al., 2013)

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# **GENERAL CODING GUIDELINES**

# **GENERAL CODING PROCESS**

# **CODING TF-CBT COMPONENT CRITERION**

- I. <u>Assessment</u>
- II. Psychoeducation about Trauma and/or TF-CBT
- III. Parenting Skills
- IV. <u>Relaxation</u>
- V. Affect Identification, Expression, and Modulation
- VI. <u>Cognitive Coping</u>
- VII. <u>Trauma Narrative</u>
- VIII. In-vivo Exposure
- IX. Conjoint Youth-Caregiver Session
- X. Enhancing Safety
- XI. Crisis Management

# **APPENDIX**

#### INTRODUCTION

This manual provides an overview of guidelines intended to help coders document the occurrence of specific therapist behaviors in an efficient, standardized, and reliable manner. The organization of this manual provides general guidelines about coding, with definitions of TF-CBT components adapted from the TF-CBT Brief Practice Checklist. The manual serves as a companion guide for training new coders, as well as a reference document for trained coders to use while reviewing sessions. As such, this manual contains information to help the coder make decisions in an informed and reliable manner and provides a thorough description of each TF-CBT CBT component code.

#### **GENERAL GUIDELINES**

The purpose of the coding process is to measure and <u>characterize therapist behaviors</u> <u>directed at both caregivers and youth clients</u> during psychotherapy sessions. Coders will assess specific interactions and behaviors in audio recordings of therapy sessions. After coders view a recorded psychotherapy session, they document the occurrence of a number of therapist behaviors and <u>provide timestamps</u> when a TF-CBT component has occurred.

**Importance of Reliability:** The goal of the coding process is to obtain valid and reliable descriptive data about therapist interactions and behaviors during the session. The potential validity of the codes is based on the extent to which the codes are used reliably by multiple coders. Validity means that that the measure actually reflects the real-life phenomenon. Reliability refers to the degree to which independent observers provide the same (or similar) ratings of the events that they observe. For example, if two different coders were to use very different codes to describe the same event, the coding system would be unreliable and have little meaning or validity. Thus, it is critical to maximize the degree to which independent coders code sessions similarly. To achieve that objective, a number of different elements have been put in place to maintain the reliability of the codes including: (a) clear definitions of codes, (b) a structured coding process, (c) training and ongoing practice, and (d) continuous reliability review. Reliability is absolutely critical to the scientific process and most of the instructions in this manual are designed to help you code as efficiently and reliably as possible. If recordings are not coded reliably, the objectives of the study will be compromised.

**Structure of Coding:** You will be coding an entire therapy session at a time which is usually 45-60 minutes; however, the coding process can extend to up to 2 hours per session. Descriptive notes will be taken under the appropriate code. The main body of this manual includes descriptions of the codes you will be looking for.

#### **Definitions of Key Terms:**

(a) **"Client"** – the child or youth who is the target of treatment. For the purposes of this manual, "child" and "youth" will be used to refer to both children and adolescents. If multiple children are present within a session, be sure to identify the target client before the session.

(b) *"Caregiver"* – the primary caregiver (i.e., biological parent, foster parent, grandmother, aunt, or other caregiver or guardian) of the target client.

(c) *"Therapist"* – the person who delivers therapeutic interventions; other terms include provider and clinician.

\* There will be sessions in which other individuals not among these three are included in the session. In your notes, please refer to them by their relationship to the client (e.g., sibling, foster sibling).

**Session Participants:** An individual is considered a session participant, if the therapist directs their attention to that individual for >10 minutes of the session.

#### CODER TRAINING PROCESS

The training process includes the following steps:

- 8) **Read** *Treating Trauma and Traumatic Grief in Children and Adolescents* by Drs. Judith A. Cohen, Anthony P. Mannarino, & Esther Deblinger
- 9) Take 11-module TF-CBT training course (<u>https://tfcbt2.musc.edu/</u>) and complete all module quizzes
- 10) Independent Review of "Your Very Own TF-CBT Manual" (Hamilton et al., 2014)
- 11) Independent Review of the "TF-CBT Adherence Coding Manual-Observer"

#### 12) Initial Didactic Training

- a. Review background and purpose of coding
- b. Overview of coding procedures
- c. Discussion of confidentiality and potential reactions to session content
- d. Review each code individually (including discussion of the behaviors that fall under each code)
- 13) Individual Practice Sessions: After the initial didactic trainings, each coder will independently code 6 gold standard session recordings. Gold standard is a pre-established code for observers to match their coding to as close as possible. After coding each recording, the coder will meet with the trainer to assess reliability with the "gold standard" codes and discuss areas of discrepancies. Coders are considered "trained" when they reach 80% agreement with gold standard codes across all 6 practice recordings (average 80% agreement across all coding sheets). Percent agreement is calculated as follows: number of agreements (within +/- 1 point on scale) divided by the number of agreements and disagreements multiplied by 100. Once a coder is considered reliable, they will be assigned "real" recordings to code every week. If more than 2 weeks of coding are missed, coders are required to re-read the entire manual and attend a booster session to prevent drift.
- 14) Ongoing "booster" sessions: Approximately every 1-2 months, interrater reliability for each code is assessed to identify problematic codes (kappa/ICC < 0.6). If/when these codes are identified, a revised coding manual along with a coder booster session is provided to clarify/address coding changes and questions. This manual is then updated to include clarifications given to coders and/or example observations.

#### WORKING WITH SESSION RECORDINGS

#### Confidentiality

Session recordings include content that should be protected as private, confidential information. This is both a legal and ethical obligation.

- (1) When discussing a case with project team members or supervisors, do not use the participant's full name. Use their initials or participant ID.
- (2) If you come across a name that you recognize, keep that information confidential. Please alert the trainer if you do. It is inappropriate to share any information about a family with any individual outside the research center.
- (3) Never e-mail identifying information about project participants. E-mail is not a safe way to transmit information and is an ethical infraction if used inappropriately.
- (4) Never discuss any session content with people outside of the coding team.

#### **Storing Coding Sheets**

You will take coding notes electronically:

- (1) Open the password-protected "TF-CBT Adherence Coding Sheet" word doc on the LauLab01 server.
- (2) You will store the word-doc version of the coding sheet in the folder labeled with your name on the LauLab01 Server. When you are ready, "save as" and rename doc to "ADTHERAPIST ID\_RECORDING ID\_YOUR INITIALS\_DATE CODED [MM.DD.YY]" (Example: AD14\_601\_SY\_06.29.19)
- (3) Email Stephanie to let her know when you have finished coding the session.(<u>stephaniehtyu@ucla.edu</u>)

#### **GENERAL CODING GUIDELINES**

Detailed descriptions and some examples of each item/code are presented. Code/Item descriptions are designed to provide coders with the guidelines required to promote effective understanding and reliable scoring for each item. As such, descriptions are intended to provide both a detailed introduction to the content of that item and a practical reference for trained coders to aid in the scoring process.

Please note that ratings are not defined by the caregiver or client's response to the strategy or the apparent success of the strategy, but rather solely on what the therapist is doing. Therapist's consistent attempts should be coded as such, regardless of whether the therapist is ultimately successful.

#### **Extensiveness Ratings**

As described earlier, every 5 minutes (or less), coders will take notes about which (if any) of the components the therapist used. This data will provide information about the occurrence of components, and how frequently they were delivered. At the completion of the session, coders will assign a rating for each of the components that were delivered in the session. This extensiveness rating is designed to reflect the thoroughness or intensity of the component delivery, as described below. "Extensiveness" is coded on a 7-point Likert scale as follows:

0	1	2	3	4	5	6
Not at all		To a moderate extent			Тс	a great extent

Rating	Description
0	Therapist did not deliver this component.
1-2	Therapist delivered component briefly or minimally (e.g., in a way that was cursory or fleeting).
3-4	Therapist delivered component with some extensiveness (e.g., in a way that was moderately explicit/obvious).
5-6	Therapist delivered component with high extensiveness (e.g., in a way that was very explicit/obvious. For example, the therapist spent considerable time and effort, where the component was delivered throughout most of or the entire session).

"Extensiveness" reflects two related dimensions that coders must consider: the thoroughness of the component and the frequency/duration of the component.

3) **Thoroughness** is determined by:

- d. The concentration of effort or commitment the therapists puts into the delivery of the component
- e. The detail, depth, or intensity of the therapist behavior
- f. The extent to which the therapist follows through with the component delivery

Many contextual factors (e.g., client challenges, client emergency) can make it difficult for a therapist to deliver TF-CBT adherently. Thus, thoroughness is not defined by the youth's or caregiver's response to or the apparent success of the component. For example, if a youth consistently gets off task and the therapist persists in delivering the component, the therapist would get higher ratings if they consistently work to refocus the youth back to the session content, regardless of whether the therapist is ultimately successful.

- 4) Frequency/Duration is determined by:
  - 4. Whether the component occurred at all
  - 5. The number of instances a therapist delivers a specific component
  - 6. The amount of time a therapist spends on delivering the component

In other words, whereas thoroughness relates to how intensively a therapist delivers a specific TF-CBT component, frequency/duration relates to the number of times and/or the amount of time a therapist spends on delivering the component during a session.

Thoroughness and Frequency are often but not always highly correlated. Some therapist behaviors when delivering components could occur fairly briefly, but very thoroughly, and others could occur frequently, but not necessarily thoroughly. Generally, however, components that are delivered thoroughly are likely to be delivered frequently, or for a longer duration during the session, thus clearly generating a high extensiveness rating.

Coders must consider both dimensions (i.e., thoroughness and frequency) of extensiveness for all therapy behaviors in each scoring session. To determine how much weight to assign the two dimensions (i.e., frequency and thoroughness) for each item, coders will have to rely on their training, item descriptions, familiarity with the scale, and experience in coding recordings. In sum, extensiveness ratings are assigned only at the end of the entire session and provide a reflection of the intensity for each component delivered in each session. These ratings will be used to examine the depth of the component, in contrast to the frequency counts/time duration which reflect the breadth of the component.

#### **Exemplars**

To assist raters to assess conversations and ultimately score sessions, we have provided some example phrases. These phrases are suggestions, not prescriptions for scoring. Each code's description in this manual includes examples of therapist behaviors, which are used as prototypes for categorizing in-session delivery of components. Exemplars are meant to help coders assign codes in a reliable manner by: (a) providing coders with an idea of what a given delivery of a component might look like and (b) helping coders differentiate between similar items. Exemplars are presented as a single sentence, or as a brief series of sentences, to help cue the coder to prototypical content of the code. Exemplars are not meant to reflect exact ratings.

Exemplars are also not meant to reflect extensiveness. They do not represent examples of highly extensive (e.g., "6"), considerably extensive (e.g., "3"), or any other extensiveness rating

of therapeutic interventions. When observed therapist statements match exemplars, this suggests only that the code should be given for a particular component, but it does not indicate what extensiveness rating should be given.

#### Item Distinction

**Multiple Codes:** Sessions can and will often be co-coded for multiple component items. It is therefore important to consider all possible items when coding sessions so that the multiple aspects of therapist behaviors can be captured. Use the provided information to guide your coding decisions and code the responses in context of this information.

**Items that Co-occur:** Many items assess components that may tend to co-occur. However, even though items tend to co-occur, extensiveness scores do not. Therapists can receive high extensiveness scores on one item and low extensiveness scores on a co-varying item, depending on the particular circumstances of the adaptation.

