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BEHAVIOR PROBLEMS: CONSTRUCT AND PREDICTIVE VALIDITY**

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CAREGIVER ENGAGEMENT IN TREATMENT FOR ADOLESCENT BEHAVIOR
PROBLEMS: CONSTRUCT AND PREDICTIVE VALIDITY

A dissertation submitted in partial fulfillment
of the requirements for the degree of

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ABSTRACT

CAREGIVER ENGAGEMENT IN TREATMENT FOR ADOLESCENT BEHAVIOR PROBLEMS: CONSTRUCT AND PREDICTIVE VALIDITY

Nicole Piazza Porter

Identifying core elements of family therapy is a relatively new line of research that has the potential to increase the availability of family therapy in usual care by providing a flexible and accessible alternative to manualized treatment. The current study extends this line of research by exploring the psychometric properties of a Caregiver Engagement factor comprised of four caregiver engagement interventions grounded in family therapy theory and clinical expertise: *Enhances Love and Commitment*, *Caregiver Collaboration*, *Caregiver Ecosystem*, and *Joins with Caregivers*. The study sampled a total of 320 audio or video recorded sessions and outcome data from 152 cases treated by 45 therapists participating in one of three randomized trials investigating delivery of family therapy for adolescent behavior problems in community settings. Construct and predictive validity were analyzed to understand the degree to which caregiver engagement items cohered as a single factor and influenced youth and family outcomes in predictable ways. Results demonstrated reliability of the four caregiver engagement techniques and construct validity of a Caregiver Engagement factor. Moreover, greater use of caregiver engagement techniques was associated with improved outcomes for adolescent substance use. Counterintuitive results were found suggesting greater use of caregiver engagement techniques exacerbated externalizing symptoms, internalizing

symptoms, and family cohesion per youth-report but not caregiver-report. Results of post-hoc analyses indicated therapists may respond to worsening symptom presentation with greater efforts to involve caregivers in treatment. Implications for improving caregiver engagement in youth mental health services more broadly are discussed.

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Chapter 1

Introduction: Statement of the Problem

Compared to other research-proven approaches, family therapy has the strongest evidence base for treating adolescent behavior problems (Hogue et al., 2018; McCart & Sheidow, 2016). A fundamental and unique feature of family therapy for adolescent behavior problems that differentiates family therapy from other approaches is family involvement in treatment. At the core, family therapy models seek to intervene directly with family members to repair relationships, foster developmentally appropriate parenting strategies, and target systemic challenges in key extrafamilial systems (Rowe, 2012). An obvious and key feature of family involvement is caregiver engagement, characterized by interventions aimed at enhancing parent motivation, involvement, and investment in the therapy process (Hogue et al., 2017).

Family therapy has yet to be widely adopted in routine care for youth behavior problems. Research has identified several barriers to family therapy uptake, perhaps the most pressing being proprietary licensing and quality assurance procedures required by the leading manualized, empirically supported family therapy models (i.e., Brief Strategic Family Therapy, Functional Family Therapy, Multidimensional Family Therapy, Multisystemic Family Therapy). As an alternative, experts in adolescent mental health research and treatment have turned to a core elements approach, designed to define common treatment techniques across evidence-based treatments (Chorpita et al., 2005a, 2005b; Hogue et al., 2017; Hogue et al., 2019; Hogue et al., in preparation). However, a gap in this approach exists. Despite the inherent commitment to engage parents in the

family therapy approach, a Caregiver Engagement factor has yet to be empirically validated as a core element of family therapy.

The present study tests the construct and predictive validity of a Caregiver Engagement factor in a community-based sample using observational coding data. The Caregiver Engagement factor is composed of four engagement techniques derived from family therapy theory and clinical experience: *Enhances Love and Commitment*, *Caregiver Collaboration*, *Caregiver Ecosystem*, and *Joins with Caregivers*. These techniques describe therapist efforts to reduce emotional disconnection between caregivers and their children, underscore efforts at parenting, acknowledge difficult past and present circumstances caregivers experience including difficulties that their child brings, and generate hope for the future and the current treatment.

Chapter II

Literature Review

Treatment for Youth Behavior Problems: Family Therapy

Family therapy and multicomponent treatments integrating family therapy techniques are proving to be among the most effective models to treat a range of youth psychopathology (Hogue et al., 2018; McCart & Sheidow, 2016). Compared to individually-based treatments that focus more specifically on youth skill building and emotion regulation, family-based treatments incorporate parents in treatment and see the family system as the focus of treatment to not only improve skills but also address parent, family, and environmental factors that have been shown to be associated with poor child outcomes. Family therapy treatments simultaneously target intrapersonal factors (e.g., patterns cognitive, behavioral, and emotional processes associated with problematic behavior) as well as interpersonal change (e.g., transactional patterns between family members and between family members and extrafamilial persons and systems).

Manualized family therapy has reached the highest levels of empirical validation for treating a range of youth behavior problems. Family therapy has been shown to be effective in treating youth substance use (Hogue et al., 2014), delinquency (McCart & Sheidow, 2016), obsessive-compulsive disorder (Freeman et al., 2014) anorexia nervosa (Lock, 2015), and anxiety disorders (Higa-McMillan et al., 2016). For conduct and substance use disorders in particular, comprehensive reviews (Hogue et al., 2018; McCart & Sheidow, 2016) and meta-analyses (Dopp et al., 2017; Tanner-Smith et al., 2013) show that family therapy models have the strongest evidence base compared to other research supported approaches. Moreover, family therapy is recognized as a treatment of choice

for the prevention and treatment of adolescent violence and risky behaviors, depression, mania and anxiety, and the management of more severe mental illnesses including schizophrenia (Sexton & Datchi, 2014).

One of the defining features of family therapy in comparison to other treatment approaches is the focus on understanding family relationships and improving conflicted family interactions (Sexton & Datchi, 2014). Family therapy is often described as being concerned with the space between people instead of within them (Rivet & Buchmüller, 2017), accentuating family connection and relationships as an agent for healing rather than focusing specifically on the presenting problems of the individual. In this way, family members are reframed as part of the solution to problems rather than placing blame on the youth.

Family therapy encompasses a range of interventions that includes family skills training and relational or systemic therapies. Family skills training is a more behavioral approach that focuses on teaching new positive and effective coping, communication, and problem-solving skills to family members as well as developmentally appropriate parenting strategies. The basis of systemic family therapy is reframing adolescent symptoms as problems that need relational solutions within the family, and understanding the family's experience within systems with which they interact (Rowe, 2012). These are distinct from treatment frameworks that place an emphasis on supporting individuals to overcome problematic patterns of thoughts, feelings, and behaviors where therapists plan and carry out treatment activities at the level of the individual client.

To support the goals of family therapy, treatment is often solution-focused, brief, and designed with specific and attainable therapy goals in mind (AAMFT, 2020).

Multiple family members participate in the majority of sessions, though individual sessions are also planned to prepare family members for future conjoint sessions. Although family members are sometimes invited to join sessions in more individual-based treatment models, this is often with the objective of supporting treatment generalization outside of the therapy room through tasking family members with encouraging and monitoring the use of learned skills at home.

Family Therapy Dissemination

Despite the large evidence base of empirical research, family therapy has yet to be widely adopted in routine care (Withers et al., 2016) for a number of reasons. Manualized family therapy models require an extensive set of quality assurance procedures to ensure fidelity to respective models. These procedures include but are not limited to standardized initial training, guidelines and requirements for ongoing training, and provisions of observational coding of sessions by model experts. This is a mismatch with community mental health providers who need affordable and easily scalable treatment models that can be implemented under constraints of low budget and high practitioner turnover (Hogue et al., 2013; Knudsen et al., 2008). Put simply, the quality assurance procedures required by typical manualized family therapy models are too expensive and resource demanding for the vast majority of community clinics to maintain. In fact, even with state funding and infrastructure designed to support the roll-out of these kinds of manualized models, initial training and ongoing quality assurance demands often remain problematic (McHugh & Barlow, 2010).

Even if these logistical barriers were non-existent, research suggests some therapist may be uninterested in learning full-scale manualized treatments. For example,

in one national study of practicing psychologists, about half reported little to no interest in using a manualized intervention due to concerns about rigidity of treatment manuals, among other reasons (Addis & Krasnow, 2000). Other research suggests negative attitudes toward manualized treatments held by therapists outweigh cited advantages. Therapist concerns included worry about manualized interventions interfering with therapeutic alliance and the belief that evidence-based interventions are ineffective or a mismatch for the clinical population or treatment center (Baumann et al., 2006; Stewart et al., 2021). Research suggests that in some cases, therapists develop these kinds of negative opinions about treatment manuals despite little familiarity and exposure to them (Addis & Krasnow, 2000, Bauman et al., 2006).

Another barrier limiting the availability of family therapy in routine care is insufficient training opportunities in family therapy for clinicians in training. According to the Commission on Accreditation for marriage and Family Therapy Education, there are only 128 accredited doctoral or master's level graduate programs offering training in family therapy and the vast majority of these training programs are masters level. For clinicians interested in growing expertise in family therapy intervention who do not attend one of these programs, remaining options include post-degree certificate programs and private training programs that require significant additional time and financial investment. This is consistent with trends abroad. For example, in Sweden, although older generations of psychologists and psychiatrists are likely to have some competency in family therapy, younger generations are less likely to be competent. Training is largely restricted to social workers who are able to access family therapy training in their educational programs and to those who have the time and resources to pursue private

training institutes (Ringborg, 2016). This significant barrier limits the availability of family therapy and prevents adolescents and families from receiving this effective treatment option.

Hope remains for family therapy in usual care with growing efforts to disseminate family therapy. Research suggests growing interest among clinicians to learn family therapy interventions and resources continue to be allocated to promoting family-based interventions for adolescents and families (Withers et al., 2017). Even more promising is that research indicates community therapists practicing family therapy in usual care settings in the absence of the hefty quality assurance procedures are able to achieve positive therapeutic outcomes (Hogue et al., 2015; Hogue et al., under review). This research suggests that if we can provide clinicians with basic training in family therapy and tools to self-monitor their use of interventions, we may be able to increase access and availability of family therapy in routine care.

Innovation in Family Therapy Dissemination: Core Elements

Researchers and clinicians are motivated to identify alternative dissemination strategies to manualized models in order to bridge the gap between what is known about effective treatment and real-world practice (Perkins et al., 2007). This is true for mental health services broadly and not just family therapy in particular. The most successful alternative to manualized treatment models to date is the core elements approach, which was defined by Chorpita and colleagues nearly two decades ago (Chorpita et al., 2005a, 2005b) and has only grown in popularity since. A core elements approach provides accessibility to community providers by offering granular, flexible, and transdiagnostic treatment elements that are fundamental and presumed to be active ingredients of

comparable manuals (Chorpita & Daleiden, 2009). For front line clinicians and community mental health providers without the resources to adopt or learn a manualized treatment model, core elements can be more easily learned and integrated into existing practices.

Core elements are a viable method for disseminating evidence-based practices that can be incorporated into existing treatment approaches while maintaining treatment efficacy. Core elements are identified by specifying discrete techniques validated in randomized trials that are prescribed in larger intervention protocols from a given clinical orientation for specific disorders and/or presenting problems. Then, techniques are distilled into a smaller set of overlapping elements that represent the core features across manuals. Randomized trials testing the effectiveness of core elements for a broad set of childhood disorders suggest a core elements approach may produce sustained improvement in outcomes with a faster rate of change compared to usual care and treatment as usual (Chorpita et al., 2017; Chorpita et al., 2013; Weisz et al., 2012). Moreover, training clinicians and providers in core elements that can be applied to multiple clients rather than teaching entire treatment protocols specific to one presenting problem or clinical disorder may be a more effective method to increase the quality of mental health treatment provided in usual care (Garland et al., 2008) without taxing resources and overburdening clinicians.

For family therapy specifically, defining core elements of treatment may be especially useful to reduce the research-practice gap. Similar to innovations in mental health care for childhood disorders, family therapy research has also moved toward dissemination in real-world clinical settings by emphasizing clinical skills and discrete

family therapy practice techniques (Sexton & Datchi, 2014). Research has defined mechanisms of change in family therapy including process variables like therapeutic alliance (see Sexton & Datchi, 2013) and core elements of treatment thought to be common across various manualized models and implicated in therapeutic gains (see Hogue et al., 2017, Hogue et al., 2019; Rivett & Buchmüller, 2017).

Of particular relevance to the proposed study is the work of Hogue and colleagues. Hogue and colleagues were among the first to distill core elements of family therapy for adolescent conduct and substance use problems using a sample of three manualized family therapy models (i.e., Multidimensional Family Therapy, Brief Strategic Family Therapy, Functional Family Therapy). Starting with a conceptual distillation (Hogue et al., 2017) followed by an empirical distillation using extensive observational coding of family therapy sessions (Hogue et al., 2019), this work yielded empirical justification for four core elements of family therapy: Interactional Change, Emphasize Relationships, Adolescent Engagement, and Relational Reframe (see Hogue et al., 2019). These factors describe interventions intended to invite and direct family interactions in session, coach new patterns of behaviors and ways of thinking within the family, join with and engage the adolescent in treatment with family-wide goals, and focus treatment on family functioning and relationships.

Dissemination Gap: Caregiver Engagement in Treatment

Engaging caregivers in treatment has obvious importance to family therapy. Although caregiver engagement in treatment has been defined as a core treatment component in conceptual work (Hogue et al., 2017, Rivett & Buchmüller, 2017), caregiver engagement has yet to be empirically validated as a core element of family

therapy. Prior work by Hogue and colleagues utilizing empirical distillation methods expected to yield a factor describing family engagement. However, caregiver engagement interventions loaded on separate factors and were ultimately trimmed in favor of model fit. This is not to say that caregiver engagement interventions are not core to family therapy. On the contrary, caregiver engagement is fundamental to family therapy. Prior exploratory and confirmatory factor analysis methods may have been unsuccessful due to differences in the conceptualization of caregiver involvement and engagement across the family therapy models that were sampled in previous work. It is possible that this prevented distillation of a caregiver engagement factor because it infers differing functions across observed models. It may also be that for some models, caregiver engagement techniques are concentrated in specific treatment phases such as treatment initiation and engagement, which would complicate factor analysis across the entire treatment episode. Additional research is essential to understanding the psychometric properties of caregiver engagement interventions in family therapy as a first step to potentially identifying a core factor describing caregiver engagement interventions.

Benefits of a Caregiver Engagement Core Factor

Increasing Provider Knowledge of Caregiver Engagement Interventions

Providing empirical justification for a Caregiver Engagement factor can support therapists to effectively connect with and engage parents in treatment through increasing provider knowledge of interventions that are grounded in family therapy. As described below, caregiver engagement strategies used by family therapists target engagement and retention barriers that are common in youth behavioral health services such as parents feeling misunderstood and blamed, and therapeutic goals that are misaligned with family

needs. For example, family therapy engagement seeks to validate parental frustration and the considerable stress parents may be experiencing in their parenting and non-parenting roles, collaborate with parents to identify personally meaningful treatment goals, and take a stance of nonjudgmental curiosity of the unique strengths, needs, and circumstances of the family.

Qualitative research exploring therapeutic interventions used in usual care has found that therapists report using a high degree of family therapy interventions. In one study use of family therapy far outweighed the use of other interventions like behavioral interventions, CBT, and psychodynamic therapy (Baumann et al., 2006). Therefore, it may be that caregiver engagement interventions grounded in family therapy theory would be somewhat familiar to some therapists and a welcomed opportunity to enhance their understanding of engagement interventions.