In sum, even though each component item represents a unique feature of therapist behavior, item overlap exists and poses a challenge for coders who need to determine which item(s) to code. An Item Distinction subsection is included to help coders make some of these distinctions. This subsection contains information regarding how target items are to be distinguished from other similar items or items that tend to co-occur. Each entry describes how the target item differs in content, execution, and focus from other items. Exemplars are designed to highlight differences between target versus comparison items and are provided for most entries.

#### **GENERAL CODING PROCESS**

<u>Time Considerations</u>: Coding one session should take approximately 1.5 - 2 hours. Only begin coding a session if you know that you will have time to finish it. Do not rush. Each session will be very different so do not try to complete a particular session in any set amount of time or faster than previous sessions. Rushing may compromise the reliability of coding. In addition, coding for too long continuously, or while very tired may compromise reliability. We recommend that coders take at least a short break between sessions and not code more than 2 therapy sessions in one sitting. Reliability is a main goal of coding and should be prioritized.

**Observe and Take Notes:** Watch the entire session while taking ongoing notes with examples of each TF-CBT component you observe to help guide your ratings. Pause the video at least every 5 minutes to allow for sufficient time to write behaviors observed.

In your notes, mark the estimated timestamps of therapist behaviors. This will facilitate and make it easier to go back and review segments, if necessary.

#### Note-taking example for coding Psychoeducation:

00:10:18 – 00:32:03: Therapist delivers psychoeducation through the book "A Terrible Thing Happened: A Story for Children Who Have Witnessed Violence or Trauma." Therapist uses the parallel story to encourage the client to share about their trauma and normalize the client's trauma experience. Therapist and the client take turns reading as suggested by therapist. Therapist uses this story to explain how some people might react after an upsetting event (e.g., nightmares). The content of the story includes the main character's physical and emotional reaction to an upsetting event and pictures the main character was instructed by his therapist to draw to express his feelings. Therapist discusses with the client how the main character recovered from their trauma. Combined with the story, therapist discusses client's feeling of sadness and having a headache to suggest reasons that client could benefit from therapy, relating client's experiences to the story. Therapist asks the client what helped the main character of the story feel better. Therapist asks the client to use their imagination to guess what might have been the bad thing that happened to the main character from the story. Therapist uses the story to guide the client to share their trauma experience. (~22 min)

**Capture Enough Content of Therapist Statements to Determine Your Ratings:** It may not be necessary to capture each therapist statement verbatim, particularly for long statements or segments of a session that have lots of content to capture. In such instances, note an asterisk \* along with the segment of time you are capturing (e.g., 1:30 – 4:00 min mark) and provide a summary of the details of the discussion.

**Being Thorough:** Make sure that you know each item. When coding, always have the manual present and refer to it whenever there is any confusion about a behavior. Periodically (e.g., after coding every 6-8 sessions) review the manual in detail. Review helps ensure reliable ratings and protects against coder drift (i.e., helps prevent coders from inadvertently imposing their own definitions and standards on items). Finally, because coding tapes is a demanding and work-intensive process, do not do other tasks when coding (e.g., texting, material preparation, etc.).

**Coding "Is" not "Ought":** All coding focuses on behavior. Thus, coders should only capture what is *actually* done in session, not what might have been done or *should* have been done. Content should only be captured if it is represented in the therapist's behavior (e.g., what the therapist does or says). Here is a brief summary of important guidelines for coding "is", not "ought":

- Code only behavior NOT your interpretation of behavior.
- Code only what is done, not what you believe the therapist should have done, and not what you believe the caregiver or therapist intended to do.
- Never assume or guess what a therapist might be thinking. If there is no behavioral evidence, in the form of something the therapist says or does, then do not capture.

<u>Avoiding Potential Biases</u>: Coders should be careful to avoid instances of response bias, such as "halo" effects. Halo effects refer to situations where the coding for one item is biased or influenced by the coding of another item, or by a global judgment about the whole session. Potential biases come in many forms. Here are some relevant examples:

- A coder decides they really like the therapist. As a result, the coder tends to mark every code as occurring for that individual or inflated ratings.
- A coder observes early on that, if the session was stopped, the session would receive low scores. Having formed a negative opinion, the coder does not give sufficient weight to behavior that appears later in the session. The coder therefore marks most items as not occurring.
- A coder intentionally decides or unintentionally acts as though two different items naturally go together or if one takes place the other automatically does as well.

To avoid halo effects, coders have to follow the consistent criteria provided by this manual. Coders must code each item as a separate, independent entity that is not influenced by other items. Essentially, coders should treat each item as if it is completely uncorrelated with every other item even if that item appears to have similar characteristics.
<u>Coding Sensitivity</u>: When coding, use a fairly low threshold for deciding whether any given strategy or behavior was present. That is, if there is some evidence that the strategy was present; code it.

**<u>Call' em Like You See' em</u>**: The selected behaviors are not an exhaustive list of all dimensions of therapist behaviors. Coders should therefore not stretch the assessment of behavior just so it will fit into one of the items (even if it seems like a particularly potent therapeutic moment). When behavior is forced to fit certain items (or vice-versa), coder reliability is severely compromised.

<u>Self-care:</u> Child trauma can be an incredibly heavy experience to hear about, even as a secondhand listener. Coders are encouraged to engage in self-care activities after listening to heavy sessions. If you would like to process something you heard in session, please don't hesitate to reach out to Stephanie Yu (stephaniehtyu@ucla.edu).

# CODING TF-CBT COMPONENT CRITERION

TF-CBT is a flexible, modular treatment, meaning that components do not necessarily need to be delivered in any particular order. Rather, they can be delivered when they are clinically indicated or relevant. Thus, a rating of 0 on any one component is not inherently an indicator of poor or non-adherent TF-CBT delivery. For example, it may not always be clinically relevant for all or even more than one component to be delivered in a single session. Focusing on just one component in a session is not uncommon.

## I. Assessment

### Item I. Assessment

During Assessment, the therapist gathers information to understand the client's presenting concerns, including but not limited to the client's symptoms, behavior problems, and/or overall functioning. Assessment may involve gathering information about the onset, duration, severity, and context of symptoms or behaviors through asking questions. A simple question like "How are you sleeping?" would NOT be coded as assessment, because this can just be asked during a check-in and does not necessarily rise to the level of assessment. Assessment constitutes a more in-depth process in which the therapist asks a series of questions to understand aspects of the client's overall clinical presentation. While the bulk of Assessment often occurs at the beginning of treatment, it can also be conducted throughout treatment. Assessment may also include the therapist's use of standardized assessment measures is NOT required to code assessment. The therapist may also give feedback on assessment measures by sharing findings with the client/family, discussing the meaning of the results, and/or discussing progress (e.g., scores now compared to scores at the beginning of treatment/earlier in treatment).

0	1-2	3-4	5-6
Therapist did not conduct Assessment in this session.	Therapist conducted Assessment briefly or minimally (e.g., briefly asked a few	Therapist conducted Assessment with some extensiveness (e.g., spent a	Therapist conducted Assessment with high extensiveness by inquiring in detail
Note: A rating of 0 is not inherently an indicator of non- adherent TF-CBT delivery. Sometimes it is not clinically relevant for all or even more than one component to be delivered in a single session.	questions related to the client's clinical presentation but without following through to ask about specific details).	moderate period of time focused on learning about the client's presentation, symptoms, and behavior).	to thoroughly understand the client's presentation, symptoms, behavior, and functioning. Note: A high extensiveness score may indicate that the therapist conducted a thorough functional behavior analysis of symptoms, including triggers, OR delivered a standardized assessment measure with feedback on the client's scores

- "I'm going to ask you some questions about how you've been feeling. I'll read the questions to you, and you can let me know if it is not true, sometimes true, or very true for you."
- "You mentioned that you've been having nightmares. How long has that been a problem, and how big of a problem is it? Is it every night that this happens or once a week? When you wake up from a nightmare what do you do? Is it difficult for you to fall back to sleep?"
- "Can we talk about the last time your child wouldn't listen when you gave a clear direction? I want to understand what happened right before the direction, once you gave it, and right after you gave it, to see if we can learn something."

### **Coding Tips:**

- Throughout treatment, the therapist may ask for the client's Subjective Units of Distress (SUDs; see Affect Identification, Expression, and Modulation) ratings. This may be done for variety of reasons (e.g., teaching the client to identify and label their emotions, assessing levels of distress during exposures and/or trauma narrative). Although we cannot assume therapist intent, assessing the client's SUDs rating is NOT likely to be coded as Assessment, as it is not likely to rise to the level of assessment as indicated in the code description (i.e., gathering information to understand the client's presenting concerns).
- Common assessment measures that may be used include the Child PTSD Symptom Scale (CPSS), University of California at Los Angeles Posttraumatic Stress Disorder Reaction Index (UCLA PTSD-RI), Pediatric Symptom Checklist-17 (PSC-17), Global Appraisal of Individual Needs Short Screener (GAIN-SS), Screen for Child Anxiety Related Emotional Disorders (SCARED), Mood and Feelings Questionnaire (MFQ), trauma checklist, and trauma symptom checklist.
- Assessment can be ongoing and occur at any point throughout the treatment. It does not have to just be the first time the therapist is evaluating a client's symptoms. The therapist can administer a measure or ask questions to assess symptoms at the beginning, midway through, at the end of treatment, or even periodically to get a sense and better understanding of a client's specific symptoms. This differs from the therapist asking questions to get general updates, a read on a situation, or check-in with how things are generally going with the client, which would not be coded as Assessment.

#### **Item Distinction**

- Vs. Other TF-CBT PRACTICE Components. Generally, the therapist may often ask the client questions during a check-in or if the client tells them something to better understand the situation or story. The therapist may be doing this to be able to respond appropriately or suggest/practice a relevant TF-CBT PRACTICE skill. In these situations, code the appropriate TF-CBT PRACTICE component and NOT Assessment. Assessment would ONLY be coded for instances in which the therapist is trying to get a better understanding of the client's overall clinical presentation.
- *Vs. Cognitive Coping.* When delivering Cognitive Coping, the therapist may engage the client in Socratic Questioning, or a method for "guided discovery in which the therapist poses questions to the client to help them explore their thoughts and beliefs, think critically about them to broaden their perspectives, and arrive at more realistic and adaptive points of view" (Vittorio et al., 2022). The Socratic Questioning method

may appear similar to **Assessment** given that the therapist is asking the client a series of questions. However, if the therapist is asking the client a series of guided questions that serve to challenge the client's negative automatic thought, thereby opening them up to adopting a more realistic/helpful thought, this would be coded as **Cognitive Coping** and NOT **Assessment**.

- Vs. Enhancing Safety. In the Enhancing Safety module, the therapist may ask the client/family questions to assess their knowledge of and skills in personal safety in order to develop a future plan for continued safety. This plan for safety is often but not always related to the client's specific trauma experience(s) (e.g., childhood sexual abuse, domestic violence, natural disaster). This is distinct from the Assessment code which is focused on gathering information to understand the client's overall presenting concerns.
- Vs. Crisis Management. During Crisis Management, the therapist may ask the client/family questions to evaluate the level of risk/safety concerns, as well as to develop a safety plan to help keep the client/family safe. Again, this is distinct from the **Assessment** code which is focused on gathering information to understand the client's overall presenting concerns.

## Item Co-occurrence

• **Psychoeducation.** Psychoeducation may co-occur with Assessment. For example, while asking questions to understand the client's clinical presentation and/or trauma experience or reviewing an assessment measure responses with the client/caregiver, the therapist may also provide feedback or information about common reactions to trauma. In these situations, both **Psychoeducation** and **Assessment** would be coded.

# II. Psychoeducation about Trauma and/or TF-CBT

### Item II. Psychoeducation about Trauma and/or TF-CBT Psychoeducation is introduced at the start of treatment and continues throughout the therapy process. Psychoeducation can be administered to either the youth, caregiver, or both. Psychoeducation may include any one or combination of the following:

- Providing general information about the nature of the youth's trauma and specific diagnosis, prevalence of the trauma experienced and associated symptoms (e.g., statistics about how many youth experience the trauma), general characteristics about the specific type of trauma experienced by the client, common causes of and reactions to trauma, contributing factors to the mental health problem, and common misconceptions about trauma or trauma exposure (e.g., the event being the fault of the client, that the client is the only one who is experiencing it)
- Providing information about the impact of trauma, for example regarding how trauma symptoms develop, to normalize clients' emotional and behavioral reactions to the trauma
- Providing a broad overview (e.g., brief rationale and/or description) of the TF-CBT treatment plan, including the treatment model, objectives and/or goals of the treatment, and how they can help. This may also include orienting the youth/caregiver/family to TF-CBT, such as session structure and expectations of therapy (e.g., attendance, homework)
- Providing psychoeducation to the caregiver about skills the client is learning in TF-CBT and how to support the client in using these skills
- Highlighting youth and caregiver strengths and connecting this to the treatment (e.g., the benefits of caregiver strengths in supporting the client through treatment)
- For traumatic grief cases (i.e., cases in which grief is an interrelated aspect of the trauma), psychoeducation may also include providing information about loss, grief responses, bereavement, and mourning

An additional goal of psychoeducation may be to gradually expose youth with general information about the trauma in a way that can reinforce accurate, helpful thoughts about what the youth experienced. However this aspect will likely be unclear since we do not have access to therapist metacognition or intent.

0	1-2	3-4	5-6
Therapist did not	Therapist provided	Therapist provided	Therapist provided
provide	Psychoeducation	Psychoeducation	Psychoeducation
Psychoeducation in	briefly or minimally	with some	with high
this session.	(e.g., briefly	extensiveness, or in	extensiveness, or in
	discussed what	a way that was	a way that was very
Note: A rating of 0 is	treatment would be	moderately	explicit and obvious.
not inherently an	like).	explicit/obvious (e.g.,	For example, the
indicator of non-		reviewed common	therapist clearly
adherent TF-CBT		patterns present in	explained a general
delivery. Sometimes		youth who have	psychological
it is not clinically		experienced similar	principle to the client
relevant for all or		problems).	(e.g., reviewed
even more than one			multiple common
component to be			reactions to trauma

delivered in a single session.	and discussed how each one would be addressed in treatment) and/or provided Psychoeducation for
	an extended period. Note: A high score may indicate that the therapist has clearly covered goals of Psychoeducation, including information on prevalence of trauma/symptoms, why it happens, common reactions to trauma/ symptoms, worries (e.g., thoughts, feelings, behaviors), and/or about the different
	CBT and how they address trauma.

- "When someone experiences trauma, it is very common for that person to have trouble going near where the trauma happened or that person may even experience intrusive thoughts related to the trauma. Have you experienced any of those things recently?"
- "Anxiety is like a false alarm that makes your body think there is something dangerous when there really is not. Have you ever walked by a car and the alarm went off even though no one was touching the car or trying to break in? It's kind of like that and we're going to work on making it so that you recognize what is a real alarm and what is a false alarm."
- "PTSD stands for post, which means 'after', traumatic, stress, disorder. So PTSD is something that occurs after a really scary event happens, such as someone getting really hurt in a car accident, or hurricane, or being sexually abused."
- "There are three main parts of PTSD. One is changes in how your body reacts, like when you told me how your heart races when you think about what happened. Another is changes in your thoughts, like how you mentioned thoughts about the trauma pop into your head even when you don't want them to."
- "That's right. You're not the only kid who has experienced sexual abuse. In fact, more than 1 out of 10 children experience sexual abuse in their lifetime."
- "Now we're going to read a story called 'A Terrible Thing Happened.' We're going to learn about someone who might have gone through something like what you did. Would you like to read it out loud, or do you want me to read it to you?"
- "I want to share with you some of what I know about how kids feel after physical

abuse. Sometimes they feel scared and worried that they will get hurt again. Sometimes they are angry and think they didn't deserve to be treated that way."

• "You aren't the only one who has had nightmares after sexual abuse. That is really common."

# Coding Tip

• If in a caregiver session, the therapist teaches and discusses with the caregiver how to support the client in using the skills they are learning in TF-CBT (e.g., Relaxation, Affect ID/Expression/Modulation), this would be coded as **Psychoeducation** given that the therapist is providing psychoeducation about TF-CBT to the caregiver and how to support the client in using their skills. However, if the therapist is just updating the caregiver on the client's progress without any real teaching components, then this would not be coded.

# **Item Distinction**

- Vs. Other TF-CBT PRACTICE Components.
  - If the therapist provides a broad overview of TF-CBT as part of Psychoeducation, including about the course of treatment/structure or brief discussion of specific components/skills, but does not actually do the component in session, the individual PRACTICE component skills would NOT be coded (e.g., Relaxation, Cognitive Coping).
  - Conversely, if the therapist introduces, teaches, or demonstrates a TF-CBT component/skill, and as part of this provides the rationale for the component, only the specific component code itself would be coded, while
    Psychoeducation would NOT be coded. Examples:
    - Relaxation: "Today, we'll be learning and practicing relaxation skills, how to calm your body, and ways to think differently so you feel better."
      - You would only code **Relaxation.**
    - Cognitive Coping: "Today, we'll talk about how to think in a different way to feel better. How you think impacts how you feel & what you do."
      - You would only code Cognitive Coping.
  - A therapist may also review previously taught PRACTICE component(s) with the client, for example if nearing the end of therapy/termination or between sessions. If the therapist's review of a PRACTICE component(s) essentially extends the learning and exceeds that of a brief check-in, including additional teaching, reminding, practicing the skill, etc., then the specific PRACTICE component code itself would be coded, while **Psychoeducation** would NOT be coded. This is because review that extends learning is effectively part of teaching that component and ensuring it was learned. However, if the therapist just checks in <u>without further or specific follow-up</u> (e.g., *"Do you remember what we learned last week about X?*"), this would NOT be coded.
- Vs. Parenting Skills. The therapist may provide Psychoeducation to the caregiver about what TF-CBT skills the client is learning and how to support the client in using these skills. This would ONLY be coded as Psychoeducation, UNLESS the therapist also teaches Parenting Skills such as praise or positive reinforcement to support the client in using the skills. In this case, both Psychoeducation and Parenting Skills can be co-coded.
- Vs. Enhancing Safety. Aspects of Enhancing Safety may appear similar to Psychoeducation in that the therapist may teach different concepts of how to keep

safe from different trauma experience(s). If the therapist is providing general information about the nature of the youth's trauma, specific diagnosis, common causes of and reactions to trauma, and a rationale for TF-CBT, ONLY **Psychoeducation** should be coded. However, if the therapist teaches the client skills related to how to maintain safety in the face of possible other dangers/traumatic event(s), ONLY **Enhancing Safety** should be coded.

### Item Co-occurrence

• Assessment. Psychoeducation may co-occur with Assessment. For example, while asking questions to understand the client's clinical presentation and/or trauma experience or reviewing an assessment measure with the client/caregiver, the therapist may also provide feedback or information about common reactions to trauma. In these situations, both **Psychoeducation** and **Assessment** would be coded.

## **III. Parenting Skills**

### Item III. Parenting Skills

Parenting skills are typically taught and practiced throughout treatment in sessions with the caregiver. Parenting skills include, but are not limited to, praise, active ignoring, selective attention, timeout, behavior charts/reward systems/contingency management plan, effective commands, quality caregiver-child time, and functional behavioral analysis. Use of effective parenting skills are thus taught to assist caregivers to reduce undesirable behaviors, reinforce and increase desirable behaviors, and/or cultivate positive communication and relationships with the client. This may also involve having the caregiver identify both undesirable behaviors to work on reducing (e.g., yelling) as well as their positive opposite behaviors to work on reinforcing (e.g., telling the caregiver what they need calmly). Ultimately, teaching the caregiver effective parenting skills also functions to prepare the caregiver to hear their child's trauma narrative and respond appropriately in the Conjoint Youth-Caregiver Sessions.

<u>Refer</u> to the Appendix for brief definitions of the parenting skills mentioned. <u>Refer</u> to the Google Drive for further resources.

0	1-2	3-4	5-6
Therapist did not cover Parenting Skills in this session. <b>Note:</b> A rating of 0 is	Therapist covered Parenting Skills briefly or minimally (e.g., briefly tells the caregiver what to do	Therapist covered Parenting Skills with some extensiveness (e.g., discusses and teaches specific	Therapist covered Parenting Skills with high extensiveness, such as explicitly discussing,
not inherently an indicator of non- adherent TF-CBT delivery. Sometimes it is not clinically relevant for all or even more than one component to be delivered in a single session.	in a scenario to manage the client's behavior but does not provide a rationale).	parenting skills with recommendations for when to use them, but recommendations are vague, unclear, or non-specific).	explaining, or teaching principles of Parenting Skills for an extended period, providing rationale for the application of skills to specific behavior problems in the client/family, AND/OR practicing skills in session with the caregiver.
			Note: A high score may indicate that the therapist discussed specific Parenting Skills with the caregiver based on problem behaviors in the client/family. Some examples include identifying the most meaningful rewards and consequences to

# Exemplars (to Caregiver):

- "Oftentimes we tell kids what NOT to do, but we don't let them know what we want them to do instead. A problem you mentioned earlier is that your child often yells when they don't get what they want. Let's think about what a positive opposite behavior would be instead...Great, so we've landed on the positive opposite behavior being your child telling you calmly what they need. So every time that happens, we want to praise your child so they know that this is the behavior we want to see more of."
- Praise: "It's important to give your child immediate and specific praise when trying to teach a behavior. You can say something like, 'You just did a great job following directions on the first try!"
- Active Ignoring: "You will need to try to ignore your child's negative attention-seeking behavior, like throwing a tantrum. Your child is really seeking your attention when they throw a tantrum and when you give them lots of attention (even negative attention) they are likely to do these behaviors even more. Our goal is to have them stop doing this, so try to ignore it."
- Selective Attention: "One thing that makes ignoring hard is that often the behaviors get worse at the beginning. Your child may really want your attention! They might start yelling or crying, but even if they do this, you still need to ignore. Then the second they use a calm voice, you can give them your attention and provide praise to let them know that this is an effective way of communicating."
- Timeout: "Let me explain the use of timeout. If your child hits their sister, you could give them one warning that if they do it again, they'll have a timeout. If they do it again, then you would take them to the timeout space..."

# **Item Distinction**

• *Vs. Psychoeducation.* The therapist may provide **Psychoeducation** such as about the connection between trauma and disruptive behaviors. This would ONLY be coded as **Psychoeducation.** However, if the therapist provides rationale for the need for

**Parenting Skills** and/or teaches or demonstrates these skills, this would ONLY be coded as **Parenting Skills**. Similarly, the therapist may provide **Psychoeducation** to the caregiver about what TF-CBT skills the client is learning and how to support the client in using these skills. This would ONLY be coded as Psychoeducation, UNLESS the therapist also teaches **Parenting Skills** such as Praise to support the client in using the skills. In this case, both **Psychoeducation** and **Parenting Skills** can be co-coded.