Mental health providers are not the only professional group that would benefit from increased knowledge of caregiver engagement interventions. There are many other professions for which working with parents and caregivers is paramount including child welfare caseworkers, medical professionals, teachers, and school personnel. A Caregiver Engagement factor made up of a set of engagement interventions that can be used flexibly outside of the context of a therapy manual has the potential to benefit these providers as well to better engage parents in their work as well.

Increasing Opportunity for Family Therapy Interventions

Enhancing engagement is likely to yield greater caregiver attendance and participation in treatment (Karver et al., 2006). Greater caregiver engagement in family therapy treatment opens the door to the full spectrum of family therapy techniques that

are effective for adolescents. For example, techniques geared toward family behavior change such as arranging, coaching, and processing family interactions as they occur in conjoint family therapy sessions as well as teaching and practicing new family skills in session (e.g., positive communication skills). These kinds of interventions are difficult to implement in adolescent only sessions.

Increasing caregiver engagement may also increase the use of family-based interventions used by therapists that work from clinical orientations other than family therapy. A clinician providing cognitive behavioral therapy may integrate the same caregiver engagement interventions into their treatment in order to teach new family communication and problem solving skills. Greater caregiver collaboration and alliance through these engagement interventions can also support the generalization of newly learned skills and behaviors to other settings through parental consultation and support.

Addressing Therapist Assumptions

Research suggests in some instances, therapists and the families they treat hold conflicting views about parent participation in treatment. Prior research has identified some therapists believe youth do not want their parents to participate in treatment and perceive parental unwillingness while at the same time youth and parents report interest in family-based sessions (Baker-Ericzén et al., 2013). One question that remains is how therapist attitudes toward parents and their assumptions about whether parents are willing to participate in treatment influence the degree to which they utilize interventions designed to increase parental involvement in treatment. Caregiver engagement interventions from family therapy shifts attention to connecting with family members as part of the treatment in and of itself. Caregiver engagement interventions distilled from

family therapy are unique in the premise that parental reluctance to participate may be expected and is a symptom of family conflict and presenting problems rather than a therapy interfering factor.

Shifting Attention to Therapist Behavior

Although the past two decades has experienced significant growth in identifying and describing techniques to engage parents in treatment, the extent to which these interventions are used in usual care is less understood. Focusing on therapist delivery of caregiver engagement interventions is a relatively new line of research compared to the long history of engagement research that analyzes client behavior. The current literature base is dominated by research examining parent behaviors such as treatment attendance and participation as core constructs to understand youth treatment delivery (Becker et al., 2015; Nock & Ferriter, 2005). Caregiver attendance in particular has long been used as a quality indicator of mental health treatment services (Wright et al., 2019). Active session participation and compliance with treatment recommendations including homework exercises are other commonly used measures of caregiver engagement (e.g., Haine-Schlagel & Walsh, 2015) as well as parent active, independent, and responsive contributions in treatment (e.g., Haine-Schlagel & Walsh, 2015, Stadnick et al., 2016). Less understood is how clinicians deliver engagement intervention to invite caregivers to treatment, especially after treatment initiation. This is especially true for adolescent treatment. Some research indicates that even when caregivers attend sessions, caregivers are infrequently the target of intervention strategies and instead are more passive session participants throughout treatment (Garland et al., 2010).

Quantitative research examining therapist use of caregiver engagement interventions is scarce. In one study utilizing observational coding of community-based therapists treating youth and families, four treatment techniques were identified that were implemented to engage parents in treatment: information gathering, psychoeducation, establishing and reviewing goals, addressing external care (Haine-Schlagel et al., 2012). Yet, only one of these strategies (psychoeducation) was delivered on average and with moderate intensity while the other three were delivered at low intensity. This research suggests there is ample room to grow in increasing therapist use of caregiver engagement interventions, especially given shared understanding that parent involvement is a critical component of evidence-based practices for youth.

Therapist Self-Monitoring Measure

Validating a Caregiver Engagement factor has the potential to increase provider self-monitoring of intervention delivery. Individual items can be conceptualized as a checklist for clinicians to complete to allow clinicians themselves and supervisors to assess the delivery of interventions intended to engage caregivers in treatment. Research examining uptake of caregiver engagement interventions in younger clinical samples suggest that when clinicians are provided with an implementation toolkit including self-report adherence checklists, not only does their attitude toward and use of these kinds of interventions increase, families perceive treatment to be more effective and their participation in treatment increases (Haine-Schlagel et al., 2018). However, such a checklist is only helpful to the degree that it is empirically validated and psychometrically sound.

Caregiver Engagement in Treatment

Research suggests parent willingness and participation in treatment is associated with positive therapeutic outcomes (Karver et al., 2006). If parents are working in treatment they are likely to be making changes conducive to positive outcomes for their child whether that be in behavioral treatments such as parent management training or family therapy. One key pathway to changing problematic adolescent behavior is through fostering age and developmentally appropriate parenting skills and supporting parent-child and other family relationships, which requires caregiver engagement and involvement in treatment.

Caregiver Engagement Themes in Family Therapy

Manualized family therapy models including Functional Family Therapy (FFT; Alexander, 1982), Multidimensional Family Therapy (MDFT; Liddle & Rowe, 2000) and Brief Strategic Family Therapy (BSFT; Robbins & Szapocnik, 2000; Szapocnik & Williams, 2000) are exemplary in their clinical guidelines and demonstrated success with engaging parents and other family members in treatment. In fact, some research suggests family therapy engagement interventions are the best approach for engaging and retaining caregivers in treatment (e.g., Coatsworth et al., 2001; Ignoldsby, 2010; Santisteben et al., 1996; Szapocnik et al., 1998). Although existing manualized family therapy models have been developed independently, common themes across these models exist that describe comparable approaches to engaging caregivers in treatment. These models may represent an ideal starting point for identifying interventions that are core to caregiver engagement from a family therapy orientation.

One of the ultimate goals of caregiver engagement interventions in family therapy is to reduce disconnection and enhance the emotional bond between caregivers and their child. In addition, engaging caregivers in treatment requires fostering confidence that they can be influential in their child's life and a part of the solution to presenting problems. Doing so is fundamental to building motivation and buy-in for later cognitive and behavioral change interventions such as changes in parenting practices, age-appropriate limit setting, and parental monitoring and discipline strategies. This starts with understanding caregivers as individuals with their own needs and experiences both within the family system and also within their life outside of being a parent. Caregiver engagement interventions core to existing family therapy models are described below and serve as the basis for the four caregiver engagement techniques examined in the present study.

Theme 1: Collaboration with caregivers. Fundamental to caregiver engagement in family therapy is acknowledging that parents have their own needs and barriers to treatment engagement. Caregivers may experience low motivation for treatment, hold stigmatized beliefs about the causes of their child's presenting problems, engage in self-blame, and have poor confidence in their ability to influence their teen's behavior (Liddle & Schmidt, 1994, Morrissey-Kane & Prinz, 1999). Collaborating with parents by expanding optimism for treatment, increasing parenting confidence, and co-creating family-focused treatment goals is fundamental to engagement. Unique to family therapy is that goals can be adolescent, parent, and/or family-centered depending on the distinctive needs and experiences of each family. This supports efforts to engage parents in treatment by allowing and even encouraging treatment goals that are personally

meaningful to parents as well as adolescents. In this way, parents have something to gain by participating in treatment with their child. As treatment progresses, collaboration continues through periodic check-ins to ensure and/or re-establish investment in working on established goals, or to reformulate treatment goals as indicated.

At treatment initiation, it is not uncommon for parents to feel hopeless. This is especially true for those families that may have experienced previous unsuccessful treatment episodes and lack understanding about treatment processes (Coatsworth et al., 2004). Family therapy is different from other treatment approaches in its view that treatment reluctance is expected. Engagement includes providing treatment psychoeducation for family members as a strategy to build hope and motivation for the current treatment (Szapocznik et al., 1998, 2003). Emphasis is placed on the current therapy as a space to talk about family issues in a new way with active caregiver involvement throughout treatment. Moreover, as treatment progresses, aligning with caregivers and continuing to offer optimism for treatment and instill confidence in ability to change behaviors and ways of relating to their child is necessary to achieve ongoing engagement.

Theme 2: Enhancing love and commitment. Teens and families frequently present to treatment under duress and high in family conflict (Shirk & Karver, 2003, Waldron et al., 2017). Caregiver engagement strategies seek to rekindle emotional connection between parents and their adolescent by fostering parental commitment to their child's well-being and reducing emotional distance between parents and their children. Parental love and warmth are often obscured by negative emotions that are more prominent in times of family discord. Family therapists work under the assumption that parental love is

still present, and clinicians are tasked with uncovering and enhancing feelings of love, commitment, and connection (Liddle, 2003). For example, family therapists may attempt to prompt memories and feelings relative to their child that are in opposition to current family circumstances and also aspirations for a more positive family future. Doing so evokes a more positive and hopeful mindset and is key to parent-child reconnection.

Theme 3: Understanding caregiver's ecosystem. Essential to building empathy and connection with parents is understanding and providing validation of their life circumstances outside of their role as a parent. Many parents who present to treatment with their children experience or have experienced in the past other life stressors such as economic hardship, low social and familial support, poverty, and psychopathology (Liddle, 2003). Caregivers may also hold negative feelings toward their own upbringing and the parenting they experienced, which is necessary to understand in order to support change in current parenting practices. These difficult circumstances are likely to affect parenting and family management and also engagement and participation in therapy. Identifying and managing caregiver stressors is important to motivate parents for treatment and garner willingness to try new ways of connecting to family members.

In addition to exploring parental functioning and well-being, it is important to understand sources of strengths and support. Without adequate social support and ability to manage daily stress, parents may have less energy and motivation for participating in treatment sessions or believe that it is unmanageable to engage in therapy. Discussing non-parental activities supports caregiver resiliencies and reinforces the need for self-care and social support from friends and other family members.

Theme 4: Joining with caregivers. An environment where parents feel that their position within the family system is respected and valued is critical to engage parents in treatment (Greif, 1990). This is built carefully through demonstrating respect, understanding, and acceptance of caregivers throughout treatment so that caregivers feel their position in the family is respected and their contribution is meaningful and valued (Szapocznik et al., 2012). Earning trust and acceptance allows for access to the family system while maintaining therapeutic leadership necessary for the therapeutic process. Family therapists may acknowledge the challenging past and present experiences within the family and the difficulties their child brings to show understanding and grow willingness to engage in treatment to improve the parent-child relationship and develop a deeper understanding of their child's experience and point of view.

Caregiver Engagement Interventions in Other Treatment Approaches

Caregiver engagement in treatment is foundational to the most effective evidence-based treatment approaches in addition to family therapy for a variety of youth mental health disorders. For example, caregiver participation is core to treatment for two of the most common presenting problems in community mental health: youth disruptive behaviors (Eyberg et al., 2008) and attention deficit/hyperactivity disorder (Evans et al., 2014), often treated via parent management training and cognitive behavioral interventions (Chorpita & Weisz, 2009). Moreover, family involvement is becoming increasingly more prevalent as an adjunct to cognitive behavioral therapy for negative emotionality (Ehrenreich et al., 2009) and internalizing disorders such as anxiety (Lebowitz et al., 2014). As reviewed below, the approaches to caregiver engagement from other clinical orientations map onto many of the themes of caregiver engagement in

family therapy reviewed above. From both orientations, engagement interventions address not just caregiver participation in sessions but also their attitudes toward treatment, investment in the therapeutic process, and their life outside of their role as a parent. This overlap provided additional conceptual support for the four caregiver engagement techniques examined in the present study.

Research studying caregiver engagement interventions in child and adolescent mental health services has identified a number of engagement strategies. One of the most thorough distillation of techniques to engage families in treatment for child and adolescent mental health services has been conducted by Becker and colleagues (Becker et al., 2018). Becker et al. identified 30 empirically supported practice elements promoting engagement in treatment for youth and parents via enhancing social, cognitive, affective, and behavioral commitment to treatment. This is consistent with other research studying caregiver engagement interventions. For example, Staudt and colleagues (2007) developed an empirically derived five component model of caregiver engagement drawing from a number of psychological and clinical models for engaging parents in treatments of various kinds. They arrived at 5 central engagement targets: (1) treatment relevance and acceptability; (2) cognitions and beliefs about treatment; (3) daily stresses; (4) external barriers to treatment; (5) therapeutic alliance. Moreover, McKay and colleagues (1998, 2004) have extensively studied the process of parent and family engagement in treatment, identifying concrete principles to enhance caregiver engagement. Their early work identified key principles to be addressed at the start of treatment for initial engagement. Recommendations target (1) clarifying need for services highlighting what the caregiver perceives to be their child's needs; (2) acknowledging the

strength it takes for parents to seek help and validate the difficulty their child brings; (3) explore concerns related to previous treatment experiences; and (4) problem solve potential barriers to attending the first session (McKay et al., 1998). McKay and colleagues furthered this work by identifying an additional four key principles of engagement to be prioritized in every session to enhance engagement across the treatment episode: (1) describe the treatment process and expectations; (2) create a collaborative relationship and space for the family to share their experiences; (3) focus on practical concerns that can allow for early treatment gains; and (4) problem solve potential barriers to continued treatment attendance (McKay et al., 2004).

The Present Study

The present study utilizes archival data from a family therapy observational coding study conducted by Hogue and colleagues investigating the correspondences in family therapy process and outcomes in family therapy delivered by frontline clinicians in routine community-based services. The present study focuses specifically on a subset of family therapy techniques utilized to engage caregivers in treatment. The current study has three main innovations described below.

First, compared to the vast literature examining treatment delivery in controlled laboratory settings, virtually nothing is known about treatment delivery in usual care and community-based settings. This study will add to the literature base seeking to understand the delivery of evidence-based treatments in usual care without the kinds of quality assurance procedures in place under controlled studies and manualized treatment delivery. Better understanding usual care contexts is key to dissemination and implementation of evidence-based practices (Hoagwood & Kolko, 2009).

Second, it will seek to establish construct validity of a Caregiver Engagement factor composed of caregiver engagement techniques common to manualized family therapy models using observational coding data. Coding spanned the use of 21 core family therapy techniques including four caregiver engagement items: (1) *Parent Collaboration*: Attempts to collaborate with parent(s) by instilling hope and/or involving them in treatment goals; (2) *Love and Commitment*: Enhances parental feelings of love and commitment; (3) *Parent Ecosystem*: Focuses on parents' non-parenting life as an adult person; and (4) *Joins*: Joins with parent(s). Previous research by Hogue and colleagues failed to validate a Caregiver Engagement factor. The current study is uniquely positioned to shed light on the psychometric properties of a Caregiver Engagement factor to carry forward the line of research uncovering core elements of family therapy for adolescent behavior problems.

Third, this study examines links between caregiver engagement technique use and clinical outcomes at one-year follow-up to test the practical clinical value of caregiver engagement techniques. And, in doing so, the current study will provide empirical data to understand if collaborating and connecting with caregivers to engage them in treatment impacts symptoms in a unique way compared to interventions designed to engage adolescents. Establishing construct and predictive validity would suggest that not only do these caregiver engagement items appear in front line care, they also influence outcomes in expectable ways.

The current study is exceptionally suited to carry these objectives forward in part due to the process by which the caregiver engagement techniques were identified and operationalized to maximize representation validity. First, items were written to be

clearly recognizable and easily compared to common approaches for engaging caregivers in family therapy treatment. Second, the items were co-created and vetted by a team of family therapy experts with experience in family therapy model development and dissemination to ensure content validity. Integrating empirical research and clinical knowledge in this way has been recommended as one way to bolster the dissemination of family therapy in real world settings (Withers et al., 2016).