• Vs. Trauma Narrative. Prior to the conjoint youth-caregiver session, the therapist prepares both the caregiver and client during individual sessions by planning and reviewing for what will happen during the conjoint session. The therapist prepares the caregiver by reviewing the trauma narrative with them and helping them to regulate their emotional reaction and prepare their response to the trauma narrative (verbal and non-verbal response). This may include suggestions to the caregiver of limiting expression of negative emotions, shaming the client, interrupting the client, dismissing the client, or ignoring the client, while encouraging the caregiver to praise the client for sharing. The therapist may practice and role play the sharing of the trauma narrative with the caregiver separately. Thus, if the therapist is working with the caregiver directly specifically to prepare them to hear the trauma narrative, this would be coded as **Trauma Narrative**. However, if the therapist works with or teaches the caregiver Parenting Skills without mentioning the trauma narrative, then this would be coded as **Parenting Skills**.

### Item Co-occurrence

- Generally, when working with a caregiver to deliver another TF-CBT PRACTICE component, that code could co-occur with **Parenting Skills** if the therapist teaches the caregiver to use a **Parenting Skill** (e.g., praise). Some specific examples are below.
- *In-Vivo Exposure.* In-Vivo Exposure may co-occur with Parenting Skills as the therapist may teach the caregiver to praise and provide positive reinforcement to the client for engaging in their exposures.
- Enhancing Safety. Enhancing Safety may co-occur with Parenting Skills if the therapist explicitly teaches or practices parenting skills with the caregiver (e.g., praise, positive reinforcement) to encourage the client's use of their safety plan in the face of possible dangers.

### **IV. Relaxation**

Item IV. Relaxation

Clients are taught relaxation skills to reduce physiological symptoms (e.g., racing heartbeat, muscle tension) and nervousness/stress in their bodies. Relaxation skills are typically taught prior to the trauma narrative to help manage physiological reactions that may arise during the trauma narrative, but relaxation skills can be taught at any time. The following are examples of relaxation skills that are likely to come up in sessions:

- Focused breathing (e.g., "belly" or diaphragmatic breathing)
- Guided imagery
- Meditation
- Mindfulness (refocusing the mind on moment-to-moment experiences in the present).
- Progressive muscle relaxation (PMR; e.g., tin soldier/rag doll, uncooked/cooked noodle, or other PMR script)
- Yoga

<u>Refer</u> to the Appendix for brief definitions of each of these relaxation skills.

Refer to the Google Drive for examples and scripts of some of these relaxation skills.

0	4.0	2.4	<b>F C</b>
U	1-2	3-4	5-6
Therapist did not	Therapist covered	Therapist covered	Therapist covered
cover Relaxation in	Relaxation briefly or	Relaxation with some	Relaxation with high
this session.	minimally (e.g.,	extensiveness (e.g.,	extensiveness, such
	quickly suggesting	the therapist has the	as by
Note: A rating of 0 is	that the child takes a	client do a relaxation	discussing/explicitly
not inherently an	deep breath).	activity for a brief	teaching the client
indicator of non-		period).	different Relaxation
adherent TF-CBT			techniques for an
delivery. Sometimes			extended period
it is not clinically			AND/OR practicing
relevant for all or			relaxation skills in
even more than one			session with the
component to be			client.
delivered in a single			
session.			Note: A high score
			may include the
			therapist explaining
			the benefits of
			Relaxation skills,
			including rationale for
			use and how/when to
			use the skill, eliciting
			questions about skill
			use or how it went for
			the client, developing
			a plan for using skills
			in session or at
			home, or discussing
			strategies to
			overcome barriers to

	using the skill (e.g., ways to remember to use Relaxation
	skills).

- Focused/Diaphragmatic Breathing: "Deep breathing can help you relax. It is important that you take really deep breaths, all the way down here, in your belly. You want to see your belly come out like this when you take a breath and breathe it out slow like this."
- Focused/Diaphragmatic Breathing: "So you found yourself getting really upset when you went to bed because you were thinking about the abuse, then you tried to calm down by using the deep breathing we practiced. That's great! Show me how you did the breathing. Were you able to make your stomach go out when you did the breathing, like we practiced in session? Wow, you've become really great at that!"
- Focused/Diaphragmatic Breathing: "Remember how your body feels when you're thinking about bad things that have happened? We can change those feelings by taking deep breaths."
- Mindfulness: "I know you have mentioned that you worry a lot about many things including the impact of the sexual abuse on your son's future. When you have felt particularly distressed, have you been able to bring your focus back to the present moment with the mindfulness exercise that we practiced last week?"
- Progressive Muscle Relaxation: "Now make your fist as tight as you can and release it."
- Guided Imagery: "Imagine you are in a place that makes you really comfortable. Maybe you are lying on the beach."

### Coding Tips:

- The therapist may point out physiological changes their client experiences in response to the Relaxation activity (e.g., slower heart, relaxed muscles, slowed breath).
- This code also includes the therapist bringing the client's attention to how they physically feel when they are NOT relaxed (e.g., tight muscles, shallow breath).
- The therapist might have the client think of situations when they need to use Relaxation skills, which may include times when the client is feeling triggered by trauma memories.
- The therapist may engage Relaxation skills with the client after **Trauma Narrative** and/or **In-Vivo Exposure** regardless of whether the client becomes emotionally dysregulated in the session. In these situations, both codes can be coded.

### Item Distinction/Co-Occurrence

Vs. Affect Identification, Expression, and Modulation. Relaxation skills may be used for affect modulation/regulation, but they are coded as a distinct component item from Affect Identification, Expression and Modulation. These items can be challenging to differentiate at times. Relaxation refers specifically to a set of skills for reducing physiological/body tension whereas Affect Identification, Expression, and Modulation covers a wider range of strategies for coping with a range of difficult emotions. For the purposes of this coding system, if the therapist is teaching and guiding the client through initial practice of relaxation skills, these will be coded as Relaxation ONLY. Whereas if the client becomes elevated in or outside of session and the therapist works with them to regulate their emotions using relaxation skills,

ONLY Affect Identification, Expression, and Modulation would be coded. Think of the Relaxation code as teaching and initial practice of the skills and Affect Identification, Expression, and Modulation as implementation of skills in real-time when needed. Additionally, it can be helpful to note how the therapist describes what the skill can be used for. For example, if the therapist teaches a skill to "relax" and "be calm/happy" Relaxation might be more likely to be coded. If the therapist helps the client implement a skill to "manage anger" or "when feeling sad" Affect Identification, Expression, and Modulation might be more likely to be coded.

## V. Affect Identification, Expression, and Modulation

## Item V. Affect Identification, Expression, and Modulation (shortened to Affect ID)

Clients and/or caregivers are taught how to identify/label, express, and regulate/modulate their emotions effectively. In affect identification, therapists work with clients on expanding their emotional vocabulary by practicing to identify and label a range of feeling words which can both be related or unrelated to the traumatic event(s). This can be practiced through games, scenarios, or through identification of emotions within their own personal experiences. In affect expression, therapists encourage clients to express their feelings verbally in appropriate, effective ways. Therapists also often teach clients to rate the intensity of their emotions using a Subjective Units of Distress (SUDS) Scale, or feelings thermometer. For example, a therapist working with their client to develop a SUDS scale/feelings thermometer for fear from 1 - 10 may establish anchors by asking the client to recall a time where they felt the most afraid (10), a time where they felt calm or no fear (1), and a time where they felt neutral (5). Finally, in affect modulation, therapists work with their clients to identify and practice coping strategies to help them regulate, manage, or tolerate emotional distress/negative emotions. Strategies may include seeking social support, listening to music, exercising, or other individualized coping skills (e.g., reading, playing sports, etc.). A "tool kit" of coping skills may be developed to include different techniques personalized to each client depending on what works for them. Distraction techniques, problem solving skills, and/or anger management skills may also be taught-anything that helps the client regulate emotions that are difficult to handle. General assertiveness training (i.e., passive, aggressive, assertive) for the client to learn how to express their needs may also be part of this component.

0	1-2	3-4	5-6
Therapist did not	Therapist covered	Therapist covered	Therapist covered
cover Affect ID in this	Affect ID briefly or	Affect ID with some	Affect ID with high
session.	minimally (e.g.,	extensiveness (e.g.,	extensiveness, such
	asking a fleeting	the therapist works	as
Note: A rating of 0 is	question about what	with the client to	discussing/teaching
not inherently an	the client is feeling,	identify and explore	Affect ID with the
indicator of non-	but not delving into	their emotions but	client for an extended
adherent TF-CBT	that emotion further	suggests ineffective	period AND/OR
delivery. Sometimes	or providing	coping strategies like	practicing Affect ID
it is not clinically	psychoeducation	punching pillows,	techniques in the
relevant for all or	about that feeling).	eating, or snapping a	session with the
even more than one		rubber band on	client.
component to be		themselves when	
delivered in a single		they experience a	Note: A high score
session.		strong emotion,	indicates that the
		rather than providing	therapist focused
		effective strategies	extensively on

- Affect ID: "Let's play a game where we see who can write the most feeling words in 60 seconds! Then we can take turns to share when we each felt these feelings."
- Affect ID: "We're going to play a game of Uno except we're going to play it a little differently this time! We're going to assign colors to different emotions and each time we play that color, we'll each share a time when we felt that emotion."
- Affect ID and Expression: After reading <u>A Terrible Thing Happened</u>: "How do you think Sherman felt after the terrible thing he saw? What are other ways do you think other kids might feel if they saw what Sherman saw? How did you feel about the terrible thing you saw?"
- Affect Expression: "You mentioned feeling sad and angry when your mom told you to do your homework. Can you share more with me about what that was like...How did you know you were sad...How did you know you were angry...Where did you feel it in your body...Where were you on your SUDS scale/feelings thermometer?"
- Affect Modulation: "Today we're going to work on our coping toolkit to have a lot of things you can do when you feel scared. What are some things we can put in our coping toolkit? What are things that help you feel better when you feel scared? Here are some things that I know help other kids."
- Affect Modulation: "Last week we talked about listening to your "Happy Playlist" every time you feel sad. How did that go last week? Did it help?"
- Affect Modulation: "What are some signs that will tell you that you are starting to get

angry and that it's time to use some deep breathing skills to help us calm down?"

# **Coding Tips**

- The therapist may practice Affect Modulation skills with the client in sessions where the client becomes elevated.
- The therapist may engage Affect Modulation skills with the client after **Trauma Narrative** and/or **In-Vivo Exposure** regardless of whether the client becomes emotionally dysregulated in the session. In these situations, both codes can be coded.

# **Item Distinction**

- Vs. Cognitive Coping. The therapist often asks about clients' feelings during Cognitive Coping, such as to elicit resultant feelings from specific thoughts. In these situations, Affect Identification, Expression, and Modulation is NOT coded. If the therapist moves into exploring a feeling further this may constitute Affect Identification, Expression, and Modulation, such as asking more about the feeling (e.g., where they feel it in their body), asking what physiological symptoms they may be having, or using a feelings chart to discuss various emotions. Simply mentioning a feeling word or asking the client how they feel does NOT constitute Affect Identification, Expression, and Modulation.
- Vs. Trauma Narrative. If the therapist encourages the client to identify and express feelings as part of the trauma narrative and trauma processing work, ONLY Trauma Narrative should be coded and Affect Identification, Expression, and Modulation should NOT be coded as co-occurring. This is because providing psychoeducation and eliciting and processing emotions/thoughts are integral to the trauma narrative and processing work. Furthermore, the therapist often asks the client for their SUDs rating throughout the trauma narrative to assess their emotional reaction and assist the client to regulate/modulate if necessary. Asking for the SUDs rating periodically may also serve to reinforce the client's learning about their ability to tolerate the distress elicited by the trauma memory. Eliciting and assessing feelings are integral aspects of the Trauma Narrative and thus would NOT be coded separately for Affect Identification, Expression, and Modulation.
- Vs. In-Vivo Exposure. During In-Vivo Exposure, the therapist often asks the client to identify their emotions or their SUDs rating throughout the exposure (before, during, and after) to assess their emotional reaction and assist the client to regulate/modulate if necessary. Asking for the SUDs rating periodically may also serve to reinforce the client's learning about their ability to tolerate the distress elicited by the exposures or feared situations. Eliciting and assessing feelings are integral aspects of the In-Vivo Exposure and thus would NOT be coded separately for Affect Identification, Expression, and Modulation.

# Item Distinction/Co-Occurrence

• Vs. Relaxation. Relaxation skills may be used for affect modulation/regulation, but they are coded as a distinct component item from Affect Identification, Expression and Modulation. These items can be challenging to differentiate at times. Relaxation refers specifically to a set of skills for reducing physiological/body tension whereas Affect Identification, Expression, and Modulation covers a wider range of strategies for coping with a range of difficult emotions. For the purposes of this coding system, if the therapist is teaching and guiding the client through initial practice of relaxation skills, these will be coded as Relaxation ONLY. Whereas if the client becomes elevated in or outside of session and the therapist works with them to regulate their emotions using relaxation skills, ONLY Affect Identification, Expression, and Modulation would be coded. Think of the Relaxation code as teaching and initial practice of the skills and Affect Identification, Expression, and Modulation as implementation of skills in real-time when needed. Additionally, it can be helpful to note how the therapist describes what the skill can be used for. For example, if the therapist teaches a skill to "relax" and "be calm/happy" Relaxation might be more likely to be coded. If the therapist helps the client implement a skill to "manage anger" or "when feeling sad" Affect Identification, Expression, and Modulation might be more likely to be coded.

## VI. Cognitive Coping

### Item VI. Cognitive Coping

Through the Cognitive Coping component, clients are taught about the connection between thoughts, feelings, and behaviors. This concept is often taught through the cognitive triangle (or other diagrams/figures) and may be demonstrated through a scenario in which different thoughts may arise from the same event, thus resulting in different feelings and behaviors. Within Cognitive Coping, clients are taught to identify thoughts and distinguish them from feelings/emotions and behaviors. An integral aspect of Cognitive Coping involves teaching clients how to identify and challenge negative automatic thoughts/cognitive distortions that are maladaptive or unhelpful, in favor of adopting replacement thoughts that are more adaptive and helpful (i.e., cognitive restructuring). Therapists often teach different techniques for cognitive restructuring, such as assisting clients to look for evidence of whether or not their negative automatic thought is accurate (e.g., "detective thinking"), thereby often disputing the distorted thought. Lastly, after clients adopt a more adaptive, helpful alternative thought, the therapist encourages them to reflect on how these alternative thoughts may result in different, more adaptive feelings and behaviors. Therapists may also refer to this as positive self-talk or optimistic thinking, particularly when working with younger clients.

0	1-2	3-4	5-6
Therapist did not	Therapist covered	Therapist covered	Therapist covered
cover Cognitive	Cognitive Coping	Cognitive Coping	Cognitive Coping
Coping in this	briefly or minimally	with some	with high
session.	(e.g., encourages	extensiveness (e.g.,	extensiveness, such
	positive self-talk, but	teaches the cognitive	as discussing the
Note: A rating of 0 is	without rationale for	triangle and links	rationale for
not inherently an	why; tells the client	between thoughts,	Cognitive Coping,
indicator of non-	an alternative thought	feelings, and	explicitly teaching
adherent IF-CBI	they should think	benaviors and	different coping
delivery. Sometimes	rather than helping	describes the	techniques AND/OR
	the client to come to	process for changing	practicing Cognitive
relevant for all or	that conclusion on	hegalive automatic	Coping in session for
even more than one	their own).	adaptivo, bolpful	an extended period.
delivered in a single		thoughts but doos not	Noto: A high score
session		nrovide examples or	mole. A high score
30331011.		situations to illustrate	theranist teaching the
		how or why this	cognitive triangle
		would be beneficial).	(i.e., with a diagram
			or framework).
			making the distinction
			and connection
			between thoughts,
			feelings, and
			behaviors, and
			providing rationale for
			examining and
			challenging negative
			automatic thoughts.
			The therapist may

	also use different
	scenarios to assist
	the client to practice
	or learn Cognitive
	Coping techniques to
	adopt more helpful,
	adaptive thoughts
	that result in more
	adaptive feelings and
	behaviors. The
	therapist may
	eventually assist the
	client to apply
	Cognitive Coping
	techniques within
	their own real-life
	situations and
	problems.

- "We call this the cognitive triangle. It shows the connection between thoughts, feelings, and behaviors and how they affect one another."
- "Let's use a scenario that I'm sure everyone has had before. Have you ever waved to a friend in the hallway, and they didn't wave back?...What might you think if that happened to you?...If you were thinking that, how do you think you'd feel and then what would you do?...Now let's think about another possible thought someone else could have in this scenario, i.e., that their friend just didn't see them. If someone had that thought, how do you think they'd feel?...What do you think they'd do?"
- "We're often our own worst critics and are often a lot harsher on ourselves than the people around us. What would you tell your best friend in this situation?"
- "With this thought, are you looking at all the facts? What evidence do you have to support your thought, and would that evidence hold up in a court of law (i.e., detective thinking)? What evidence do you have against your thought?"
- "What is your brain telling you in this moment? How helpful is that thought?"

# Coding Tips:

- Therapists often teach the client to identify and challenge cognitive distortions/negative automatic thoughts such as All-or-Nothing/Black and White Thinking, Mindreading, Predicting the Future, Catastrophizing, Negative Filter, Overgeneralizing, Labeling, Discounting the Positive, "Should" Statements, Personalizing, Emotional Reasoning, and Unfair Comparisons. <u>Refer</u> to the Appendix for brief definitions of each of these cognitive distortions.
- When working with youth, therapists often use different strategies or ways to describe Cognitive Coping that are more developmentally appropriate (e.g., "detective thinking," "thought problems").
- Therapists may also engage the client in a Socratic Questioning method of Cognitive Coping, or a method for "guided discovery in which the therapist poses questions to the client to help them explore their thoughts and beliefs, think critically about them to broaden their perspectives, and arrive at more realistic and adaptive points of view" (Vittorio et al., 2022). In other words, through asking the client a series of guided

questions that serve to challenge the client's negative automatic thought, the client may come to their own conclusion that the thought is unrealistic/maladaptive, thereby opening them up to adopting a more realistic/helpful thought.

## **Item Distinction**

- Vs. Trauma Narrative. Throughout the Trauma Narrative, the therapist often elicits thoughts and engages the client in challenging maladaptive, unhelpful thoughts the client has of the traumatic event in favor of adopting more adaptive, helpful thoughts. Eliciting and reframing thoughts within the trauma narrative are integral aspects of the Trauma Narrative and thus would NOT also be coded as Cognitive Coping. Cognitive Coping should be coded when the focus is on non-trauma related experiences and/or thoughts.
- Vs. Affect Identification, Expression, and Modulation. The therapist often asks about clients' feelings during Cognitive Coping, such as to elicit resultant feelings from specific thoughts. In these situations, Affect Identification, Expression, and Modulation is NOT coded. If the therapist moves into providing psychoeducation about a feeling this may constitute Affect Identification, Expression, and Modulation, such as asking more about the feeling (e.g., where they feel it in their body), asking what physiological symptoms they may be having, or using a feelings chart to discuss various emotions. Simply mentioning a feeling word or asking the client how they feel does NOT constitute Affect Identification, Expression, and Modulation.

### **VII. Trauma Narrative**

#### Item VII. Trauma Narrative

Through the trauma narrative (TN), the client shares the events and details of the traumatic experience(s), including thoughts, feelings, and behaviors they experienced during the traumatic event(s). Trauma experiences can include the actual event(s) (i.e., abuse), as well as related experiences in the aftermath of the traumatic event(s) (i.e., client disclosing the traumatic event to their caregiver, making a police report, attending a funeral). The client's TN can take many forms, such as a storybook, picture book, poem, rap, song, play, artwork, etc. The TN typically includes an introduction chapter (i.e., About Me), a neutral narrative (i.e., a linear story that is NOT trauma-related where the therapist asks the client to share their thoughts and feelings related to the experience; this enables the therapist to assess the client's ability to tell a story and express their thoughts/feelings), chapters about the trauma, and an ending chapter focused on the client's future and what they learned in therapy. Other TN activities can include making a title page, timeline of events, table of contents, or a cover. The goals of the TN are to: 1) to expose the client to the memory of the traumatic event(s), 2) identify and challenge unhelpful or inaccurate thoughts/beliefs about the traumatic event(s), and 3) improve caregiver/child communication surrounding traumatic event(s). During the trauma narrative/exposure, the therapist may ask the client to read and re-read their TN aloud multiple times, while asking guestions to elicit additional details, thoughts, feelings, and behaviors. During trauma processing, the therapist typically works with the client to identify and challenge unhelpful or maladaptive thoughts/cognitive distortions about the trauma the client expressed through their TN, and adopt more helpful, adaptive thoughts and beliefs. Throughout the development and processing of the client's TN, the therapist may ask for the clients' Subjective Units of Distress (SUDS) ratings.

The therapist also collaboratively identifies with the client the caregiver/permanent adult figure in their life that they want to share their TN with and gain permission to share the TN from the client. The therapist then works with the client to prepare them to share the TN with their caregiver for the Conjoint Youth-Caregiver Session.

0	1-2	3-4	5-6
Therapist did not	Therapist covered	Therapist covered the	Therapist covered the TN
work on the TN	the TN briefly or	TN with some	with high extensiveness,
during this session.	minimally (e.g.,	extensiveness (e.g.,	such as helping the client
	rushing the child	completed a chapter	to identify SUDs, regulate
Note: A rating of 0 is	through the	and added in thoughts	their emotions, identify
not inherently an	chapters or having	and feelings, asked	thoughts/feelings, and
indicator of non-	the child stop	for SUDs rating).	identify/challenge unhelpful
adherent TF-CBT	when becoming		thoughts and beliefs.
delivery. Sometimes	distressed).	If the session is the	
it is not clinically		first time the therapist	If the session is the first
relevant for all or	If the session is	is introducing the TN,	time the therapist is
even more than one	the first time the	the therapist informs	introducing the TN, the
component to be	therapist is	the client that they will	therapist informs the client
delivered in a single	introducing the	be sharing the TN	that they will be sharing
session.	TN, the therapist	with their caregiver. In	with caregiver and sets
	did not inform the	a caregiver session,	expectations for sharing
	client that they will	the therapist may	the TN with caregiver. In a
	be sharing the TN	share the TN with	caregiver session, the
	with caregiver.	caregiver to prepare	therapist may share the TN

Note: A high scor	ensively egiver for ion ion of sponses.
encouraging the de	re may
sharing of the det	pist
traumatic event(s	client's
thoughts, feelings	tails of the
behaviors through	s) and
event. The therap	s, and
assist the client th	hout the
discussing, writing	pist may
and/or reviewing i	hrough
details of the even	ng down,
the client. When	the
processing the tra	ent with
high score may a	auma, a
include the therap	also
Cognitive Coping	pist using
to assist the clien	g methods
up with evidence	t to come
their unhelpful,	t to correct
maladaptive thou	ughts,
rather than the th	herapist
just telling the clie	ent how
they should be th	hinking.