Chapter III

Research Questions and Hypotheses

The present study has three research questions with five hypotheses pertaining to the reliability and validity of a Caregiver Engagement factor derived from family therapy theory in a sample of community-based family therapy sessions.

Research Question #1: Can independent observational coders reliably rate the extent to which community therapists utilize caregiver engagement techniques in treatment?

Hypothesis 1: One-way random intraclass correlation coefficients will demonstrate evidence of strong inter-rater reliability between independent observational coders on four caregiver engagement techniques.

Research Question #2: Do caregiver engagement techniques cohere as a valid construct?

Hypothesis 2: The four caregiver engagement techniques will demonstrate strong bivariate correlation and high internal consistency assessed via Cronbach's alpha.

Hypothesis 3: The Caregiver Engagement factor will demonstrate weak bivariate correlation with four other empirically supported family therapy factors identified in prior research (i.e., Interactional change, Relational Reframe, Adolescent Engagement, Emphasize Relationships; Hogue et al., 2019).

Hypothesis 4: There will be no difference in the extent to which caregiver engagement techniques are utilized across Phase 1, Phase 2, and Phase 3 treatment sessions.

Research Question #3: Does greater use of caregiver engagement techniques predict clinical outcomes over one-year follow-up?

Hypothesis 5: Higher Caregiver Engagement factor score will predict better outcomes over one-year follow-up in several clinical domains: youth externalizing problems, youth internalizing problems, family functioning, and youth substance use.

Chapter IV

Method

Study Sample

This study utilized archival data from a parent study conducted by Hogue and colleagues (R01DA037496; PI: Hogue) testing the construct and predictive validity of core elements of family therapy for adolescent substance use and behavior problems. The sample represents a total of 320 audio or video recorded sessions and outcome data from 152 cases treated by 45 therapists participating in one of three randomized trials investigating delivery of family therapy for adolescent behavior problems in community settings. Each pool is described in detail below.

One sample pool, an implementation trial of Functional Family Therapy (FFT-I; Robbins et al., 2016), contributed 98 sessions from 50 cases. The parent trial for this pool (Robbins et al., 2019) was conducted in California and examined the effects of observation-based supervision versus conventional model supervision across eight community agencies. In this pool, adolescents were 70% male and on average, 15.1 years of age. Adolescents self-identified as 76% Hispanic American, 16% African American, 6% White Non-Hispanic, and 2% unknown. Adolescents were treated by 22 therapists (68% female; 45% Hispanic American, 41% White Non-Hispanic, and 14% African American).

A second pool, an adaptation trial of Multisystemic Therapy delivered in routine care (Henggeler & Schaeffer, 2016) titled Outpatient Treatment for Adolescents (OPT-A), contributed 115 sessions from 59 cases. The parent trial (Sheidow et al., 2020) took place in South Carolina and demonstrated the efficacy of OPT-A for adolescents with co-

occurring substance use, internalizing and externalizing problems delivered by Masters level clinicians in a community mental health center. In this pool, adolescents were 59% male and on average, 15.1 years of age. Adolescents self-identified as 66% White Non-Hispanic American, 15% African American, 5% Hispanic American, and 5% another race/ethnicity. Adolescents were treated by 2 therapists (1 female; 2 African American).

A third pool, a naturalistic trial of non-manualized family therapy in usual care (UC-FT), contributed 107 sessions from 52 cases. The parent trial (Hogue et al., 2015) was conducted in New York City and demonstrated superior outcomes for adolescents in one clinic that featured family therapy as the routine standard of care versus five clinics that featured various alternative treatment approaches; the UC-FT condition was shown to have strong adherence to the family therapy approach (Hogue et al., 2017). In this pool, adolescents were 50% male and on average, 15.8 years of age. Adolescents self-identified as 73% Hispanic American, 15% African American, 2% White Non-Hispanic, 4% another race/ethnicity and 6% unknown. Adolescents were treated by 21 therapists (76% female; 76% Hispanic American, 14% White Non-Hispanic, and 10% African American).

Importantly, therapists in all three pools were standard workforce clinicians with diverse training backgrounds and experience treating cases from routine clinic referral streams. In all three pools, outcome data were collected at baseline, six-month follow-up, and twelve-month follow-up.

Session Sample Selection Procedures

In the parent study, to select a reduced but still representative sample of recorded (audio or video) sessions from each case, treatment was divided into three generic

sampling phases: Phase 1 (Sessions 1–2), Phase 2 (Sessions 3–6), and Phase 3 (Sessions 7–20). Sampling phases were created based on the timing and sequencing of treatment techniques prescribed by manualized family therapy models. The sampling design of the parent study allowed for the examination of phase effects in the present study. Sessions later than the twentieth were excluded, as they represent an unusual length of treatment for family therapy in routine care, unless only sessions later than 20 were available; in these few instances (n=9) the earliest session available was used for Phase 3. One session was randomly selected for coding from each sampling phase for which at least one session had occurred. The final session for a given case was excluded to avoid selection of termination-focused sessions (e.g., therapy graduation) that may generally preclude family therapy interventions. A percentage of initially selected recordings were over 75 minutes long; in this circumstance (n=31), a shorter replacement tape within the same phase was randomly selected, or if a replacement tape was not available, only the first 60 minutes were coded. Fourteen percent of the sample (n=22) had sessions in all three phases, 68% (n=109) had sessions in two of the phases (usually Phases 2 and 3), and 15% (n=24) had sessions in one phase only (usually Phase 3). Overall, there were 99 recordings in Phase 1, 103 in Phase 2, and 118 in Phase 3, for a total of 320 recordings. Adolescents and caregivers appeared together in 74% of sessions, with 18% of sessions containing only adolescents and 8% only caregivers.

Study Measures

Caregiver engagement Techniques

Caregiver engagement was rated using the Therapist Behavior Rating Scale: Core Elements of Family Therapy (TBRS-CEFT; Bobek et al., 2018). The TBRS is a

measurement system designed by Hogue and colleagues (1994) for observational rating of family therapy interventions. The TBRS has been adapted and rigorously tested as a measurement tool in a number of observational coding studies since its inception (e.g., Diamond et al., 2007; Hogue et al., 1998, 2007, 2019). The most recent version of the TBRS, the TBRS-CEFT, contains items that represent core elements of evidence-based family therapy for adolescent conduct and substance use disorders. The scale measures the extensiveness (i.e., thoroughness and/or frequency) with which family therapy techniques are utilized in observed session, based on a 5-point Likert-type scale: 1 = *Not at all*, 2 = *A little bit*, 3 = *Moderately*, 4 = *Considerably*, 5 = *Extensively* (see Appendix A). Most recent psychometric data (Hogue et al., 2019) showed fair-to-excellent interrater reliability for each item using one-way random intraclass correlation coefficients (ICC_(1,2); Shrout & Fleiss, 1979), range .54 – .91; strong inter-item correlations within module (i.e., internal consistency) using Cronbach’s α , range .67 – .93; and weak-to-modest average correlations among subscales (i.e., strong module differentiation) using Pearson’s r , range .04 – .30. For the current study, Caregiver engagement techniques (i.e., Parent Collaboration, Love and Commitment, Parent Ecosystem, Join with Parents) were added to original TBRS-CEFT scale for observational coding. An example caregiver engagement item from the coding manual is presented in Appendix B.

Working Alliance

Working alliance was observationally coded with one item: “Please rate the extent to which the session featured a strong working alliance (i.e., a collaborative and connected relationship)” based on a 5-point Likert-type scale: 1 = *Not at all*, 2 = *A little*

bit, 3 = *Moderately*, 4 = *Considerably*, 5 = *Extensively*. This item was adapted from a single-item therapist-report version designed for use in routine care settings by Bickman and colleagues (2012). The single-item measure has demonstrated solid psychometric properties in large-scale studies of community-based youth mental health services (e.g., Bickman et al., 2016; Breda & Riemer, 2012), including strong bivariate correlation with a well-validated 52-item alliance measure for both youth-therapist and caregiver-therapist alliance scores ($r = .75$ and $.81$ respectively; Bickman et al., 2012). In the parent study from which the current sample was drawn, this single-item alliance measure with strong face validity was preferred over lengthier alliance measures to reduce coder burden known to trouble observational coding studies of this kind (Shelef & Diamond, 2008). In the present sample, the ICC for the adolescent alliance item (ICC = $.47$) and caregiver item (ICC = $.50$) indicate adequate interrater reliability (Cicchetti, 1994). If both an adolescent and parent attended a given session, separate ratings were provided for each and later averaged to generate a single family alliance score for the session.

Client Outcomes

The current study selected client outcome measures from the three parent trials (FFT-I, OPT-A, UC-FT) that represented primary transdiagnostic intervention targets: behavior problems, family functioning, and substance use. All client outcome data were collected at baseline, six-month follow-up, and one-year follow-up. Because the trials did not share a common assessment battery, below indicates which measures derive from which trials.

Behavior Problems. Youth behavior problems were measured using the *Achenbach System of Empirically Based Assessment* (ASEBA). The ASEBA offers

parallel self-report and parent-report measures of youth behavior problems supported by extensive evidence of reliability, validity, and clinical utility: the *Child Behavior Checklist* (CBCL; parent report) and *Youth Self-Report* (YSR) (Achenbach & Rescorla, 2001). The CBCL and YSR are tailored for the particular informant intended to complete the assessment. Each assessment was created, tested, and revised using clinical and community samples of youth and have been normed on nationally representative samples (Achenbach, 1991; Achenbach & Rescorla, 2001). Research has found 1-week test-retest reliabilities ranging from .79 to .96 and alpha coefficients range from .68 to .97 in nationally representative samples (see Achenbach & Rescorla, 2001). The CBCL and YSR contain broadband summary scales of Externalizing (delinquent, aggressive) and Internalizing (anxious/depressed, withdrawn, somatic complaints) behavior problems (Achenbach, 1966). The parent-report externalizing variable combined data from all three pools (FFT-I, OPT-A, UC-FT); youth-report externalizing, parent-report internalizing, and youth-report internalizing combined data from the FFT-I and UC-FT pools.

Family Functioning. The *Family Environment Scale* (FES; Moos & Moos, 1986) is a self-report measure completed separately by adolescents and parents containing ten subscales describing family home life, each with strong internal consistency and test-retest reliability (see Boyd, 1997, Moos 1990). This study used the 10-item Family Cohesion and Family Conflict subscales, which show evidence of strong reliability and internal consistency in adolescent samples (alpha coefficients = .67 and .72 respectively; Boyd et al., 2004). Adolescent-report and parent-report variables for both subscales combined data from the FFT-I and UC-FT pools.

Substance Use. Substance use was assessed using urine drug assays testing for a range of commonly used illegal substances, which indicated either Absence or Presence of a given substance. This variable was obtained from the OPT-A pool only (the other two pools did not collect urine assays).

Observational Coding Procedures and Raters

Caregiver engagement technique use and working alliance were coded at the same time by the same group of raters. Raters were trained during twice-weekly meetings via review of the observational coding scoring manual, in-group coding practice, and exercises to increase understanding of scale items. Study coding commenced once raters reached a collective reliability threshold of intraclass correlation coefficient ($ICC_{(1,2)} = .65$ for 80% of items) and was monitored thereafter. All sessions were independently coded in their entirety by two raters randomly assigned to sessions in pairs according to a balanced incomplete randomized block design (Fleiss, 1981). There were 11 raters (including author NP): 10 female; 8 White Non-Hispanic, 3 Hispanic American. Six had a Master's degree.

Plan of Analysis

Study analyses occurred in three stages following preliminary descriptive analyses. Preliminary, Stage 1, and Stage 2 analyses were conducted in IBM SPSS for Windows, Version 27.0 (IBM Corp, 2020). Preliminary analyses were conducted to test statistical assumptions including: (a) descriptive analyses to assess measures of central tendency and dispersion (mean, standard deviation, median, range, skewness, kurtosis) for all continuous variables (i.e., individual caregiver engagement items, Caregiver Engagement factor score, working alliance, behavior problems, family functioning) and

proportions for all categorical variables (i.e., adolescent substance use); and (b) data screening for outliers, missing data, and covariance between study variables.

Transformations were applied to variables that violated normality standards in the event that more conservative data trimming of outliers was insufficient.

In Stage 1 the interrater reliability of caregiver engagement items was evaluated to test Hypothesis 1. Interrater reliability for the four caregiver engagement items and working alliance were calculated using the one-way random intraclass correlation coefficient ($ICC_{(1,2)}$; Shrout & Fleiss, 1979). ICC is the gold standard for assessing interrater reliability for continuous variables with two or more coders (Hallgren, 2012) and can be interpreted according to: (a) Cicchetti (1994) criteria for classifying ICC magnitudes, which are ubiquitous in observational coding research on behavioral interventions: below .40 = poor, .40 - .59 = fair, .60 - .74 = good, and .75 and above = excellent; and/or (b) Koo and Li's (2016) criteria recommended for behavioral measurement theory more broadly: below .50 = poor, .50 - .74 is fair, .75 - .90 is good, and .91 - 1.0 is excellent. Once adequate interrater reliability was established, item scores were averaged across raters to yield a single score for each of the four techniques within each sample pool. Finally, items were averaged to create a factor level caregiver engagement score for each case.

Stage 2 analyses examined the construct validity of the Caregiver Engagement factor to test Hypotheses 2-4. First, bivariate correlations between the four caregiver engagement items were calculated to assess the strength of the relation between each pair of items and Cronbach's alpha was calculated to determine internal consistency (i.e., high scores for one item within a specific measure correspond to high scores on other items

within the measure). Then, bivariate correlations between the Caregiver Engagement factor and four separate family therapy factors validated by Hogue and colleagues (i.e., Interactional Change, Relational Reframe, Adolescent Engagement, Emphasize Relationships; Hogue et al., 2019) were calculated to determine factor differentiation. Finally, data were stratified by treatment phase (i.e., Phase 1, Phase 2, Phase 3) to test for consistency in inter-item relations and one-way analysis of variance was used to test for mean differences in Caregiver Engagement factor score across treatment phases.

Finally, in Stage 3, latent growth curve modeling (LGCM; Duncan & Duncan, 2004) was conducted to examine technique-outcome associations over one-year follow-up. LGCM produces growth curve estimates for each individual case and aggregates individual trajectories to estimate mean growth parameters of intercept and slope (Curran et al., 2011). The intercept parameter characterizes the sample in terms of average baseline value of the dependent variable and the slope parameter estimates the rate and shape of change over time. LGCM was preferred over a multilevel modeling framework, given the longitudinal panel design in which participants were assessed at baseline, six-month, and one-year follow-up from baseline (Curran et al., 2010). The first step in LGCM was to test a test for linear change in each dependent variable over time. Then, preliminary analyses examined whether adolescent race/ethnicity, sex, and age were associated with linear change in each outcome variable; any of these variables that was significantly associated with a given outcome variable was retained as a covariate along with working alliance. Finally, Caregiver Engagement factor score was included as the predictor in each model to examine the impact of caregiver engagement technique use on symptom change over time.

Stage 3 analyses were conducted in Mplus Version 8.3 (Muthén & Muthén, 1998-2017). Analyses addressed non-independence of data, specifically, family sessions nested within therapists, using the CLUSTER command and sandwich variance estimator, which computes standard errors taking into account complex sampling procedures including this kind of data clustering (Diggle et al., 2002, Muthén & Muthén, 1998-2017). Although it was also the case that therapists were nested within agencies, a preliminary examination of the intraclass correlation coefficient revealed that the ratio of between-cluster variance to total variance for Agency was nearly zero (ICC was $< .001$ to $.07$ across outcome variables). This indicates that ignoring nesting at this third level would have negligible impact on study results (Kreft & DeLeeuw, 1998). In comparison, the ICC for Therapist ranged from $.04$ to $.19$ across outcome variables. Therefore, for modeling parsimony Agency was not included as an additional cluster variable in the present study. For effect size estimates, we used β coefficients from the growth curve models estimating fully standardized effects (Cohen, 1988). Specifically, β indexes unit change in the outcome variable for one standard deviation of change in slope of the predictor variable, in this case, Caregiver Engagement factor score (as described in Muthén & Muthén, 1998-2017).