- Pauses client during TN sharing "What were you thinking in that moment?" or "How did you feel at that time?"
- Explains to caregiver the rationale of TN and explains "Client will be sharing this with you in a few weeks. To prepare, I will be sharing their progress with you. I ask that you do not discuss the TN with Client until they share it with you so the things we discuss in this session stay between us."
- Has client repeat chapter several times
- "Let's build our table of contents. We will start with a chapter that sets the stage, just like any story. We want to know who the main character is. Next, I want you to tell me about your favorite memory (or any neutral narrative). Then we will have our trauma chapters. Just like most stories, let's end our narrative with a summary of how the main character has grown and what is next for them."
- "I know that you have experienced many traumas in your life. Which do you feel is impacting you the most? Which do you think about the most often/have nightmares about the most often? What is the worst trauma you have experienced?" These become the basis for the trauma narrative chapters.
- "What is your SUDs rating right now?"

### Coding Tips:

- Some chapters may move more slowly, or may be longer or shorter than others.
- The therapist should be regularly asking for SUDs ratings throughout the trauma narrative.
- The therapist may not start to ask for thoughts/feelings until the second or third re-telling.
- The therapist may engage Relaxation or Affect Modulation skills with the client after Trauma Narrative regardless of whether the client becomes emotionally dysregulated in the session. In these situations, both codes can be coded. Please note that this refers to Affect Modulation only, and not Affect ID or Affect Expression.

## Item Distinction

- Vs. Affect Identification, Expression, and Modulation. The therapist often asks the client for their SUDs rating throughout the Trauma Narrative to assess their emotional reaction and assist the client to regulate/modulate if necessary. Asking for the SUDs rating periodically may also serve to reinforce the client's learning about their ability to tolerate the distress elicited by the trauma memory. Eliciting and assessing feelings are integral aspects of the Trauma Narrative and thus would NOT be coded separately for Affect Identification, Expression, and Modulation.
- Vs. Cognitive Coping. Throughout the Trauma Narrative, the therapist often elicits thoughts and engages the client in challenging maladaptive, unhelpful thoughts in favor of adopting more adaptive, helpful thoughts. <u>Eliciting and reframing thoughts within the trauma narrative are integral aspects of the Trauma Narrative and thus would NOT be coded separately for Cognitive Coping</u>. Cognitive Coping should be coded when the focus is on non-trauma related experiences and/or thoughts.
- Vs. Conjoint Youth-Caregiver Session. Prior to the conjoint youth-caregiver session, the therapist prepares both the caregiver and client during individual sessions by planning and reviewing for what will happen during the conjoint session. The therapist prepares the caregiver by reviewing the trauma narrative with them and helping them to regulate their emotional reaction and prepare their response to the trauma narrative (verbal and non-verbal response). This may include suggestions to the caregiver of limiting expression of negative emotions, shaming the client, interrupting the client, dismissing the client, or ignoring the client, while encouraging the caregiver to praise the client for sharing. The therapist may practice and role play with the caregiver separately. These sessions held individually with the caregiver to prepare for the trauma narrative would be coded as Trauma Narrative NOT as the Conjoint Youth-Caregiver Session.

Similarly, the therapist may practice and role play the sharing of the Trauma Narrative with the client separately. <u>These sessions held individually with the client to prepare for sharing the trauma narrative would be coded as **Trauma Narrative** NOT as the <u>Conjoint Youth-Caregiver Session</u>. The Conjoint Youth-Caregiver Session would only be coded in sessions in which with the client is sharing their trauma narrative with the caregiver together.</u>

Vs. Enhancing Safety. Oftentimes within Trauma Narrative, the therapist and client may work on an ending chapter focused on the client's future and what they learned in therapy, as well as skills learned in therapy for keeping the client safe. In these situations, ONLY Trauma Narrative would be coded. Though some topics on remaining safe may be covered, this is distinct from the Enhancing Safety code, which would be more intentionally focused on developing a plan with the client/family regarding safe actions they can take to reduce the likelihood of re-traumatization from the child's personal trauma experience (e.g., revictimization, body safety), or future other traumas.

### VIII. In-vivo Exposure

### Item VIII. In-vivo Exposure

In In-vivo exposure, the client is exposed to anxiety-provoking stimuli (e.g., feared objects, activities, situations, sensations, memories) in real-world settings to assist them in overcoming their fears of typically innocuous stimuli, that are often related to the client's trauma in some way (i.e., trauma reminders). In other words, the therapist assists the client to face things they have been avoiding that interfere with the client's functioning, often due to reminders of the traumatic event(s). During this component, the therapist typically assists the client to identify triggers/reminders that cause anxiety/fear for them in their own environments (i.e., home, school) that interfere with their functioning. The therapist then assists the client to construct a fear ladder/hierarchy, in which these anxiety-provoking stimuli are ranked according to difficulty, and then develop a plan for the client to face these feared stimuli. In-vivo exposures as a part of this plan may be implemented at home or in-session with the therapist. Together, the therapist and client then carry out this plan for facing the feared stimuli in a gradual fashion by beginning with mildly or moderately difficult exposures, before progressing to increasingly difficult ones. During in-session exposures, the therapist often asks clients for their anxiety levels or Subjective Units of Distress (SUDs; see Affect Identification, Expression, and Modulation) ratings before, during and after the exposure. The therapist will also typically debrief/review what the exposure was like for the client. These actions serve to reinforce the client's learning that the client can tolerate the distress associated with the feared stimuli. For In-vivo exposures assigned outside of session for homework, the therapist will typically spend time in session debriefing/reviewing how the exposure went, as well as their anxiety/SUD levels before, during, and after the exposure. Over time, the client may find that their reactions to feared stimuli decreases or that they are able to manage the anxiety/fear associated with the originally feared stimuli.

0	1-2	3-4	5-6
Therapist did	Therapist plans for,	Therapist plans	Therapist plans for, conducts, or
not conduct or	conducts, or reviews	for, conducts, or	reviews in-vivo exposure(s) with
review in-vivo	in-vivo exposure(s) in	reviews in-vivo	high extensiveness in a way
exposure(s)	the session briefly or	exposure(s) in the	that was very explicit and
during this	minimally (e.g.,	session with some	obvious. Throughout or after the
session.	rushing the client	extensiveness	in-vivo exposure(s), the
	through developing	(e.g., the therapist	therapist assists the client to
Note: A rating	their fear hierarchy or	and client conduct	identify their SUDs ratings
of 0 is not	conducting an in-vivo	an in-vivo	and/or debriefs with the client.
inherently an	exposure; only	exposure during	The therapist may debrief about
indicator of non-	acknowledging that	the session but	what the client's initial feared
adherent TF-	the client conducted	only debrief about	outcome was, whether it
CBT delivery.	an in-vivo exposure	it briefly).	happened, or if anything
Sometimes it is	for homework without		surprising happened. The
not clinically	debriefing how it went		debrief often serves to
relevant for all	for them).		challenge the client's initial
or even more			irrational, maladaptive, or
than one			unhelpful beliefs about their
component to			feared outcome and reinforces
be delivered in			learning to provide support for
a single			more adaptive, helpful beliefs.
session.			
			Note: A high score may indicate

	that the therapist provided a clear rationale for the in-vivo exposure(s), developed a clear plan/fear hierarchy for conducting gradual exposures with the client, assigned the client to engage in an in-vivo exposure(s) for homework having thoroughly discussed the details (i.e., where, when, potential barriers, what client can do to problem-solve/plan for barriers, how caregiver can provide support/encouragement), motivated or obtained commitment from the client and/or caregiver to follow through with the in-vivo exposure, or provided a thorough review/debrief of the
	thorough review/debrief of the in-vivo exposure.

- "Today, we're going to start working on a plan to help you face your fears. We're going to do this by listing the things that you have trouble doing because you feel afraid or because they remind you of what happened. Then, we're going to rank each one from the thing that makes you feel least afraid to most afraid. Over time, we are going to work on having you face those fears in that order."
- "I know it's hard for you to sleep alone at night. What would be the first step you could take to eventually get you to sleep alone at night? Could you take a 30-minute nap with the lights off?"
- "Okay, it sounds like we have a great plan for having you start to sleep alone this week. What do you think might get in the way...What can you do in the moment to help you stick with it?"
- "So, as we mentioned last week, we are going to do an exposure this session where you'll be giving a speech to me. Before we begin, what are you afraid will happen?...How likely do you think it is that this will happen?...If it does happen, what will you do to stick with it?...What is your SUDs rating right now?"
- "Great job sleeping by crossing the street this week for your exposure homework! Last week you said you were afraid that you would get hit by car. Did that happen? What was your SUDs before you crossed the street? What was your SUDs rating after you crossed the street? Did anything surprise you?"
- As they are conducting the in-vivo exposure: "What is your SUDs rating right now?" Where is your anxiety right now?"

# Coding Tips:

- The therapist may involve the caregiver to assist the client in implementing in-home exposures.
- Therapists also often engage in motivating clients to implement in-home exposures with support from their caregiver.

 The therapist may engage Relaxation or Affect Modulation skills with the client after In-Vivo Exposure regardless of whether the client becomes emotionally dysregulated in the session. In these situations, both codes can be coded. Please note that this refers to Affect Modulation only, and not Affect ID or Affect Expression.

## Item Distinction

- Vs. Trauma Narrative. Although these components may serve a similar function of exposure, ONLY Trauma Narrative is coded if the session involves the client telling the story of what happened during the traumatic event they experienced (through various possible mediums). <u>This differs from In-vivo Exposure</u>, which involves planning for and/or facing anxiety-provoking stimuli from within real-life situations that may be related to trauma reminders.
- Vs. Affect Identification, Expression, and Modulation. During In-Vivo Exposure, the therapist often asks the client to identify their emotions or their SUDs rating throughout the exposure (before, during, and after) to assess their emotional reaction and assist the client to regulate/modulate if necessary. Asking for the SUDs rating periodically may also serve to reinforce the client's learning about their ability to tolerate the distress elicited by the exposures or feared situations. Eliciting and assessing feelings are integral aspects of the In-Vivo Exposure and thus would NOT be coded separately for Affect Identification, Expression, and Modulation.

## Item Co-occurrence

• **Parenting Skills.** In-Vivo Exposure may co-occur with Parenting Skills as caregivers are taught to praise and provide positive reinforcement to the client for engaging in their in-vivo exposures.