Exploratory Analyses

The Caregiver Engagement factor was tested individually, rather than included with the other four core elements of family therapy distilled by Hogue and colleagues (Hogue et al., 2019, submitted). The highly stringent design of including all five factors as co-predictors would risk masking effect of the Caregiver Engagement factor, especially to the degree that the five factors are clinically counterbalanced such that

greater use of one factor may be associated with lesser use of other factors in a given session. However, on an exploratory basis, Stage 3 analyses were extended by re-running the final models controlling for the use of adolescent engagement interventions.

Adolescent engagement interventions are conceptually closest to the caregiver engagement interventions examined in the present study. Understanding the extent to which caregiver engagement interventions uniquely predict outcomes beyond what is accounted for by interventions targeting adolescent engagement is clinically useful and relevant.

Chapter V

Results

Stage 1: Preliminary Analyses

Sample Demographics

Therapist demographics. Study therapists included 45 therapists working in three community-based mental health clinics. Therapists averaged 31.4 ($SD = 9.7$) years of age (68% self-identified female, 31% male). Self-identified race/ethnicity was 41% African American, 40% Latinx, and 19% White Non-Hispanic. A total of 63% of therapists held a master's level degree, 4% a doctorate degree 1% a bachelor's degree. Therapist education was unreported for 30% of the sample (one sample pool: FFT-I).

Family demographics. Study therapists treated a total of 152 adolescents and their families. Adolescents averaged 15 years of age ($SD = 1.65$) and 63% of adolescents were male (37% female). Self-identified race/ethnicity was 52% Hispanic, 30% White Non-Hispanic, 16% Hispanic, and 2% another race/ethnicity. Eighty-two percent of caregivers who participated in treatment sessions earned less than \$45,000 in family income, 28% obtained a high school degree, and 19% graduated from college.

Descriptive Statistics

Caregiver engagement techniques. Factor and item level descriptive statistics for the four caregiver engagement items including measures of central tendency and dispersion are presented in Table 1. Across the full sample ($N = 320$ sessions) and within Phase 1 sessions ($n = 99$), Phase 2 sessions ($n = 103$) and Phase 3 sessions ($n = 118$), *Join with Parents* was used by therapists with the highest degree of frequency and thoroughness in sessions, followed by *Instill Hope*, then *Enhance Love and Commitment*,

and finally, *Parent Ecosystem*. Across the full sample, mean *Join with Parents* score was 3.05 ($SD = 1.26$), *Instill Hope* was 2.06 ($SD = .88$), *Enhance Love and Commitment* was 1.50 ($SD = .70$), and *Parent Ecosystem* was 1.41 ($SD = .70$). Skew and kurtosis values at the item-level for *Enhance Love and Commitment* and *Parent Ecosystem* suggested slight deviation from normality (skewness = 1.74 and 2.05 respectively; kurtosis = 3.60 and 4.13 respectively), however, at the factor level skew and kurtosis values were close to zero, indicating normal distribution; therefore, data trimming and/or transformation were not indicated. Caregiver engagement factor score was slightly highest during Phase 3 ($M = 2.05$, $SD = .70$), followed by Phase 1 ($M = 2.02$, $SD = .64$) and then Phase 2 ($M = 1.94$, $SD = .66$). One-way analysis of variance testing for between treatment phase differences in Caregiver Engagement factor score was non-significant [$F(2, 317) = .812$, $p = .45$], indicating stability in the frequency and thoroughness of caregiver engagement technique use over treatment.

Outcome variables: Descriptive statistics for all outcome variables (i.e., externalizing symptoms, internalizing symptoms, family conflict, family cohesion, substance use) at each time point (i.e., baseline, 6-months, 12-month) are presented in Table 2. Skew and kurtosis values for all outcome variables indicate approximate normal distribution; therefore, data transformations were not indicated.

Stage 1: Inter-rater Reliability

To assess interrater reliability between observational coders, one-way random ICCs were calculated for each of the four caregiver engagement technique items as well as the Caregiver Engagement factor score (see Table 3). ICCs were interpreted based on Cicchetti's (1994) criteria for classifying ICC magnitudes: below .40 is poor, .40-.59 is

fair, .60-.74 is good, and .75-1.0 is excellent. Item ICCs ranged from .52 to .81 for the four caregiver engagement items: *Join with Parents* ICC = .81, *Instill Hope* ICC = .52, *Enhance Love and Commitment* ICC = .56, and *Parent Ecosystem* ICC = .66. The ICC for the Caregiver Engagement factor score was .82. These data have two main implications. First, all 4 item-level scores and the mean factor-level score were adequately reliable, supporting their use in Stage 2 and Stage 3 analyses. Second, these four caregiver engagement items could be dependably and consistently scored by independent observers trained to rate the frequency and thoroughness with which therapists used each of the items during family therapy sessions.

Stage 2: Construct Validity Analyses

Bivariate item correlations. Bivariate Pearson's r correlation coefficients for the four caregiver engagement items were calculated at the item-level and are presented in Table 4. Correlation magnitude can be interpreted as follows: 0 is no correlation, +/- .01-.29 is low, +/- .30 to .49 is moderate, and +/- .50 to +/-1.0 is high. Bivariate correlations in the current sample ranged from .17 to .61 with 1 bivariate correlation falling within the high range, 4 within the moderate range, and 1 within the low range. Similar correlation trends were found within treatment phases (see Table 4).

Bivariate factor correlations. Table 5 presents factor-level bivariate Pearson's r correlation coefficients between the Caregiver Engagement factor and the other four factors distilled by Hogue and colleagues (i.e., Interactional Change, Relational Reframe, Adolescent Engagement, Emphasize Relationships). Factors are considered non-redundant when $r < .70$ (Kline, 1979). At the factor level, correlations between Caregiver Engagement and the other factors ranged from -.23 to .58: $r = -.23$ for Adolescent

Engagement, $r = .40$ for Relational Focus, $r = .58$ for Relational Reframe, $r = .35$ for Interactional Change. The absence of consistently high correlations between the Caregiver Engagement factor and the other four factors suggests substantial factor discrimination between the cluster of items intended to engage caregivers in treatment and other item clusters that represent core elements of family therapy. This provides further evidence for construct validity. Post-hoc examination of the strongest bivariate correlation (Caregiver Engagement and Relational Focus) at the item level suggests the strength of the correlation at the factor level is driven by the correlation between a single Relational Focus item a single caregiver engagement item rather than high bivariate correlations of all items.

Cronbach's alpha was calculated to understand the internal consistency of the set of caregiver engagement items and is considered a primary index of scale reliability. Alpha coefficient of .70 or higher is considered acceptable (Nunnally, 1978). Cronbach's alpha for the full sample and by each treatment phase is presented in Table 6. Cronbach's alpha for the full sample ($\alpha = .72$) as well as within each treatment phase (range $\alpha = .70$ to .74) indicates adequate internal consistency. Moreover, attempting to improve scale reliability by systematically deleting individual items was unsuccessful, suggesting the strongest reliability for the set of four items compared to any other combination of the four items. The magnitude and consistency of Cronbach's alpha provides additional empirical support for construct validity.

Stage 3: Predictive Validity Analyses

Results of the series of growth curve models are presented in Tables 7-9. The β coefficients can be used as effect sizes and interpreted as follows (Cohen, 1988): Small =

.10, Medium = .30, Large = .50. As presented in Table 7, all outcome variables demonstrated a significant linear slope estimate for growth factor mean, indicating significant change in the outcome variable over time in the expected direction (decreases in internalizing and externalizing symptoms, family conflict, and substance use; increases in family cohesion). Results of LGCM models including Caregiver Engagement factor score as the predictor variable and controlling for working alliance are presented in Table 8; only significant results are reported here. There were significant Caregiver Engagement factor effects for four outcomes. One result was in the expected direction: higher use of caregiver engagement techniques was associated with larger proportions of youth with negative urine drug screen results ($\beta = -0.75$, $SE = 0.39$, $pseudo-z = -1.90$, $p < 0.01$). Three results were counterintuitive and all based on youth-report, suggesting that greater use of caregiver engagement techniques was associated with increases in internalizing symptoms ($\beta = 0.45$, $SE = 0.58$, $pseudo-z = 0.78$, $p = 0.04$) and externalizing symptoms ($\beta = 0.29$, $SE = 0.10$, $pseudo-z = -1.87$, $p < 0.01$), and decreases in family cohesion ($\beta = -0.27$, $SE = 0.14$, $pseudo-z = 1.78$, $p = 0.03$). No caregiver-report outcomes were significant.

Exploratory Analyses

Results of LGCM described above held consistent in direction and significance when controlling for the use of adolescent engagement interventions, which are conceptually similar to caregiver engagement items. That is, one result was in the expected direction, indicating that higher use of caregiver engagement techniques was associated with larger proportions of youth with negative urine drug screen results ($\beta = -0.89$, $SE = 0.28$, $pseudo-z = -3.18$, $p < 0.001$). Three results were counterintuitive per

youth-report only, suggesting that greater use of caregiver engagement techniques was associated with increases in internalizing symptoms ($\beta = 0.62$, $SE = 0.87$, $pseudo-z = 0.87$, $p < 0.01$) and externalizing symptoms ($\beta = 0.26$, $SE = 0.09$, $pseudo-z = 2.75$, $p < 0.01$), and decreases in family cohesion ($\beta = -0.29$, $SE = 0.15$, $pseudo-z = -1.89$, $p = 0.03$).

Post-hoc Analyses

Post-hoc analyses were conducted to better understand counterintuitive results suggesting that greater use of caregiver engagement interventions had iatrogenic effects based on youth report (but not caregiver report). Given the finding that the caregiver engagement factor score had similar effects across a number of youth-report outcome variables, it is unlikely that results were due to a fundamental problem with the way the caregiver engagement interventions were measured or scored. Instead, results may be related to caregiver engagement interventions being utilized in response to poor clinical progress or other presenting problems complicating the overall symptom presentation.

For the three outcome variables associated with significant results (i.e., youth-report internalizing symptoms, youth-report externalizing symptoms, youth-report family cohesion), cases were coded as either having improved over treatment, deteriorated, or experienced no change. Categories were created using change scores from baseline to one-year follow-up. Cases were coded as having improved if the change score was positive (e.g., one-year symptom score was lower than baseline score) and no smaller than 1 standard deviation below the mean change for the particular outcome. Cases were coded as having deteriorated if the change score was negative (e.g., one-year symptom score was higher than baseline score) and no greater than 1 standard deviation above the

mean change. Cases that did not fall into one of these two categories (i.e., minimal improvement, minimal deterioration, zero change score) were coded as experiencing no change on the outcome variable.

One-way analysis of variance was conducted to test for mean difference in Caregiver Engagement factor score across the three change groups. Results were significant or trending toward significance for all three outcome variables, indicating mean differences in Caregiver Engagement factor score across cases that improved, deteriorated, or remained the same (see Table 10). Results were significant for youth-report internalizing symptoms [$F(2, 89) = 9.46, p < .001$] and youth-report family cohesion [$F(2, 59) = 3.13, p = .05$], and trended toward significance for youth-report externalizing symptoms [$F(2, 65) = 2.38, p = .10$]. To diagnose between group differences a series of independent samples *t*-tests were conducted for each outcome variable. Per youth-report on internalizing symptoms and family cohesion, compared to cases that improved, there was significantly greater use of caregiver engagement technique use in cases for which there was no change [$t(76) = -4.26, p < .001$; $t(45) = -2.23, p = .04$ respectively] and cases that deteriorated [$t(68) = -2.28, p = .03$; $t(45) = -2.13, p = .05$]. A similar pattern was found for youth-reported externalizing symptoms [$t(46) = -1.58, p = .09$; $t(54) = -1.85, p = .07$]. For all three outcome variables there were no significant differences in Caregiver Engagement factor score between cases for which there was no change and cases that deteriorated.

Taken together, these post-hoc analyses provide some evidence to suggest that rather than therapist use of caregiver engagement interventions causing more negative outcomes, it is likely that therapists in this sample responded to stagnant or worsening

cases by increasing efforts to involve parents in treatment. If it were true that greater use of caregiver engagement techniques exacerbated presenting problems, we would expect significantly greater use of caregiver engagement technique use in cases that deteriorated versus those who experienced no change, and moreover, both of these groups would have significantly greater engagement scores than cases that improved. However, these post-hoc results suggest no difference in caregiver engagement technique use between the no-change and deterioration groups.

Chapter VI

Discussion

Background and Research Hypotheses

Identifying core elements of family therapy is a relatively new line of research that has the potential to increase the availability of family therapy in usual care by providing a flexible and accessible alternative to manualized family therapy. Prior research distilling core elements of family therapy conducted by Hogue and colleagues (2017, 2019) has identified four common elements across manualized models: *Adolescent Engagement, Relational Focus, Interactional Change, Relational Reframe*. Previous empirical distillations failed to identify a core factor describing caregiver engagement, with only adolescent engagement cohering as a unified factor. The current study extends this line of research by exploring the psychometric properties of a core factor of caregiver engagement in a new sample of family therapy delivered in community care. The factor was comprised of four techniques to engage caregivers in treatment that are conceptually similar across models of family therapy. This study tested five hypotheses pertaining the construct and predictive validity of a Caregiver Engagement factor using a sample of community-based video or audio recorded therapy sessions that were observationally scored by trained coders for various family therapy techniques including caregiver engagement.

Summary of Main Findings

The present study found evidence demonstrating the reliability and construct validity of a Caregiver Engagement factor identified via conceptual distillation of caregiver engagement techniques in family therapy. In other words, the four caregiver

engagement items evaluated in the current sample (i.e., *Parent Collaboration, Love and Commitment, Parent Ecosystem, Join with Parents*) cohere as a single and reliable factor measuring a unidimensional construct (Tavakol & Dennick, 2011): caregiver engagement in treatment for adolescent behavior problems.

Results of the present study were mixed as they pertain the predictive validity of the Caregiver Engagement factor. There was empirical evidence suggesting greater use of caregiver engagement techniques improved outcomes for adolescent substance use, as well as counterintuitive results suggesting greater use of caregiver engagement techniques worsened outcomes for externalizing symptoms, internalizing symptoms, and family cohesion per youth-report. Results of post-hoc analyses indicate that therapists may be responding to worsening adolescent presentation with greater efforts to involve parents in treatment. The main conclusions for each hypothesis are described in detail below and then clinical implications are discussed.

Hypothesis 1

As expected, in the current study independent observational coders reliably scored the four caregiver engagement items. Items scores demonstrated a high degree of correlation and raters achieved Fair to Excellent inter-rater reliability for each item (i.e. ICC range = .51-.81; Cicchetti, 1994). In other words, a group of naïve observational coders could be trained to consistently rate the degree to which these four caregiver engagement treatment techniques were used by community therapists. Because these ratings were reliable, scores could be used to further test the construct and predictive validity of the set of four items. These findings are consistent with previous observational studies of this kind assessing therapist use of family therapy interventions in both

controlled and community settings (e.g., Hogue et al., 2015; Hogue et al., under review; Hurlburt et al., 2010).