## IX. Conjoint Youth-Caregiver Session

### Item IX. Conjoint Youth-Caregiver Session

During the conjoint youth-caregiver session, the client shares their trauma narrative with their caregiver/permanent adult figure. At the end of sharing, the therapist often debriefs with both the caregiver and client about the experience and reinforces the positive communication skills learned through the process. For the caregiver, those skills often include listening without interrupting/judging, regulating their emotional response, non-verbal active listening skills, and supportive responses. For the client, those skills often include sharing the details of the traumatic event(s) with the caregiver. The Conjoint Youth-Caregiver Session would only be coded in sessions in which with the client is sharing their trauma narrative with the caregiver together.

0	1-2	3-4	5-6
Therapist did not	Therapist conducted	Therapist conducted	Therapist conducted the
conduct the	the conjoint session	the conjoint session	conjoint session with high
conjoint youth-	briefly or minimally	with some	extensiveness (e.g.,
caregiver session.	(e.g., rushing the child	extensiveness (e.g.,	allows enough time for
	through sharing their	the conjoint session	planned communication
Note: A rating of 0	trauma narrative with	occurs and the	between the caregiver
is not inherently an	their caregiver,	therapist briefly	and client, appropriately
indicator of non-	prematurely stopping	debriefs with the	debriefs with both the
adherent TF-CBT	the sharing of the	caregiver and/or	caregiver and client after
delivery.	trauma narrative, or	client).	the sharing of the trauma
Sometimes it is not	not debriefing with the		narrative).
clinically relevant	caregiver and client		
for all or even more	afterwards).		Note: A high score may
than one			indicate that the therapist
component to be			adequately prepared the
delivered in a			caregiver and client for
single session.			the conjoint session by
			thoroughly reviewing and
			preparing them in detail
			for what will occur, often
			with the use of active
			techniques such as role
			play and modeling.

#### Exemplars:

- "Client, you did an excellent job sharing. Caregiver, what did you think about hearing all of that?" This question should prompt the Caregiver's planned response.
- "Our session today will look a little different than normal. I am going to ask Client to read their trauma narrative to Caregiver. Caregiver, I would like for you not to interrupt while they are reading. Client, you can start whenever you are ready."
- "How did it feel to share that with your Caregiver?"
- "How did it feel to hear that from Client?"
- "What was it like to hear Caregiver's response?"

### Coding Tips:

• Sometimes the therapist will meet with the caregiver and client individually right before the session to ensure that they are ready and to review the caregiver's response.

- The caregiver and client may sometimes go off script during the conjoint session. The therapist should bring them back to the learned skills for the conjoint session mentioned above.
- At times, sessions occur in which both the client and caregiver are in attendance for various reasons. These do not necessarily constitute Conjoint Youth-Caregiver Sessions. Unless the purpose of the session is specifically for the client to share their trauma narrative with the caregiver, these are NOT Conjoint Youth-Caregiver sessions.

### Item Distinction

- Vs. Psychoeducation. If the therapist only educates the client and caregiver that TF-CBT will include some conjoint sessions (without preparing or reviewing for a conjoint session), this would only be Psychoeducation. Conjoint Youth-Caregiver Sessions should ONLY be coded when it is clear that the therapist is working with the client and caregiver on how to prepare for the sharing of the trauma narrative, as opposed to teaching of any other skills.
- Vs. Trauma Narrative. Prior to the Conjoint Youth-Caregiver session, the therapist prepares both the caregiver and client during individual sessions by planning and reviewing for what will happen during the conjoint session. The therapist prepares the caregiver by reviewing the trauma narrative with them and helping them to regulate their emotional reaction and prepare their response to the trauma narrative (verbal and non-verbal response). This may include suggestions to the caregiver of limiting expression of negative emotions, shaming the client, interrupting the client, dismissing the client, or ignoring the client, while encouraging the caregiver to praise the client for sharing. The therapist may practice and role play with the caregiver separately. These sessions held individually with the caregiver to prepare for the trauma narrative would be coded as Trauma Narrative NOT as the Conjoint Youth-Caregiver Session.

Similarly, the therapist may practice and role play the sharing of the Trauma Narrative with the client separately. <u>These sessions held individually with the client to prepare for sharing the trauma narrative would be coded as **Trauma Narrative** NOT as the <u>Conjoint Youth-Caregiver Session</u>. The Conjoint Youth-Caregiver Session would only be coded in sessions in which with the client is sharing their trauma narrative with the caregiver together.</u>

# X. Enhancing Safety

### Item X. Enhancing Safety

During the Enhancing Safety module, the therapist builds on earlier skills learned in treatment to prepare the client and/or caregiver to maintain safety in the face of possible future dangers. This likely includes developing a plan with the client/family regarding safe actions they can take to reduce the likelihood of re-traumatization from the child's personal trauma experience (e.g., revictimization, body safety), as well as from other potential dangers unrelated to the initial trauma(s) (e.g., disaster safety). Within this module, the therapist may evaluate the client/family's knowledge of and skills in personal safety, often with but not limited to those related to the client's specific trauma experience(s) (e.g., childhood sexual abuse, domestic violence, natural disaster). The therapist likely often works with the client/family to reinforce their knowledge and offer new skills for maintaining safety to protect against encountering the same traumatic experiences(s), as well as new possible trauma(s). One frequently discussed skill involves how the client can tell a safe adult if a traumatic event as occurred (if it could not be prevented). To carry out this module, the therapist may teach a number of skills including assertive communication, problem-solving, and sex ed when appropriate.

	,	<b>3</b> ,	
0	1-2	3-4	5-6
Therapist did not	Therapist	Therapist covered	Therapist covered
cover Enhancing	covered	Enhancing Safety with	Enhancing Safety with high
Safety in this	Enhancing Safety	some extensiveness	extensiveness, such as
session.	briefly or	(e.g., discusses the	discussing, explicitly
	minimally (e.g.,	importance of	teaching, or developing a
Note: A rating of 0	briefly mentions	maintaining safety as	plan with the client on
is not inherently	the importance of	well as recommendations	maintaining safety (e.g.,
an indicator of	keeping safe, but	for how, but	reviews and practices
non-adherent TF-	without	recommendations are	specific safety skills the
CBT delivery.	discussion of	vague, unclear, or non-	client can engage in to
Sometimes it is	how to do so, i.e.,	specific).	reduce likelihood of re-
not clinically	"you should stay		traumatization).
relevant for all or	sate").		
even more than			Note: A high score
one component to			Indicates that the therapist
			may have laught specific
Single session.			that raduas likelihood of ro
			traumatization as well as
			exposure to other possible
			future dangers unrelated to
			the trauma A high score
			may also indicate that the
			therapist engaged client
			involvement, such as by
			eliciting their ideas,
			practicing with specific
			scenarios/role plays, and/or
			involving the caregiver to
			practice skills. The
			therapist may have also
			discussed possible barriers

|--|

- "Let's come up with a safety plan together in case it happens again that you hear gunshots outside while you are home alone."
- "Today, we are going to talk about what 'ok touches,' 'not-ok touches,' and 'confusing touches' are. What might be some examples of ways that people can touch each other that are okay? How about examples of 'not-ok touches'?"
- "What are different ways kids can keep their bodies safe...Right, you can wear your seat belt in the car and helmet when riding your bike. Those are great examples. Now we're going to talk about and practice what to do when someone makes you feel uncomfortable by a touch. What do you think kids should do when someone touches them in a way that makes them feel uncomfortable?"
- "There are a lot of people who care about you and your safety. These are people you can go to if you need help or if you want someone to talk to. Let's identify people you can go to and tell in case something bad or scary happens again.
- With a caregiver: "This is the plan we came up with together with your child for how they can keep themselves safe, which includes going to a safe adult for help. In situations when you may not be home, is there another safe adult, maybe a neighbor, that your child can go to if they need help?
- "Even though the fire you experienced was really scary, I am glad that your family stayed safe and alive when it happened. Let's review what you and your family did to ensure that everyone was safe during the fire. Let's also talk about what else we can do to keep safe if it happens again."

# Item Distinction

- Vs. Affect Identification, Expression, and Modulation. Teaching and practicing assertiveness in relation to keeping one's body safe related to the specific trauma(s) or from future possible dangers would ONLY be coded as Enhancing Safety. If the therapist discusses emotional assertiveness and expression generally, ONLY Affect Identification, Expression, and Modulation would be coded.
- Vs. Assessment. In the Enhancing Safety module, the therapist may ask the client/family questions to assess their knowledge of and skills in personal safety in order to develop a future plan for continued safety. This plan for safety is often but not always related to the client's specific trauma experience(s) (e.g., childhood sexual abuse, domestic violence, natural disaster). This is distinct from the Assessment code which is focused on gathering information to understand the client's overall presenting concerns.
- Vs. Psychoeducation. Aspects of Enhancing Safety may appear similar to Psychoeducation in that the therapist may teach different concepts of how to keep safe from different trauma experience(s). If the therapist is providing general information about the nature of the youth's trauma, specific diagnosis, common causes of and reactions to trauma, and a rationale for TF-CBT, ONLY Psychoeducation should be coded. However, if the therapist teaches the client skills related to how to maintain safety in the face of possible other dangers/traumatic event(s), ONLY Enhancing Safety should be coded.
- *Vs. Trauma Narrative.* Oftentimes within Trauma Narrative, the therapist and client may work on an ending chapter focused on the client's future and what they learned in therapy, as well as skills learned in therapy for keeping the client safe. In these situations, ONLY **Trauma Narrative** would be coded. This is distinct from the

**Enhancing Safety** code, which would be more intentionally focused on developing a plan with the client/family regarding safe actions they can take to reduce the likelihood of re-traumatization from the child's personal trauma experience (e.g., revictimization, body safety), or future other traumas.

Vs. Crisis Management. Addressing immediate/current safety concerns or mental health crises, including suicidal ideation, self-harm or self-harm ideation, child abuse, elder abuse, neglect, distribution or creation of child pornography, and involvement of any iteration of DCFS (i.e., Department of Child & Family Services, Child Protective Services) are necessary to address in all therapy regardless of the TF-CBT protocol. Addressing these concerns in session would be coded as Crisis Management. This may include generally discussing how to maintain safety or developing a safety plan (e.g., warning signs, coping strategies, people to reach out to, places to go) for youth to safeguard themselves against these safety concerns. This is distinct from Enhancing Safety, which focuses more on a plan to avoid future rather than current retraumatization.

### Item Co-occurrence

- **Parenting Skills. Enhancing Safety** may co-occur with **Parenting Skills** if the therapist explicitly teaches or practices parenting skills with the caregiver (e.g., praise, positive reinforcement) to encourage the client's use of their safety plan in the face of possible dangers.
- **Crisis Management.** It is possible for an immediate safety concern to arise in the session that is also directly related to the client's trauma. If the therapist evaluates the level of crisis/potential for re-traumatization and works with the client and/or caregiver on a plan that simultaneously addresses the client's immediate safety and reduces likelihood of re-traumatization, both **Crisis Management** and **Enhancing Safety** can be coded.

## XI. Crisis Management

### Item XI. Crisis Management

Crisis Management is not necessarily its own module but refers to crisis situations that may arise in a session that must be addressed by the therapist related to an immediate safety concern. Addressing immediate/current safety concerns or mental health crises, including suicidal ideation, self-harm or self-harm ideation, child abuse, elder abuse, neglect, distribution or creation of child pornography, and involvement of any iteration of DCFS (i.e., Department of Child & Family Services, Child Protective Services) are necessary to address in all therapy regardless of the TF-CBT protocol. This may include the therapist inquiring further to evaluate the level of risk/safety concern, generally discussing how to maintain safety, or developing a personal safety plan (e.g., warning signs, coping strategies, people to reach out to, places to go) for youth to safeguard themselves against these safety concerns.