Hypothesis 2

As predicted, the present study found evidence of convergent validity indicating the set of items measures a single underlying construct of caregiver engagement in treatment. The four caregiver engagement items were found to have positive moderate-to-high inter-item correlations indicating a linear relation between pairs of items, such that greater use of one item was associated with greater use of other items. This is expected among items deemed to be similar to one another. In addition, the Caregiver Engagement factor demonstrated high internal consistency as evidenced by Cronbach's alpha across the full sample and within each treatment phase, indicating the items as a set are unidimensional and closely related.

Hypothesis 3

As predicted, the present study found evidence of discriminant validity suggesting the Caregiver Engagement factor is a unified construct that is can be differentiated from previously distilled core factors of family therapy. Specifically, the Caregiver Engagement factor tested in the present study was not redundant with four other core factors of family therapy validated in prior research by Hogue et al. (i.e., Interactional Change, Emphasize Relationships, Adolescent Engagement, and Relational Reframe; see Hogue et al., 2019 for a description). Although the Caregiver Engagement factor was moderately correlated with one factor (i.e., Relational Focus; Hogue et al., 2019), further analysis of this finding suggested the correlation was driven by a single bivariate item correlation. Overall, the Caregiver Engagement factor measured unique techniques of

family therapy not captured by existing factors comprised of core elements of family therapy.

Hypothesis 4

As hypothesized, results indicate that caregiver engagement interventions were used to a similar degree of frequency and thoroughness throughout treatment. There were no significant differences in the extent to which caregiver engagement techniques were implemented across Phase 1, Phase 2, and Phase 3 of treatment. This indicates that in this sample of community-based family therapy, caregiver engagement was an ongoing process throughout treatment. This is consistent with recommendations outlined in manualized family therapy models dictating that caregiver engagement is an ongoing therapeutic task that is not limited to treatment initiation. Instead, caregivers are actively engaged throughout the treatment episode from treatment initiation to behavior change and generalization phases.

Hypothesis 5

Results of the present study as they pertain to Hypothesis 5 were mixed. It was hypothesized that greater use of caregiver engagement interventions would be associated with improved clinical outcomes over one-year follow-up. Results provide support for youth substance use: greater use of caregiver engagement interventions was associated with a decrease in the proportion of youth who tested positive for substance use over one-year follow-up. This is consistent with a large body of research and clinical recommendations highlighting caregiver and family engagement in treatment for youth substance use disorders as a key component for effective treatment and lasting clinical gains (Gilbert et al., 2004).

However, as reported by youth, greater use of caregiver engagement interventions was associated with worsening outcomes for internalizing symptoms, externalizing symptoms, and family cohesion. This was in contrast to parent-report data for which there were no significant predictive effects. One conclusion that can be drawn is that therapist efforts to engage parents in treatment indeed had iatrogenic effects in this sample and exacerbated presenting problems. Or, involving parents in treatment lessens the degree to which youth experiences or perceives family cohesion and connection. However, what is more conceptually and clinically plausible, as well as supported by post-hoc analyses, is that when youth presenting problems worsened, therapists responded with efforts to engage parents in treatment. This result is consistent with previous research finding that among community-based youth psychotherapy treatment, youth symptom severity predicted parent involvement, such that children with more behavior problems had higher parent involvement in their treatment (Brookeman-Frazer et al. 2010; Haine-Schlagel et al., 2012). It may be that therapists and/or the family perceive a greater need for caregiver involvement in treatment for cases that experience worsening behavior problems.

Moreover, previous research suggests a similar finding at the family-level. Specifically, prior research has found evidence that higher rates of parental strain and family stress at treatment entry predicted greater involvement of parents throughout treatment (Richards et al., 2008). In other words, when cases entered treatment with more severe symptomology and family stress, therapists responded by increasing their use of caregiver engagement interventions and/or parents were more motivated to participate in their child's treatment in response.

Predictive effects remained consistent when controlling for the extent to which adolescent engagement interventions were utilized in a given session. In other words, in this sample the way in which caregiver engagement interventions influenced outcomes was different from the effects of conceptually similar interventions targeting youth engagement.

Clinical Implications

This study provides preliminary empirical evidence for a core element grounded in family therapy describing intervention techniques designed to engage caregivers in treatment for adolescent behavior problems. A growing body of research seeks to identify core elements of evidence-based interventions in an effort to alleviate some of the current barriers to disseminating evidence-based interventions. Core elements represent a more viable option for disseminating evidence-based interventions for a number of reasons including enhanced flexibility and accessibility as well as reduction in the resources required by manualized models to ensure quality assurance (Hogue et al., 2013).

Although construct validity of the factor was established, results of the current study suggest some iatrogenic effects suggesting worsening outcomes associated with greater efforts to engage parents in treatment. It is conceptually possible that therapist use of caregiver engagement interventions somehow precipitated worse externalizing and internalizing outcomes in youth. However, this is unlikely given a number of reasons including decades of research highlighting the importance of parent and family engagement in youth mental health services of various kinds (e.g., Brinkmeyer et al., 2004; Liddle, 1995; Laptook, 2016; McKay et al., 2004).

New approaches to caregiver engagement in youth mental health services are

greatly needed. Despite the fact that the most effective treatments for youth mental health concerns require some degree of parental and family involvement in care, rates of caregiver engagement in services remains inadequate related to a host of logistical and perceptual engagement barriers (see Becker et al., 2018 for a review). Engagement interventions grounded in family therapy may be one way to increase rates of caregiver engagement in treatment however this work requires replication and greater understanding of mechanisms that may lead to worsening outcomes among teens.

Timing of Engagement Intervention Delivery

The current study suggests that family therapists typically utilize caregiver engagement interventions consistently from treatment initiation through termination. This represents a conceptual shift from other methods of caregiver and family engagement in mental health services wherein engagement is concentrated early in treatment in order to target both logistical barriers to participation (e.g., child care, transportation) and early cognitive beliefs related to treatment acceptance and readiness (see Ingoldsby, 2010 for a review). The timing and extent of caregiver engagement interventions prescribed by family therapy may be one of the reasons contributing to findings that family therapy has among the highest rates of caregiver and family engagement and retention in treatment (Coatsworth et al., 2001). In the current study, it is possible that the greater emphasis on caregiver engagement interventions contributed to findings of worsening outcomes as reported by youth.

Attitudes toward Parents

One noteworthy conceptual difference between caregiver engagement in family therapy, including the engagement techniques tested in the current study, compared to

other treatment approaches relates to assumptions and perceptions of parental reluctance to participate in treatment. Prior research suggests therapists may hold unhelpful assumptions related to caregiver engagement and participation in treatment (e.g., Baker-Ericzén et al., 2013). Reluctance on the part of caregivers to engage in treatment is understood to be normative in family therapy and an expected aspect of working to engage parents and other caregivers. This fundamental move away from parents as “resistant” may be one way to improve rates of family involvement and engagement across mental health services more broadly. Moreover, sensitivity to family ecosystem and external factors that maintain or reinforce problematic behaviors are seen as intervention points and embedded in the kinds of caregiver engagement techniques used by family therapists. Therapists assume the role of advocating not just for adolescent and youth clients but also for their parents.

Therapist Self-Report Checklist

Given results that support the construct validity of the Caregiver Engagement factor, the items can serve as a checklist for therapist self-monitoring of use of parent engagement interventions in treatment. Monitoring of caregiver engagement via constructs like caregiver attendance may overestimate engagement (Becker et al., 2013). Shifting focus to therapist use of engagement interventions may be a more realistic alternative that promotes self-reflection and identification of room to grow, when it exists, in delivering interventions to engage and retain caregivers in treatment. Moreover, results of this kind of self-report checklist can be a valuable supervision aid to reinforce and/or enhance engagement intervention delivery. However, before it is recommended to integrate the engagement practices tested in the current study, more research is needed to

understand the counterintuitive effects of worsening behavior problems as per youth-report.

Study Strengths & Limitations

Study Strengths

Study strengths include that data were collected in real-world community mental health care with a diverse clinical sample rather than a controlled laboratory setting. This adds to the growing body of evidence suggesting that family therapy techniques can be implemented in the real world outside of controlled training clinics (Sexton et al., 2013) and without extensive quality assurance procedures (Hogue et al., 2013). Moreover, the caregiver engagement techniques scored in the current study were identified and described by a team of family therapy experts with extensive expertise in model development and implementation.

Another strength pertains to the independence of ratings for caregiver engagement techniques and therapeutic outcome. The frequency and thoroughness of use of the four caregiver engagement interventions was rated independently from measuring clinical outcomes in each sample pool. This fostered an independent estimate of intervention delivery and clinical outcomes that may otherwise be biased when intervention delivery and outcomes are measured concurrently or by the same rater. Furthermore, outcome data were collected from both youth and caregiver perspectives allowing for predictive analyses to be conducted separately for each reporter. A final strength is the rigorous observational data collection method as it relates to initial coder training and ongoing monitoring.

Study Limitations

One limitation of the present study pertains to the data analysis procedures. Data were combined across different treatment pools in order to increase sample size and power to detect significant effects. It is possible that the combining data under the assumption that technique-outcome links would be similar across study pools masked effects that may have been found in one or two pools but not all three, or, contrary effects between samples. Although this study controlled for nesting of sessions within therapists, there were not sufficiently large sample sizes to model the effects of therapists nested within community sample.

Another limitation relates to the way in which use of caregiver engagement techniques was measured. Techniques were assessed and scored in the context of the frequency and thoroughness with which a given technique was utilized by the clinician. This method is consistent with similar fidelity and therapy dose studies in family therapy as well as other treatment approaches (e.g., McLeod et al., 2015; Rodriguez-Quintana & Lewis, 2018). What was not taken into account was therapist intent, nor the degree to which a given engagement intervention was delivered by the clinician with skill and competence.

Directions for Future Research

A fundamental next step is to understand the dynamic interplay of engagement techniques and symptom improvement over treatment. It would be informative to explore the timing of engagement interventions in cases where symptoms improve, worsen, or remain unchanged in order to better diagnose and understand the extent to which caregiver engagement interventions explain and/or are one agent for change in clinical

outcomes. This line of research will help to understand potential mechanisms of the counterintuitive findings in the current study.

The present study provides empirical evidence in support of a unidimensional Caregiver Engagement factor that is valid and can reliably scored by trained observational coders. Another next step in this line of research is exploring the degree to which therapist can be trained to reliably self-report on their use of these caregiver engagement interventions, and if the results of the present study generalize to therapist-report. In other words, it remains to be seen whether therapists can reliably self-report their use of these caregiver engagement strategies and if so, if therapist self-report yields similar patterns of technique-outcome associations. Future research may also consider whether therapist attention to their use of caregiver engagement interventions impacts attitudes and perceptions about caregiver motivation and willingness to participate in mental health services for their children, which may improve rates of caregiver engagement and retention in community settings.

Disseminating core elements of family therapy is a promising step improve the quality of mental health care in for adolescents and families. However, additional research is fundamental to further operationalize and test whether distilled elements are coherent, can be implemented in routine care, and improve outcomes, especially as it relates to caregiver engagement in treatment. Replication is important to understand the extent to which the validity established in the current study is generalizable to other populations and settings different from the sample used in the present study (McLeod et al., 2013).

Appendix A

Core Elements of Family Therapy Coding Scale

PART I: TREATMENT TECHNIQUES SCALE

Instructions: Listed below are therapist behaviors commonly used in sessions. Using the Likert scale provided below, please indicate the **degree to which each behavior is present** in the session you are viewing. Scores will be based on consideration of both the thoroughness and the frequency with which the given behavior is evidenced. Place the appropriate number from the Likert scale in the space provided next to each item.

| | | | | |
|------------|--------------|------------|--------------|-------------|
| 1 | 2 | 3 | 4 | 5 |
| Not at all | A little bit | Moderately | Considerably | Extensively |

CAREGIVER ENGAGEMENT

(If no caregivers present, score "N/A")

- _____ 1. **Love and Commitment:** Enhances feelings of love and commitment.
- _____ 2. **Instills Hope:** Attempts to collaborate with parent(s) by instilling hope and/or involving them in treatment goals.
- _____ 3. **Parent Ecosystem:** Focuses on parent's non-parenting life as an adult person.
- _____ 4. **Joins with parents**

Appendix B

Core Elements of Family Therapy Coding Manual

Item Description: Instills Hope

Instills Hope: Attempts to collaborate with parent(s) by instilling hope and/or involving them in treatment goals.

Description:

Therapists are called upon to couch the process of therapy as a joint struggle to overcome problems and realize goals. Emphasis is placed on engaging the client in productive discussion, maintaining client interest in the therapeutic process, and making therapy a collaboration that is equally shared between therapist and client. This is equally true for a frustrated, angry and overburdened parent as for the teen. Thus, at the beginning of and throughout treatment, therapists attempt to build or maintain a working alliance with parents by (a) generating hope about the future in general and the therapy in particular and (b) formulating and revisiting active parental involvement in treatment goals.

a) Generates hope about the future. By the time they reach treatment, many parents have become hopeless about change. Behavior-problem and drug-using adolescents can be frustratingly defiant and emotional or inaccessible and unresponsive. Parents often feel that they have “tried everything” and are on the verge of abdication. Therapists should encourage parents not to give up despite their well-honed frustrations. By describing therapy as a place in which the struggle for change can be waged and won, the therapist creates a motivation and a forum for productive collaboration with the parent.

b) Involves parents in treatment goals. Effective therapy involves the definition of specific treatment goals. In most cases, parents come to therapy worried about their adolescent’s welfare and bring with them a host of goals, such as having their adolescent obey curfew, cease or decrease substance use, do better in school, make more or different friends, participate in more extrafamilial activities, and so forth. In some cases, parents begin treatment with the expectation that they are dropping their adolescent off to be fixed by the therapist; they do not see themselves as active participants in the therapy process. In all cases, the therapist’s job is to make clear to the parent that successful therapy requires the parent’s active involvement. This item should be scored when the therapist formulates the treatment goals in a manner that involves the parent in a meaningful way. Parental involvement in treatment goals can take one of two forms: (1) The parent is asked to help define and work on goals that are adolescent-centered, that is, focus on change/improvement in the adolescent’s behavior primarily (e.g., “I know it’s important to you that Joey start doing better in school. Let’s talk about some ways you can help him with that”). (2) The parent is asked to collaborate on goals that are parent-centered (focus on change in parenting practices, such as improving supervision habits) or family-centered

(focus on change in the adolescent-parent relationship, such as increasing positive communication). As they do with adolescents, therapists periodically check in with parents to ensure that they continue to endorse and be invested in these goals (i.e., “Are you still on board with this?”).

This item will often be scored when the therapist and parent discuss aspects of the therapy situation itself. Score this item whenever the therapist encourages the parent to continue attending sessions, points out the ways in which therapy can help the parent succeed, discusses how therapy is an opportunity to talk about new issues or old issues in new ways, and so forth. Such talk about the importance of treatment is an indirect form of establishing therapist-parent collaboration and, in many cases, a direct way for actively involving the parent in therapy.

Working to enroll or re-engage a teen in school, a summer program, or another prosocial activity is a common treatment goal for many youth. Thus interventions aimed at enhancing a parent’s involvement in such activities, as described above, should be scored. However, merely presenting such as goal matter-of-factly, or pursuing the goal as a routine/ongoing part of the therapeutic work, without directly targeting parent investment in such, should not be scored.

Exemplars:

"I hear how much you have going: being a single parent, working, trying to be there for your own parents and not getting much support. I really want to be able to be a support for you and your son. You have a good foundation, you really do. We just need to fine-tune things."

"You said that your daughter resents you for a lot of things that happened in the past. Talking about those things may help to open up the door between you. Would you be willing to talk with her about some stuff that has gone down in the past?"

"I think that there are things you can do to help your daughter open up to you."

"You and I together are trying to help her not go under. This isn't going to be easy, but I'm going to push you to hear her point of view and you're not always going to agree. I'm going to help her bring things to you, and to help you hear her."

"I agree, the fact that your daughter doesn't talk to you at all is worrisome. Can we make that the first order of business? Finding out what keeps her from talking to you and trying to change that?"

"I'm worried about her failing school, too. That would be a real blow. How about if we spend some time together figuring out what it is going to take to save this year?"

"I may ask you two to do some difficult things, but I believe that if you are willing to push yourselves, you can play an important role in helping your son turn things around."

Table 1*Item-level and factor-level descriptive statistics for caregiver engagement techniques.*

| | Mean (SD) | Median | Range | Skewness | Kurtosis |
|----------------------------|-------------|--------|-------|----------|----------|
| Full Sample (N=320) | | | | | |
| Caregiver Engagement | 2.00 (.67) | 2.13 | 3.00 | .01 | -.66 |
| Love & Commitment | 1.50 (.70) | 1.00 | 4.00 | 1.74 | 3.60 |
| Instill Hope | 2.06 (.88) | 2.00 | 4.00 | .50 | -.51 |
| Parent Ecosystem | 1.41 (.70) | 1.00 | 3.50 | 2.05 | 4.13 |
| Join with Parent(s) | 3.05 (1.26) | 3.50 | 4.00 | -.39 | -.93 |
| Phase 1 (n=99) | | | | | |
| Caregiver Engagement | 2.02 (.64) | 2.13 | 2.63 | .02 | -.47 |
| Love & Commitment | 1.46 (.64) | 1.00 | 2.5 | 1.34 | .84 |
| Instill Hope | 2.08 (.88) | 2.00 | 3.5 | .57 | -.34 |
| Parent Ecosystem | 1.45 (.75) | 1.00 | 3.5 | 2.23 | 5.54 |
| Join with Parent(s) | 3.11 (1.19) | 3.50 | 4.00 | -.47 | -.64 |
| Phase 2 (n=103) | | | | | |
| Caregiver Engagement | 1.94 (.66) | 2.00 | 2.63 | .13 | -.61 |
| Love & Commitment | 1.47 (.68) | 1.00 | 4.00 | 2.26 | 7.20 |
| Instill Hope | 2.01 (.89) | 2.00 | 4.00 | .64 | -.09 |
| Parent Ecosystem | 1.29 (.52) | 1.00 | 2.00 | 1.70 | 1.83 |
| Join with Parent(s) | 2.98 (1.26) | 3.00 | 4.00 | -.37 | -.99 |
| Phase 3 (n=118) | | | | | |

| | | | | | |
|----------------------|-------------|------|------|------|-------|
| Caregiver Engagement | 2.05 (.70) | 2.13 | 3.00 | -.11 | -.75 |
| Love & Commitment | 1.57 (.76) | 1.50 | 4.00 | 1.57 | 2.68 |
| Instill Hope | 2.10 (.87) | 2.00 | 3.00 | .32 | -.94 |
| Parent Ecosystem | 1.47 (.79) | 1.00 | 3.00 | 1.77 | 2.19 |
| Join with Parent(s) | 3.05 (1.31) | 3.50 | 4.00 | -.36 | -1.06 |

Note. SD = Standard Deviation.

Table 2*Descriptive statistics for outcome variables.*

| | N | Mean (SD) | Median | Range | Skew | Kurtosis |
|---------------------------------------|----------|------------------|---------------|--------------|-------------|-----------------|
| Youth-report internalizing | | | | | | |
| Baseline | 149 | 55.32 (14.40) | 53.14 | 68.70 | 0.78 | 0.41 |
| 6-month | 118 | 50.55 (15.47) | 46.35 | 70.42 | 0.95 | 0.73 |
| 12-month | 92 | 49.33 (13.42) | 45.13 | 58.52 | 0.85 | 0.08 |
| Caregiver-report internalizing | | | | | | |
| Baseline | 89 | 65.85 (17.69) | 62.08 | 73.68 | 0.52 | -0.33 |
| 6-month | 81 | 60.44 (16.63) | 56.42 | 63.16 | 0.83 | -0.16 |
| 12-month | 70 | 59.54 (19.12) | 53.51 | 70.18 | 0.91 | -0.17 |
| Youth-report externalizing | | | | | | |
| Baseline | 96 | 57.55 (13.94) | 56.18 | 55.88 | 0.40 | -0.81 |
| 6-month | 81 | 53.86 (15.26) | 51.51 | 66.18 | 1.10 | 0.92 |
| 12-month | 68 | 50.55 (11.16) | 48.80 | 41.18 | 0.58 | -0.65 |
| Caregiver-report externalizing | | | | | | |
| Baseline | 142 | 68.66 (15.09) | 70.79 | 69.33 | 0.06 | -0.54 |
| 6-month | 126 | 61.56 (13.87) | 59.57 | 65.00 | 0.79 | 0.23 |
| 12-month | 100 | 61.26 (16.93) | 60.50 | 84.00 | 0.98 | 1.38 |
| Youth-report family cohesion | | | | | | |
| Baseline | 78 | 5.86 (2.13) | 6 | 8 | -0.37 | -0.81 |
| 6-month | 63 | 6.02 (2.14) | 7 | 8 | -0.62 | -0.58 |
| 12-month | 62 | 6.66 (2.16) | 7 | 9 | -1.20 | 0.92 |

Caregiver-report family cohesion

| | | | | | | |
|----------|----|-------------|---|---|-------|-------|
| Baseline | 75 | 5.59 (2.39) | 6 | 8 | -0.19 | -1.22 |
| 6-month | 67 | 5.88 (2.35) | 7 | 8 | -0.67 | -0.68 |
| 12-month | 69 | 6.14 (2.30) | 7 | 8 | -0.60 | -0.63 |

Youth-report family conflict

| | | | | | | |
|----------|----|-------------|---|---|------|-------|
| Baseline | 78 | 3.67 (2.43) | 3 | 9 | 0.42 | -0.66 |
| 6-month | 63 | 3.17 (2.17) | 3 | 9 | 0.55 | -0.30 |
| 12-month | 62 | 2.61 (2.25) | 2 | 9 | 0.92 | 0.19 |

Caregiver-report family conflict

| | | | | | | |
|----------|----|-------------|---|---|------|-------|
| Baseline | 75 | 3.93 (2.16) | 4 | 8 | 0.09 | -0.88 |
| 6-month | 67 | 3.69 (2.20) | 4 | 8 | 0.36 | -0.79 |
| 12-month | 69 | 3.49 (2.39) | 3 | 9 | 0.49 | -0.72 |

Urine Drug Screen

| | | |
|----------|----|-------------------|
| Baseline | 53 | 21 Positive (40%) |
| 6-month | 36 | 14 Positive (25%) |
| 12-month | 21 | 6 Positive (11%) |

Note. SD = Standard Deviation.

Table 3

Item-level and factor-level one-way random ICCs for caregiver engagement techniques.

| Scale/Item | ICC_{1,2}^a | Classification^b |
|------------------------------|--------------------------------------|-----------------------------------|
| Caregiver Engagement | 0.82 | Excellent |
| Enhances Love and Commitment | 0.56 | Fair |
| Instills Hope | 0.52 | Fair |
| Parent Ecosystem | 0.66 | Good |
| Joins with Parents | 0.81 | Excellent |

^aOne-way random intraclass correlation coefficient (Shrout & Fleiss, 1979)

^bGuidelines by Cichetti (1994)

Table 4

Item-level Pearson's r correlation coefficients for caregiver engagement techniques.

| | Love & Commitment | Instill Hope | Parent Ecosystem | Join with Parent(s) |
|---------------------|-----------------------------|-------------------|-----------------------|-----------------------|
| | Full Sample | | | |
| | (Phase 1, Phase 2, Phase 3) | | | |
| Love & Commitment | 1 | .46** | .31** | .44** |
| Instill Hope | (.39**, .56**, .43**) | 1 | (.26**, .27**, .27**) | (.47**, .42**, .43**) |
| Parent Ecosystem | .17** | .17** | 1 | .61** |
| Join with Parent(s) | (.56**, .67**, .61**) | (.11, .30**, .14) | (.40**, .41**, .43**) | 1 |

** Correlation significant at the 0.01 level.

Table 5

Factor-level bivariate Pearson's r correlation coefficients for core elements of family therapy.

| | Caregiver Engagement | Adolescent Engagement | Relational Focus | Relational Reframe | Interactional Change |
|--------------------------|--|--|-----------------------|-----------------------|-------------------------|
| | Full Sample (Phase 1, Phase 2, Phase 3) | | | | |
| Caregiver Engagement | 1 | -.23** | .40** | .58** | .35** |
| Adolescent Engagement | | 1 | .18** | .04 | .12** |
| Relational Focus | | | 1 | .61** | .41** |
| Relational Reframe | | | | 1 | .64** |
| Interactional Change | | | | | 1 |
| | | (-.03, -.27**, -.36**) (.34**, .45**, .43**) (.49**, .61**, .65**) (.23**, .45**, .35**) | (.29**, .11, .13) | (.18, .07, -.04) | (.14, .05, .19*) |
| | | | (.53**, .74**, .64**) | (.37**, .50**, .45**) | (.65**, .66**, .60**) |

** Correlation significant at the 0.01 level.

Table 6*Cronbach's alpha for Caregiver Engagement factor.*

| | Cronbach's Alpha (α) | | | |
|----------------------|---|---------|---------|---------|
| | Full Sample | Phase 1 | Phase 2 | Phase 3 |
| Caregiver Engagement | 0.72 | 0.70 | 0.74 | 0.72 |
| | α if item deleted | | | |
| Love & Commitment | 0.67 | 0.64 | 0.70 | 0.67 |
| Instill Hope | 0.61 | 0.62 | 0.58 | 0.63 |
| Parent Ecosystem | 0.73 | 0.71 | 0.76 | 0.71 |
| Join with Parents | 0.56 | 0.49 | 0.64 | 0.53 |

Note. Alpha coefficient of .70 or higher is considered acceptable (Nunnally, 1978)

Table 7

Unconditional models testing linear change in each outcome variable.

| | <i>Intercept</i> | | <i>Linear Slope</i> | |
|--|-----------------------|-----------------|------------------------|-----------------|
| | β (SE) | <i>Pseudo-z</i> | β (SE) | <i>Pseudo-z</i> |
| Internalizing Symptoms | | | | |
| Youth-report ^a | 4.81*** (0.95) | 5.08 | -0.69*** (0.42) | -1.62 |
| Caregiver-report ^a | 4.52*** (0.56) | 8.10 | -1.47*** (4.17) | -0.35 |
| Externalizing Symptoms | | | | |
| Youth-report ^a | 4.31*** (0.45) | 9.58 | -0.33** (0.11) | -2.89 |
| Caregiver-report ^b | 5.35*** (0.88) | 6.09 | -1.12*** (0.76) | -1.45 |
| Family Functioning | | | | |
| Youth-report Cohesion ^a | 3.49*** (0.58) | 6.03 | 0.43* (0.21) | 2.08 |
| Youth-report Conflict ^a | 2.08*** (0.39) | 5.29 | -0.56** (0.31) | -1.81 |
| Caregiver-report Cohesion ^a | 3.23*** (0.82) | 3.92 | 0.29** (0.10) | 2.84 |
| Caregiver-report Conflict ^a | 2.43*** (0.40) | 6.16 | -0.39* (0.48) | -0.82 |
| Substance Use | | | | |
| Urine Drug Screen ^c | 0.00*** (0.00) | 0.01 | -1.34*** (.89) | -1.51 |

Note. The linear slope estimate represents linear change in the outcome variable from baseline to one-year follow-up. SE = Standard error.

^aN = 99; FFT-I and UC-FT pools combined.

^bN = 152; FFT-I, UC-FT, OPT-A pools combined.

^cN = 53; OPT-A pool only.

* $p < .05$, ** $p < .01$, *** $p < .001$, + $p < .10$

Table 8

Caregiver engagement factor score effects on one-year outcomes controlling for working alliance.

| | <i>Intercept</i> | | <i>Linear Slope</i> | |
|--|-----------------------|-----------------|------------------------|-----------------|
| | <i>β (SE)</i> | <i>Pseudo-z</i> | <i>β (SE)</i> | <i>Pseudo-z</i> |
| Internalizing Symptoms | | | | |
| Youth-report ^a | -0.09 (0.13) | -0.71 | 0.45* (0.58) | 0.78 |
| Caregiver-report ^a | -0.02 (0.16) | -0.14 | 0.48 (1.82) | 0.26 |
| Externalizing Symptoms | | | | |
| Youth-report ^a | -0.29** (0.10) | -2.88 | 0.29** (0.10) | 3.01 |
| Caregiver-report ^b | 0.01 (0.11) | -0.14 | 0.36 (0.33) | 1.10 |
| Family Functioning | | | | |
| Youth-report Cohesion ^a | 0.19 (1.22) | 1.59 | -0.27* (0.14) | -1.87 |
| Youth-report Conflict ^a | -0.39 (0.13) | -3.02 | 0.20 (0.20) | 0.99 |
| Caregiver-report Cohesion ^a | 0.25 (0.62) | 0.36 | -0.10 (0.29) | -0.36 |
| Caregiver-report Conflict ^a | -1.64 (0.22) | -0.76 | -0.14 (1.19) | -0.12 |
| Substance Use | | | | |
| Urine Drug Screen ^c | 0.33*** (0.16) | 2.13 | -0.74*** (0.39) | -1.90 |

Note. The linear slope estimate represents linear change in the outcome variable from baseline to one-year follow-up. SE = Standard error.

^a N = 99; FFT-I and UC-FT pools combined.

^b N = 152; FFT-I, UC-FT, OPT-A pools combined.

^c N = 53; OPT-A pool only.

* $p < .05$, ** $p < .01$, *** $p < .001$, + $p < .10$

Table 9

Caregiver engagement factor score effects on one-year outcomes controlling for working alliance and adolescent engagement technique use.

| | Intercept | | Linear Slope | |
|--|-----------------------|----------|------------------------|----------|
| | β (SE) | Pseudo-z | β (SE) | Pseudo-z |
| Internalizing Symptoms | | | | |
| Youth-report ^a | -0.14 (0.13) | -1.21 | 0.62** (0.87) | 0.71 |
| Caregiver-report ^a | -0.01 (0.16) | -0.01 | 0.17 (1.47) | 0.12 |
| Externalizing Symptoms | | | | |
| Youth-report ^a | -0.26* (0.11) | -2.50 | 0.26** (0.09) | 2.75 |
| Caregiver-report ^b | 0.03 (0.10) | 0.03 | 0.24 (0.26) | 0.91 |
| Family Functioning | | | | |
| Youth-report Cohesion ^a | 0.23 (0.14) | 1.61 | -0.29* (0.15) | -1.89 |
| Youth-report Conflict ^a | -0.40** (0.18) | 2.25 | 0.17 (0.14) | -2.96 |
| Caregiver-report Cohesion ^a | 0.10 (0.20) | 0.52 | -0.11 (0.29) | -0.39 |
| Caregiver-report Conflict ^a | -0.21 (-.22) | -0.98 | -0.03 (0.71) | -0.05 |
| Substance Use | | | | |
| Urine Drug Screen ^c | 0.32*** (0.19) | 1.67 | -0.89*** (0.28) | -3.18 |

Note. The linear slope estimate represents linear change in the outcome variable from baseline to one-year follow-up. SE = Standard error.

SE = Standard error.