		· · · · · · · · · · · · · · · · · · ·	
0	1-2	3-4	5-6
Therapist did not	Therapist covered	Therapist conducted	Therapist conducted
conduct Crisis	Crisis	Crisis Management with	Crisis Management with
Management in	Management	some extensiveness	high extensiveness, such
this session.	briefly or minimally	(e.g., discusses the	as discussing, explicitly
	(e.g., briefly	importance of	teaching, or developing a
Note: A rating of 0	mentions the	maintaining safety as	plan with the client on
is not inherently an	importance of	well as	maintaining safety (e.g.,
indicator of non-	keeping safe, but	recommendations for	develops personal safety
adherent TF-CBT	without discussion	how, but	plan, with attention to
delivery.	of how to do so,	recommendations are	warning signs/triggers,
Sometimes it is not	i.e., "you should	vague, unclear, or non-	coping strategies,
clinically relevant	stay safe").	specific).	places/people the client
for all or even more			can go to seek help or
than one			provide distraction).
component to be			Note: A bigh agore may
			indicate that the therepiet
Single session.			ongaged client
			involvement such as by
			eliciting their ideas
			practicing with specific
			scenarios/role plays
			and/or involving the
			caregiver to practice
			skills The therapist may
			have also discussed
			possible barriers to
			implementing these
			safety skills and how to
			overcome these barriers.

## Exemplars:

 "Let's come up with a safety plan together to use when you're having thoughts about dying again. This safety plan can help because in a moment of a crisis it can be really difficult to remember what helps. Having this safety plan already written down can help you not have to think about it in the moment. So, what are some warning signs, like thoughts, situations, moods, that might tell you that a crisis may be developing and that it might be a good time to use your safety plan... What are coping strategies you can do to take your mind off of things that you can do independently...Who can provide social support as a distraction to you...Where can you go that might help take your mind off things like a nearby park that you enjoy...Who can you go to ask for help?"

## Item Distinction

- Vs. Assessment. During Crisis Management, the therapist may ask the client/family questions to evaluate the level of risk/safety concerns, as well as to develop a safety plan to help keep the client/family safe. This would only be coded as Crisis
  Management because it is necessary for managing/evaluating the potential level of crisis. This is distinct from the Assessment code which is focused on gathering information to understand the client's overall presenting concerns.
- Vs. Relaxation. If in the context of developing a safety plan for crisis management, the therapist encourages the client to include relaxation skills on their safety plan, this would NOT be coded as **Relaxation**. This is because including such types of coping skills on a safety plan is part and parcel of the component. However, if in the context of developing their safety plan, the therapist teaches and/or practices the **Relaxation** skill together in session with the client, these can be co-coded for **Crisis Management** AND **Relaxation**.
- Vs. Affect ID/Expression/Modulation. If in the context of developing a safety plan for crisis management, the therapist encourages the client to include affect modulation skills on their safety plan, this would NOT be coded as Affect ID/Expression/Modulation. This is because including such types of coping skills on a safety plan is part and parcel of the component. However, if in the context of developing their safety plan, the therapist teaches and/or practices the Affect Modulation skill together in session with the client, these can be co-coded for Crisis Management AND Affect ID/Expression/Modulation.
- Vs. Enhancing Safety. Addressing immediate/current safety concerns or mental health crises, including suicidal ideation, self-harm or self-harm ideation, child abuse, elder abuse, neglect, distribution or creation of child pornography, and involvement of any iteration of DCFS (i.e., Department of Child & Family Services, Child Protective Services) are necessary to address in all therapy regardless of the TF-CBT protocol. Addressing these concerns in session would be coded as Crisis Management. This may include generally discussing how to maintain safety or developing a safety plan (e.g., warning signs, coping strategies, people to reach out to, places to go) for youth to safeguard themselves against these safety concerns. This is distinct from Enhancing Safety, which focuses more on a plan to avoid future rather than current retraumatization.

### Item Co-occurrence

- **Parenting Skills. Crisis Management** may co-occur with **Parenting Skills** if the therapist explicitly teaches or practices parenting skills with the caregiver (e.g., praise, positive reinforcement) to encourage the client's use of their safety plan.
- **Relaxation** or **Affect ID/Expression/Modulation**. If in the initial aftermath of a crisis the therapist teaches or practices a **Relaxation** or **Affect Modulation** skill with the client, but then generalizes the skills to other aspects of the client's life, these can be co-coded with **Crisis Management**. For example, perhaps the therapist teaches progressive muscle relaxation as a part of the client's safety plan for self-harm, but then mentions that they can use this skill for any time that they're feeling upset in other situations. In this situation, both **Relaxation** AND **Crisis Management** can be coded, in addition to

### Crisis Management.

• **Enhancing Safety.** It is possible for an immediate safety concern to arise in the session that is also directly related to the client's trauma. If the therapist evaluates the level of crisis/potential for re-traumatization and works with the client and/or caregiver on a plan that simultaneously addresses the client's immediate safety and reduces likelihood of re-traumatization, both **Crisis Management** and **Enhancing Safety** can be coded.

#### APPENDIX

#### **Parenting Skills**

**Praise:** Teaching caregivers to provide social rewards in response to desired behaviors (e.g., verbal praise, encouragement, affection, or physical proximity).

Active Ignoring: Teaching caregivers to remove attention to problem or undesirable behaviors to reduce reinforcement of these behaviors.

**Selective Attention:** Teaching caregivers to selectively remove attention to problem behaviors and to increase attention to positive opposite/alternate behaviors

**Timeout:** Teaching the caregiver to remove the youth from all reinforcement for a specified period of time in response to a problem behavior.

Behavior Charts/Reward Systems/Contingency Management Plans: Teaching caregivers to deliver tangible rewards in response to desired behaviors. This can involve behavior charts, point incentive/reward systems, or contingency management plans in which the caregiver, therapist, and youth collaborate to identify positive opposite behaviors that the youth will receive specific rewards for doing.

**Effective Commands:** Teaching the caregiver to give clear and specific directions to increase youth compliance. Principles that are frequently included in giving commands include differentiating between direct and indirect commands (e.g., telling a child to do something vs. asking them to do something), telling children what "to do" as opposed to "what not to do," how to state commands in a manner that children will listen, giving developmentally appropriate commands or instructions, and how and when to give explanations for the commands that are given.

**Quality Caregiver-Child Time.** Increasing youth and caregiver positive/quality one-onone time. This may include the therapist facilitating planning of specific times, activities, and monitoring of one-on-one time, or if the therapist facilitates the youth and caregiver practicing quality one-on-one time in session.

**Functional Behavior Analysis:** Helping the caregiver examine the pattern of caregiverchild interactions. This may include determining what happened right before and/or right after a behavior that might have made it more likely to happen or might make it more likely to happen again in the future. The therapist may then work with the caregiver to develop a plan for altering antecedents (i.e., triggers, events) to youth problem behaviors.

**Communication Skills:** Teaching the caregiver and child skills to communicate, navigate conflict, and compromise effectively with one another to improve positive relations among family members.

#### **Relaxation Skills:**

**Focused breathing (e.g., "belly" or diaphragmatic breathing):** a method of breathing that engages the diaphragm and stomach/abdominal muscles rather than the chest for fuller oxygen exchange

**Guided imagery:** a focused relaxation exercise that involves visualizing a peaceful or calming environment/place/memory, often engaging the five senses; "a mind–body technique involving the deliberate prompting of mental images to induce a relaxed, focused state" (APA, 2020)

**Meditation:** "profound and extended contemplation or reflection in order to achieve focused attention or an otherwise altered state of consciousness and to gain insight into oneself and the world" (APA, 2020)

**Mindfulness:** a form of attention training in which one learns to pay attention to the present moment, without judgment (Kabat-Zinn, 2003); "awareness of one's internal states and surroundings" (APA, 2020)

**Progressive muscle relaxation (PMR):** "a technique in which the individual is trained to relax the entire body by becoming aware of tensions in various muscle groups and then relaxing one muscle group at a time. In some cases, the individual consciously tenses specific muscles or muscle groups and then releases tension to achieve relaxation throughout the body." (APA, 2020)

#### **Cognitive Distortions (from the MUSC Telehealth Outreach Program):**

All-or-Nothing/Black and White Thinking: You view events or people in all-or-none or black-or-white terms.

**Mindreading:** You assume you know what people are thinking without having evidence of their thoughts.

**Predicting the Future:** You predict the future—that things will get worse or that there's danger ahead.

**Catastrophizing:** You believe what might happen will be so awful and unbearable that you won't be able to stand it.

**Negative Filter:** You focus almost exclusively on all the negatives and seldom notice the positives.

**Overgeneralizing:** You perceive the likelihood of a negative outcome based on a single incident.

Labeling: You assign general negative traits to yourself and others.

**Discounting the Positive:** You claim that the positives that you or others have don't matter.
"Should" Statements: You interpret events in terms of how things should be, rather than simply focusing on what is.

**Personalizing:** You attribute most of the blame to yourself for negative events and fail to see that certain situations are also caused by others.

Emotional Reasoning: You let your feelings guide your interpretation of reality.

Unfair Comparisons: You interpret events in terms of standards that are unrealistic.

# Appendix G: Session-level TF-CBT Adherence Observational Coding Form

SESSION-LEVEL ADHERENCE OBSERVATIONAL CODING FORM - NOTES											
Therapist ID:		Session ID:		Session Length:		Language: English (0) Spanish (1) Mandarin (2) Cantonese (3) Other (4)		Coder Initials:		Coding Date:	

**Instructions:** Use this form to take notes while you watch a therapy session recording. Pause the recording as needed and record notes with timestamps regarding therapist behaviors. After you watch the entire session, review your notes and assign ratings on the Ratings page.

TF-CBT Activities/Strategies Delivered in Session (e.g., Trauma Narrative)	Indicate Time (e.g., 00:00:00 - 00:26:36)
1.	
2.	
3.	
4.	
5.	

#### Item 1. Assessment

Item 2. Psychoeducation about Trauma and/or TF-CBT

Item 3. Parenting Skills

Item 4. Relaxation

Item 5. Affect Identification, Expression, and Modulation

Item 6. Cognitive Coping

Item 7. Trauma Narrative

#### Item 8. In-vivo Exposure

## Item 9. Conjoint Youth-Caregiver Session

## Item 10. Enhancing Safety

## Item 11. Crisis Management

Session Participants	Present? No = 0 Yes = 1	Caregivers/other providers (e.g., father, mother, etc.)	# minutes therapist directed attention to: *If possible, write time intervals	Total Minutes
Child				
Caregiver 1:				
Caregiver 2:				
Other Provider:				
Other:				

	Rating (0-6)	Total Time
Item 1. Assessment		
Item 2. Psychoeducation about Trauma and/or TF-CBT		
Item 3. Parenting Skills		
Item 4. Relaxation		
Item 5. Affect Identification, Expression, and Modulation		
Item 6. Cognitive Coping		
Item 7. Trauma Narrative		
Item 8. In-vivo Exposure		
Item 9. Conjoint Youth-Caregiver Session		
Item 10. Enhancing Safety		
Item 11. Crisis Management		
Enter highest rating out of Items 1-11		

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