^aN = 99; FFT-I and UC-FT pools combined.

^bN = 152; FFT-I, UC-FT, OPT-A pools combined.

^cN = 53; OPT-A pool only.

* $p < .05$, ** $p < .01$, *** $p < .001$, + $p < .10$

Table 10

Post-hoc mean comparisons of Caregiver Engagement factor score across change groups.

| | N | Mean (SD) | F^a | t^b |
|-----------------------------------|----------|------------------|----------------------|----------------------|
| Youth-report internalizing | | | 9.46*** | |
| Improved | 56 | 1.93 (0.53) | | -- |
| No change | 14 | 2.46 (0.41) | | -4.26*** |
| Deteriorated | 12 | 2.30 (0.63) | | -2.28* |
| Youth-report externalizing | | | 2.38 ⁺ | |
| Improved | 36 | 2.07 (0.56) | | -- |
| No change | 12 | 2.34 (0.38) | | -1.58 ⁺ |
| Deteriorated | 20 | 2.36 (0.58) | | -1.85 ⁺ |
| Youth-report cohesion | | | 3.13* | |
| Improved | 31 | 2.09 (0.50) | | -- |
| No change | 16 | 2.41 (0.45) | | -2.23* |
| Deteriorated | 15 | 2.40 (0.53) | | -2.13* |

Note. SD = Standard Deviation.

^aOne-way analysis of variance compared mean PE factor score across improved, no change, and deteriorated groups.

^bt-test compared no change and deteriorated groups to the improved group.

References

- Achenbach, T. M. (1966). The classification of children's psychiatric symptoms: A factor-analytic study. *Psychological Monographs*, 80, (No. 615).
- Addis, M. E., & Krasnow, A. D. (2000). A national survey of practicing psychologists' attitudes toward psychotherapy treatment manuals. *Journal of consulting and clinical psychology*, 68(2), 331.
- Alexander, J., & Parsons, B. V. (1982). *Functional family therapy*. Brooks/Cole Publishing Company.
- Alexander, J. F., Waldron, H. B., Robbins, M. S., & Neeb, A. A. (2013). Functional family therapy for adolescent behavior problems. American Psychological Association.
- American Psychiatric Association. (2013). *Diagnostic and statistical manual of mental disorders (DSM-5®)*. American Psychiatric Pub.
- Angold, A., Costello, E. J., & Erkanli, A. (1999). Comorbidity. *Journal of child psychology and psychiatry*, 40(1), 57-87.
- Armstrong, T. D., & Costello, E. J. (2002). Community studies on adolescent substance use, abuse, or dependence and psychiatric comorbidity. *Journal of Consulting and Clinical Psychology*, 70(6), 12-24.
- Baker-Ericzén, M. J., Jenkins, M. M., & Haine-Schlagel, R. (2013). Therapist, parent, and youth perspectives of treatment barriers to family-focused community outpatient mental health services. *Journal of Child and Family Studies*, 22(6), 854-868.
- Baumann, B. L., Kolko, D. J., Collins, K., & Herschell, A. D. (2006). Understanding

practitioners' characteristics and perspectives prior to the dissemination of an evidence-based intervention. *Child Abuse & Neglect*, 30(7), 771-787.

- Becker, K. D., Boustani, M., Gellatly, R., & Chorpita, B. F. (2018). Forty years of engagement research in children's mental health services: Multidimensional measurement and practice elements. *Journal of Clinical Child & Adolescent Psychology*, 47(1), 1-23.
- Bickman, L., De Andrade, A. R. V., Athay, M. M., Chen, J. I., De Nadai, A. S., Jordan-Arthur, B. L., & Karver, M. S. (2012). The relationship between change in therapeutic alliance ratings and improvement in youth symptom severity: Whose ratings matter the most?. *Administration and Policy in Mental Health and Mental Health Services Research*, 39(1-2), 78-89.
- Bickman, L., Douglas, S. R., De Andrade, A. R. V., Tomlinson, M., Gleacher, A., Olin, S., & Hoagwood, K. (2016). Implementing a measurement feedback system: A tale of two sites. *Administration and Policy in Mental Health and Mental Health Services Research*, 43(3), 410-425.
- Bobek, M., Porter, N., Krohner, N., & Hogue, A. (2018). Scoring manual for Core Elements of Family Therapy: Therapist Behavior Rating Scale (CEFT-TBRS). *Self-published document available from the authors: ahogue@centeronaddiction.org.*
- Boyd, C. P., Gullone, E., Needleman, G. L., & Burt, T. (1997). The Family Environment Scale: Reliability and normative data for an adolescent sample. *Family process*, 36(4), 369-373.
- Boyd, C. P., Gullone, E., Needleman, G. L., & Burt, T. (1997). The Family Environment

- Scale: Reliability and normative data for an adolescent sample. *Family Process*, 36(4), 369-373.
- Boylan, K., Vaillancourt, T., Boyle, M., & Szatmari, P. (2007). Comorbidity of internalizing disorders in children with oppositional defiant disorder. *European child & adolescent psychiatry*, 16(8), 484-494.
- Boyle, C. A., Boulet, S., Schieve, L. A., Cohen, R. A., Blumberg, S. J., Yeargin-Allsopp, M., ... & Kogan, M. D. (2011). Trends in the prevalence of developmental disabilities in US children, 1997–2008. *Pediatrics*, 127(6), 1034-1042.
- Breda, C. S., & Riemer, M. (2012). Motivation for Youth's Treatment Scale (MYTS): A new tool for measuring motivation among youths and their caregivers. *Administration and Policy in Mental Health and Mental Health Services Research*, 39(1-2), 118-132.
- Brinkmeyer, M. Y., Eyberg, S. M., Nguyen, M. L., & Adams, R. W. (2004). Family engagement, consumer satisfaction and treatment outcome in the new era of child and adolescent in-patient psychiatric care. *Clinical Child Psychology and Psychiatry*, 9(4), 553-566.
- Carr, A. (2009). The effectiveness of family therapy and systemic interventions for child-focused problems. *Journal of Family Therapy*, 31(1), 3-45.
- Chacko, A., Jensen, S. A., Lowry, L. S., Cornwell, M., Chimklis, A., Chan, E., ... Pulgarin, B. (2016). Engagement in behavioral parent training: Review of the literature and implications for practice. *Clinical Child and Family Psychology Review*, 19(3), 204–215.
- Chassin, L., Bountress, K., Haller, M., & Wang, F. (2014). Adolescent Substance Use

Disorders. In E. J. Mash & R. A. Barkley (Eds.), *Child psychopathology* (pp. 145). New York: Guilford Press.

Chorpita, B. F., & Daleiden, E. L. (2009). Mapping evidencebased treatments for children and adolescents: Application of the distillation and matching model to 615 treatments from 322 randomized trials. *Journal of Consulting & Clinical Psychology, 77*, 566–579.

Chorpita, B. F., Daleiden, E. L., Park, A. L., Ward, A. M., Levy, M. C., Cromley, T., ... & Krull, J. L. (2017). Child STEPs in California: A cluster randomized effectiveness trial comparing modular treatment with community implemented treatment for youth with anxiety, depression, conduct problems, or traumatic stress. *Journal of Consulting and Clinical Psychology, 85*(1), 13.

Chorpita, B. F., Weisz, J. R., Daleiden, E. L., Schoenwald, S. K., Palinkas, L. A., Miranda, J., ... & Gibbons, R. D. (2013). Long-term outcomes for the Child STEPs randomized effectiveness trial: a comparison of modular and standard treatment designs with usual care. *Journal of Consulting and Clinical Psychology, 81*(6), 999.

Chorpita, B. F., & Weisz, J. R. (2009). MATCH-ADTC: Modular approach to therapy for children with anxiety, depression, trauma, or conduct problems. PracticeWise.

Chorpita, B. F., Weisz, J. R., Daleiden, E. L., Schoenwald, S. K., Palinkas, L. A., Miranda, J., ... & Gibbons, R. D. (2013). Long-term outcomes for the Child STEPs randomized effectiveness trial: a comparison of modular and standard treatment designs with usual care. *Journal of Consulting and Clinical Psychology, 81*(6), 999.

- Cicchetti, D. V. (1994). Guidelines, criteria, and rules of thumb for evaluating normed and standardized assessment instruments in psychology. *Psychological Assessment, 6*, 284-290.
- Coatsworth, J. D., Santisteban, D. A., McBride, C. K., & Szapocznik, J. (2001). Brief strategic family therapy versus community control: Engagement, retention, and an exploration of the moderating role of adolescent symptom severity. *Family Process, 40*(3), 313-332.
- Cohen, J. (1988). *Statistical Power Analysis for the Behavioral Sciences, 2nd ed.* Hillsdale, NJ: Laurence Erlbaum Associates.
- Conway, K. P., Swendsen J., Husky, M. M., He, J. P., & Merikangas, K. R. (2016). Association of lifetime mental disorders and subsequent alcohol and illicit drug use: results from the National Comorbidity Survey–Adolescent Supplement. *Journal of the American Academy of Child & Adolescent Psychiatry, 55*(4), 280-288.
- Cottrell, D., & Boston, P. (2002). Practitioner review: The effectiveness of systemic family therapy for children and adolescents. *Journal of Child Psychology and Psychiatry, 43*(5), 573-586.
- Crane, D. R., & Christenson, J. D. (2012). A summary report of the cost-effectiveness of the profession and practice of marriage and family therapy. *Contemporary Family Therapy, 34*(2), 204-216.
- Cronbach, L. J. (1951). Coefficient alpha and the internal structure of tests. *psychometrika, 16*(3), 297-334.
- Curran, P. J., Bauer, D. J., & Willoughby, M. T. (2004). Testing main effects and

- interactions in latent curve analysis. *Psychological Methods*, 9(2), 220.
- Curran, P. J., Oeidat, K., & Losardo, D. (2010). Twelve frequently asked questions about growth curve modeling. *Journal of Cognitive Development* 11(2), 121-136.
- Diamond, G. M., Diamond, G. S., & Hogue, A. (2007). Attachment-based family therapy: Adherence and differentiation. *Journal of Marital and Family Therapy*, 33(2), 177-191.
- Diggle, P., Heagerty, P., Liang, K., & Zeger, S. (2002). *Analysis of Longitudinal Data (2nd Edition)*. Great Britain: Oxford University Press.
- Dishion, T. J., & Kavanagh, K. (2003b). *Intervening in adolescent problem behavior: A family-centered approach*. New York: NY: Guilford Press.
- Dowell, K. A., & Ogles, B. M. (2010). The effects of parent participation on child psychotherapy outcome: A meta-analytic review. *Journal of Clinical Child & Adolescent Psychology*, 39(2), 151-162.
- Duncan, T. E., & Duncan, S. C. (2004). An introduction to latent growth curve modeling. *Behavior Therapy*, 35(2), 333-363.
- Duncan, T. E., Duncan, S. C., Strycker, A. L., Li, F., & Alpert, A. (1999). *An Introduction to Latent Variable Growth Curve Modeling*. Mahwah, NJ: Sage.
- Ehrenreich, J. T., Goldstein, C. R., Wright, L. R., & Barlow, D. H. (2009). Development of a unified protocol for the treatment of emotional disorders in youth. *Child & family behavior therapy*, 31(1), 20-37.
- Evans, Steven W., Julie Sarno Owens, and Nora Bunford. "Evidence-based psychosocial treatments for children and adolescents with attention-deficit/hyperactivity disorder." *Journal of Clinical Child & Adolescent Psychology* 43, no. 4 (2014):

527-551.

- Eyberg, S. M., Nelson, M. M., & Boggs, S. R. (2008). Evidence-based psychosocial treatments for children and adolescents with disruptive behavior. *Journal of clinical child & Adolescent psychology, 37*(1), 215-237.
- Garland, A. F., Hawley, K. M., Brookman-Frazee, L., & Hurlburt, M. S. (2008). Identifying common elements of evidence-based psychosocial treatments for children's disruptive behavior problems. *Journal of the American Academy of Child & Adolescent Psychiatry, 47*(5), 505-514.
- Garland, A. F., Hurlburt, M. S., Brookman-Frazee, L., Taylor, R. M., & Accurso, E. C. (2010). Methodological challenges of characterizing usual care psychotherapeutic practice. *Administration and Policy in Mental Health and Mental Health Services Research, 37*(3), 208-220.
- Gilbert, J. M., Oliff, H., Sutton, D., Bartlett, C., & Henderson, R. (2004). Substance Abuse Treatment And Family Therapy. A Treatment Improvement Protocol (TIP) Series 39. *Substance Abuse and Mental Health Services Administration*.
- Gopalan, G., Goldstein, L., Klingenstein, K., Sicher, C., Blake, C., & McKay, M. M. (2010). Engaging families into child mental health treatment: updates and special considerations. *Journal of the Canadian Academy of Child and Adolescent Psychiatry. 19*(3), 182-196..
- Greif, G. L. (1990). Twenty-five basic joining techniques in family therapy. *Journal of Psychoactive Drugs, 22*(1), 89-90.
- Gross, D., Julion, W., & Fogg, L. (2001). What motivates participation and dropout among low-income urban families of color in a prevention intervention?. *Family*

Relations, 50(3), 246-254.

- Haine-Schlagel, R., Brookman-Frazee, L., Fettes, D. L., Baker-Ericzén, M., & Garland, A. F. (2012). Therapist focus on parent involvement in community-based youth psychotherapy. *Journal of Child and Family Studies*, 21(4), 646-656.
- Haine-Schlagel, R., Martinez, J. I., Roesch, S. C., Bustos, C. E., & Janicki, C. (2018). Randomized trial of the Parent and Caregiver Active Participation Toolkit for child mental health treatment. *Journal of Clinical Child & Adolescent Psychology*, 47(sup1), S150-S160.
- Haine-Schlagel, R., Mechammil, M., & Brookman-Frazee, L. (2017). Stakeholder perspectives on a toolkit to enhance caregiver participation in community-based child mental health services. *Psychological services*, 14(3), 373.
- Hammen, C. L., Rudolph, K. D., & Abaied, J. (2014). Child and Adolescent Depression. In E. J. Mash & R. A. Barkley (Eds.), *Child psychopathology* (pp. 225). New York: Guilford Press.
- Henggeler, S. W., & Schaeffer, C. M. (2016). Multisystemic therapy®: Clinical overview, outcomes, and implementation research. *Family Process*, 55(3), 514-528.
- Herman, K. C., Borden, L. A., Hsu, C., Schultz, T. R., Strawsine Carney, M., Brooks, C. M., & Reinke, W. M. (2011). Enhancing family engagement in interventions for mental health problems in youth. *Residential Treatment for Children & Youth*, 28(2), 102-119.
- Higa-McMillan, C. K., Francis, S. E., & Chorpita, B. F. (2014). Anxiety Disorders. In E. J. Mash & R. A. Barkley (Eds.), *Child psychopathology* (pp. 345). New York:

Guilford Press.

- Hinkle, D. E., Wiersma, W., & Jurs, S. G. (2003). *Applied statistics for the behavioral sciences* (Vol. 663). Houghton Mifflin College Division.
- Hoagwood, K. (2005). Family-based services in children's mental health: A research review and synthesis. *Journal of Clinical Psychology and Psychiatry*, 46, 690.
- Hoagwood, K., & Kolko, D. J. (2009). Introduction to the special section on practice contexts: A glimpse into the nether world of public mental health services for children and families. *Administration and Policy in Mental Health and Mental Health Services Research*, 36, 35-36.
- Hogue, A., Bobek, M., Dauber, S., Henderson, C. E., McLeod, B. D., & Southam-Gerow, M. A. (2017). Distilling the core elements of family therapy for adolescent substance use: Conceptual and empirical solutions. *Journal of Child & Adolescent Substance Abuse*, 26(6), 437-453.
- Hogue, A., Bobek, M., Dauber, S., Henderson, C. E., McLeod, B. D., & Southam-Gerow, M. A. (2019). Core Elements of Family Therapy for Adolescent Behavior Problems: Empirical Distillation of Three Manualized Treatments. *Journal of Clinical Child and Adolescent Psychology*, 48(1), 29-41.
- Hogue, A., Bobek, M., Porter, N., Dauber, S., Southam-Gerow, M. A., McLeod, B. D., & Henderson, C. E. (under review). Core Elements of Family Therapy for Adolescents in Community Settings: Construct and Predictive Validity.
- Hogue, A., Dauber, S., Chinchilla, P., Fried, A., Henderson, C., Inclan, J., ... & Liddle, H. A. (2008). Assessing fidelity in individual and family therapy for adolescent substance abuse. *Journal of Substance Abuse Treatment*, 35(2), 137-147.

- Hogue, A., Dauber, S., Henderson, C., Bobek, M., Johnson, C., Lichvar, E., & Morgenstern, J. (2015). Randomized trial of family therapy versus non-family treatment for adolescent behavior problems in usual care. *Journal of Clinical Child and Adolescent Psychology, 44*(6), 954-969.
- Hogue, A., Dauber, S., & Henderson, C. E. (2017). Benchmarking family therapy for adolescent behavior problems in usual care: Fidelity, outcomes, and therapist performance differences. *Administration and Policy in Mental Health and Mental Health Services Research, 44*(5), 626-641.
- Hogue, A., Ozechowski, T. J., Robbins, M. S., & Waldron, H. B. (2013). Making fidelity an intramural game: Localizing quality assurance procedures to promote sustainability of evidence-based practices in usual care. *Clinical Psychology: Science and Practice, 20*, 60–77.
- Hogue, A., Liddle, H. A., Rowe, C., Turner, R. M., Dakof, G. A., & LaPann, K. (1998). Treatment adherence and differentiation in individual versus family therapy for adolescent substance abuse. *Journal of Counseling Psychology, 45*(1), 104.
- Hogue, A., Rowe, C, Liddle, H., & Turner, R. (1994). Scoring manual for the Therapist Behavior Rating Scale (TBRS). Unpublished manuscript, Center for Research on Adolescent Drug Abuse, Temple University, Philadelphia, PA.
- Hurlburt, M. S., Garland, A. F., Nguyen, K., & Brookman-Frazee, L. (2010). Child and family therapy process: Concordance of therapist and observational perspectives. *Administration and Policy in Mental Health and Mental Health Services Research, 37*(3), 230-244.
- IBM Corp. Released 2020. IBM SPSS Statistics for Windows, Version 27.0. Armonk,

NY: IBM Corp.

- Ingoldsby, E. M. (2010). Review of interventions to improve family engagement and retention in parent and child mental health programs. *Journal of Child and Family Studies, 19*(5), 629-645.
- Karver, M. S., Handelsman, J. B., Fields, S., & Bickman, L. (2006). Meta-analysis of therapeutic relationship variables in youth and family therapy: The evidence for different relationship variables in the child and adolescent treatment outcome literature. *Clinical Psychology Review, 26*(1), 50-65.
- King, G., Currie, M., & Petersen, P. (2014). Child and caregiver engagement in the mental health intervention process: A motivational framework. *Child and Adolescent Mental Health, 19*(1), 2-8.
- Kimonis, E. R., Frick, P. J., & McMahon, R. J. (2014). Conduct and Oppositional Defiant Disorders. In E. J. Mash & R. A. Barkley (Eds.), *Child Psychopathology* (pp. 180). New York: Guilford Press.
- Knudsen, H. K., Ducharme, L. J., & Roman, P. M. (2008). Clinical supervision, emotional exhaustion, and turnover intention: A study of substance abuse treatment counselors in the Clinical Trials Network of the National Institute on Drug Abuse. *Journal of Substance Abuse Treatment, 35*(4), 387-395.
- Koo, T. K., & Li, M. Y. (2016). A guideline of selecting and reporting intraclass correlation coefficients for reliability research. *Journal of chiropractic medicine, 15*(2), 155-163.
- Kreft, I., & DeLeeuw, J. (1998). *Introducing multilevel modeling*. London: Sage Publications.

- Laptook, R. (2016). Between sessions: The crucial role of parent engagement in treatment. *The Brown University Child and Adolescent Behavior Letter*, 32(7), 1-7.
- Lebowitz, E. R., Omer, H., Hermes, H., & Scahill, L. (2014). Parent training for childhood anxiety disorders: the SPACE program. *Cognitive and Behavioral Practice*, 21(4), 456-469.
- Liddle, H. A. (2003). Multidimensional family therapy for early adolescent substance abuse treatment manual. Center for Substance Abuse Treatment. Substance Abuse and Mental Health Services Administration.
- Liddle, H. A. (1995). Conceptual and clinical dimensions of a multidimensional, multisystems engagement strategy in family-based adolescent treatment. *Psychotherapy: Theory, Research, Practice, Training*, 32(1), 39.
- Loeber, R., Burke, J. D., Lahey, B. B., Winters, A., & Zera, M. (2000). Oppositional defiant and conduct disorder: a review of the past 10 years, part I. *Journal of the American Academy of Child & Adolescent Psychiatry*, 39(12), 1468-1484.
- Logan, D. E., & King, C. A. (2001). Parental facilitation of adolescent mental health service utilization: A conceptual and empirical review. *Clinical Psychology: Science and Practice*, 8, 319-333.
- Lynne-Landsman, S. D., Bradshaw, C. P., & Ialongo, N. S. (2010). Testing a developmental cascade model of adolescent substance use trajectories and young adult adjustment. *Development and psychopathology*, 22(4), 933.

- Marmorstein, N. R. (2007). Relationships between anxiety and externalizing disorders in youth: the influences of age and gender. *Journal of Anxiety Disorders, 21*(3), 420-432.
- Martinez, J. I., Lau, A. S., Chorpita, B. F., Weisz, J. R., & Research Network on Youth Mental Health. (2017). Psychoeducation as a mediator of treatment approach on caregiver engagement in child psychotherapy for disruptive behavior. *Journal of Clinical Child & Adolescent Psychology, 46*(4), 573-587.
- Masi, G., Millepiedi, S., Mucci, M., Poli, P., Bertini, N., & Milantoni, L. (2004). Generalized anxiety disorder in referred children and adolescents. *Journal of the American Academy of Child & Adolescent Psychiatry, 43*(6), 752-760.
- Masi, M. V., Miller, R. B., & Olson, M. M. (2003). Differences in dropout rates among individual, couple, and family therapy clients. *Contemporary Family Therapy, 25*(1), 63-75.
- McCart, M. R., & Sheidow, A. J. (2016). Evidence-based psychosocial treatments for adolescents with disruptive behavior. *Journal of Clinical Child & Adolescent Psychology, 45*, 529–563.
- McHugh, R. K., & Barlow, D. H. (2010). The dissemination and implementation of evidence-based psychological treatments: A review of current efforts. *American Psychologist, 65*(2), 73.
- McKay, M. M., Hibbert, R., Hoagwood, K., Rodriguez, J., Murray L., Legurski, J., & Fernandez, D. (2004). Increasing evidence-based engagement interventions into “real world” child mental health setting. *Brief Treatment and Crisis Intervention, 4*, 177–186.

- McKay, M., Stoewe, J., McCadam, K., & Gonzales, J. (1998). Increasing access to child mental health services for urban children and their care givers. *Health and Social Work, 23*, 9–15.
- McLeod, B. D., Jensen-Doss, A., & Ollendick, T. H. (2013). Overview of diagnostic and behavioral assessment. In B. D. McLeod, A. Jensen-Doss, & T. H. Ollendick (Eds.), *Diagnostic and behavioral assessment in children and adolescents: A clinical guide* (pp. 3-33). New York: Guilford Publications, Inc.
- McLeod, B. D., Smith, M. M., Southam-Gerow, M. A., Weisz, J. R., & Kendall, P. C. (2015). Measuring treatment differentiation for implementation research: The Therapy Process Observational Coding System for Child Psychotherapy Revised Strategies Scale. *Psychological Assessment, 27*(1), 314.
- Miller, W. R., & Rollnick, S. (Eds.). (2002). *Motivational interviewing: Preparing people for change*, 2nd ed. New York, NY: Guilford Press.
- Molina, B. S., & Pelham Jr, W. E. (2003). Childhood predictors of adolescent substance use in a longitudinal study of children with ADHD. *Journal of abnormal psychology, 112*(3), 497.
- Morrissey-Kane, E., & Prinz, R. J. (1999). Engagement in child and adolescent treatment: The role of parental cognitions and attributions. *Clinical Child and Family Psychology Review, 2*(3), 183-198.
- Muthén, L. K., & Muthén, B. O. (1998-2017). *Mplus User's Guide* (Seventh ed.). Los Angeles, CA: Muthen & Muthen.

- Muthén, B., & Muthén, L. K. (2000). Integrating person-centered and variable-centered analyses: Growth mixture modeling with latent trajectory classes. *Alcoholism: Clinical and experimental research, 24*(6), 882-891.
- Masi, G., Millepiedi, S., Mucci, M., Poli, P., Bertini, N., & Milantoni, L. (2004). Generalized anxiety disorder in referred children and adolescents. *Journal of the American Academy of Child & Adolescent Psychiatry, 43*(6), 752-760.
- Nock, M. K., & Ferriter, C. (2005). Parent management of attendance and adherence in child and adolescent therapy: A conceptual and empirical review. *Clinical Child and Family Psychology Review, 8*(2), 149-166.
- Nunnally, J. C. (1967). *Psychometric Theory*, 1st ed., New York: MccGraw-Hill.
- Nunnally, J. C. (1978). *Psychometric Theory*, 2nd ed., New York: MccGraw-Hill.
- Perkins, M. B., Jensen, P. S., Jaccard, J., Gollwitzer, P., Oettingen, G., Pappadopulos, E., & Hoagwood, K. E. (2007). Applying theory-driven approaches to understanding and modifying clinicians' behavior: what do we know?. *Psychiatric Services, 58*(3), 342-348.
- Prinz, R. J., & Miller, G. E. (1994). Family-based treatment for childhood antisocial behavior: Experimental influences on dropout and engagement. *Journal of Consulting and Clinical Psychology, 62*(3), 645.
- Ringborg, M. (2016). Dissemination of attachment-based family therapy in Sweden. *Australian and New Zealand Journal of Family Therapy, 37*(2), 228-239.
- Rivett, M., & Buchmüller, J. (2017). *Family therapy skills and techniques in action*. Routledge.
- Robbins, M. S., Alexander, J. F., Turner, C. W., & Hollimon, A. (2016). Evolution of

- functional family therapy as an evidence-based practice for adolescents with disruptive behavior problems. *Family Process*, 55(3), 543-557.
- Robbins, M. S., Waldron, H. B., Turner, C. W., Brody, J., Hops, H., & Ozechowski, T. (2019). Evaluating supervision models in functional family therapy: Does adding observation enhance outcomes? *Family Process*, 58(4), 873-890.
- Rodriguez-Quintana, N., & Lewis, C. C. (2018). Observational coding training methods for CBT treatment fidelity: A systematic review. *Cognitive Therapy and Research*, 42(4), 358-368.
- Rowe, C. L. (2012). Family therapy for drug abuse: Review and updates 2003–2010. *Journal of Marital and Family Therapy*, 38, 59–81.
- Santisteban, D. A., Szapocznik, J., Perez-Vidal, A., Kurtines, W. M., Murray, E. J., & LaPerriere, A. (1996). Efficacy of intervention for engaging youth and families into treatment and some variables that may contribute to differential effectiveness. *Journal of Family Psychology*, 10(1), 35.
- Sexton, T. L., & Datchi, C. (2014). The development and evolution of family therapy research: Its impact on practice, current status, and future directions. *Family Process*, 53(3), 415-433.
- Sexton, T. L., Datchi, C., Evans, L., LaFollette, J., & Wright, L. (2013). The effectiveness of couple and family-based clinical intervention. In M. J. Lambert (Ed.), *Bergin and Garfield's handbook of psychotherapy and behavior change* (6th ed., pp. 587-639). Hoboken, NJ: Wiley & Sons.
- Sheidow, A. J., Zajac, K., Chapman, J. E., McCart, M. R., & Drazdowski, T. K. (2020). Randomized controlled trial of an integrated family-based treatment for

adolescents presenting to community mental health centers. *Community Mental Health Journal*.

Shrout, P., & Fleiss, J. (1979). Intraclass correlations: Uses in assessing rater reliability. *Psychological Bulletin*, 86(2), 420-428.

Stadnick, N. A., Haine-Schlagel, R., & Martinez, J. I. (2016, October). Using observational assessment to help identify factors associated with parent participation engagement in community-based child mental health services. In *Child & youth care forum* (Vol. 45, No. 5, pp. 745-758). Springer US.

Stewart, R. E., Beidas, R. S., Last, B. S., Hoskins, K., Byeon, Y. V., Williams, N. J., & Bottenheim, A. M. (2020). Applying NUDGE to inform design of EBP implementation strategies in community mental health settings. *Administration and Policy in Mental Health and Mental Health Services Research*, 1-12.

Szapocznik, J., Hervis, O., & Schwartz, S. (2003). Brief Strategic Family Therapy for Adolescent Drug Abuse.

Szapocznik, J., Perez-Vidal, A., Brickman, A. L., Foote, F. H., Santisteban, D., Hervis, O., & Kurtines, W. M. (1988). Engaging adolescent drug abusers and their families in treatment: A strategic structural systems approach. *Journal of Consulting and Clinical Psychology*, 56(4), 552.

Szapocznik, J., Schwartz, S. J., Muir, J. A., & Brown, C. H. (2012). Brief strategic family therapy: An intervention to reduce adolescent risk behavior. *Couple and Family Psychology: Research and Practice*, 1(2), 134.

Tavakol, M., & Dennick, R. (2011). Making sense of Cronbach's alpha. *International journal of medical education*, 2, 53.

- Waldron, H. B., Brody, J. L., & Hops, H. (2017). Functional Family Therapy for adolescent substance use disorders. In J. W. Weisz & A. E. Kazdin (Eds.), *Evidence-based Psychotherapies for Children and Adolescents* (pp. 401-415). The Guildford Press: New York.
- Weisz, J. R., Chorpita, B. F., Palinkas, L. A., Schoenwald, S. K., Miranda, J., Bearman, S. K., ... & Research Network on Youth Mental Health. (2012). Testing standard and modular designs for psychotherapy treating depression, anxiety, and conduct problems in youth: A randomized effectiveness trial. *Archives of General Psychiatry*, *69*(3), 274-282.
- Wilens, T. E., Martelon, M., Joshi, G., Bateman, C., Fried, R., Petty, C., & Biederman, J. (2011). Does ADHD predict substance-use disorders? A 10-year follow-up study of young adults with ADHD. *Journal of the American Academy of Child & Adolescent Psychiatry*, *50*(6), 543-553.
- Withers, M. C., Reynolds, J. E., Reed, K., & Holtrop, K. (2017). Dissemination and implementation research in marriage and family therapy: An introduction and call to the field. *Journal of Marital and Family Therapy*, *43*(2), 183-197.
- Wright, B., Lau, A. S., & Brookman-Frazee, L. (2019). Factors associated with caregiver attendance in implementation of multiple evidence-based practices in youth mental health services. *Psychiatric Services*, *70*(9), 808-815.

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