Youths' Alliance, Involvement Behaviors, and Therapists' Alliance-building: A Process-Outcome Study of Youths Receiving Trauma-Focused Cognitive Behavioral Therapy

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List of Papers

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List of Abbreviations

a	Cronbach's alpha
AABS-r	*Adolescent Alliance Building Scale—revised*
AIC	Akaike information criterion
BIDS	*The Behavioral Index of Disengagement Scale*
CAMHS	Child and Adolescent Mental Health Services
CAPS-CA	*Clinician-Administered PTSD Scale for Children and Adolescents*
CBT	Cognitive behavioral therapy
CIRS	*The Client Involvement Rating Scale*
CPSS	*The Child PTSD Symptom Scale*
DMM	Distillation and matching model
DV	Dependent variable
ICC	Infraclass correlation coefficient
ISTSS	International Society for Traumatic Stress Studies
IV	Independent variable
K	Cohen's kappa
M	Mean
NICE	National Institute for Health and Care Excellence
PAF	Principal-axis factoring
PTEs	Potentially traumatic events
PTS	Post-traumatic stress
PTSD	Post-traumatic stress disorder
PTSS	Post-traumatic stress symptoms
RCT	Randomized controlled trial
SD	Standard deviation
TAU	Treatment as usual
TASC-r	*The Therapeutic Alliance Scale for Children-revised*
TF-CBT	Trauma-focused cognitive behavioral therapy
TPOCS-A	Therapy process Observational Coding System for Child Psychotherapy-Alliance Scale
U	Mann-Whitney *U*-test
X^2	Chi square test

Summary

Many young people worldwide are exposed to potentially traumatizing events (PTEs; e.g., Finkelhor et al., 2015; Landolt et al., 2013; Lewis et al., 2019; McLaughlin et al., 2013). Although many youths show impressive resilience and considerable recovery in the first weeks after exposure to trauma (e.g., Miller-Graff & Howell, 2015), approximately 16% may develop post-traumatic stress disorder (PTSD; Alisic et al., 2014). Symptoms of PTSD entail intrusions, avoidance, changes in cognition and mood, arousal, and reactivity (American Psychiatric Association, 2013), and these trauma-related symptoms may negatively impact youths' affective, behavioral, cognitive, interpersonal, and biological domains (Cohen et al., 2017). Thus, knowledge on how to help youths recover from PTSD is essential. Trauma-focused cognitive behavioral therapy (TF-CBT) is a recommended treatment for PTSD (International Society for Traumatic Stress Studies [ISTSS], 2018; National Institute for Health and Care Excellence [NICE], 2018). Research suggests that a combination of the trauma-specific interventions of TF-CBT along with a strong alliance with a therapist may be optimal for helping youths alleviate post-traumatic stress symptoms (PTSS; Ormhaug et al., 2014; Zorzella et al., 2015). However, relatively little is known about how TF-CBT facilitates change in symptoms (Alpert et al., 2021; Hayes et al., 2017). The overarching aim of this thesis is to increase understanding of youth-therapist alliances, youth in-session involvement behaviors, and therapist in-session alliance-building behaviors and to examine how these relate to treatment outcomes for youths receiving TF-CBT.

Data for this study were derived from the Norwegian TF-CBT study that investigated the effectiveness of TF-CBT in comparison to treatment as usual (TAU). Results from this randomized controlled trial study showed that TF-CBT was superior to TAU in reducing post-treatment PTSS (Jensen et al., 2014), and the treatment effects of TF-CBT seemed to be maintained at follow-up (Jensen et al., 2017). The present thesis involves participants from the TF-CBT arm (n = 65).

The thesis consists of three studies. The overarching aim of Paper I was to evaluate how therapists can best monitor youth-therapist alliances in TF-CBT. The specific aims of the study were as follows: (1) to examine which alliance perspective(s) predict post-traumatic stress (PTS) outcomes; (2) to investigate the concordance between youth, parent, therapist, and observer ratings of youth-therapist alliances; and (3) to evaluate whether discrepancies in youth, parent, and therapist ratings of the alliance predict PTS outcomes. Youths, parents, and therapists rated the alliance according to The Therapeutic Alliance Scale for Children-revised

(TASC-r; Shirk, 2003, Shirk & Saiz, 1992), and observers rated the alliance using the Therapy Process Observational Coding System for Child Psychotherapy-Alliance Scale (TPOCS-A; McLeod, 2001; McLeod & Weisz, 2005). Results showed that only the youths' alliance ratings predicted PTS outcomes. Only the parents' alliance ratings significantly correlated with the youths' alliance ratings. An overestimation of youth-therapist alliances by therapists and parents predicted poorer PTS outcomes. These results highlight the importance of attending to and tuning into youths' perspectives of their alliance with therapists during TF-CBT and suggest that consulting parents to evaluate the youths' alliances may be helpful.

The overarching aim of Paper II was to increase understanding of how therapists can build a strong alliance with traumatized youths receiving TF-CBT, and to examine whether early trauma focus impedes the alliance-formation process. This study had three research aims: (1) to examine the predictive associations between therapist alliance-building behaviors and youth-rated alliances, (2) to evaluate the degree of therapists' trauma focus (gradual exposure) as a predictor of subsequent youth-rated alliances, and (3) to examine whether the type of initial client engagement moderates the relationship between therapist behaviors and youth-rated alliances. Youths rated the alliance according to TASC-r (Shirk, 2003, Shirk & Saiz, 1992). Therapists' alliance-building behaviors were coded by observers using the Adolescent Alliance-Building Scale-revised (AABS-r; Shirk & Jungbluth, 2014). Two main therapist alliance-building strategies were identified from AABS-r: *rapport-building* (focusing on youths' experiences by eliciting information, offering alternative perspectives through cognitive restructuring, and providing support) and *treatment socialization* (active structuring of the session [leading and directing], explaining the treatment model, expressing positive expectations for change, and emphasizing collaboration). To examine whether early trauma focus may impede alliance-building, the observers also coded how often the therapist talked about or probed for trauma experiences. Youths' initial engagement behaviors within the treatment were coded by observers using the Behavioral Index of Disengagement Scale (BIDS; Peterson et al., 2011; Peterson & Shirk, 2012). From BIDS, youths' behaviors were categorized as engaged, passively disengaged, or actively disengaged. The results showed that more rapport-building was associated with a stronger alliance, while the extensiveness of treatment socialization was not associated with the strength of the alliance. The extensiveness of therapist elicitation of trauma-related material did not predict the strength of the alliance. The only significant interaction effect between therapist behaviors and youths' initial behaviors was that greater elicitation of trauma was associated with a stronger alliance within the group of passively disengaged youths. Together, these results suggest that using rapport-

building behaviors is helpful when attempting to establish a strong alliance with traumatized youths regardless of their initial behavior. Additionally, the results suggest that therapists need not be too concerned about addressing trauma early in treatment, as this does not seem to undermine the alliance-building process. Rather, the results suggest that focusing on trauma content may be helpful for building a strong alliance with youths who initially appear to be marginally engaged.

The overarching aim of Paper III was to examine the relationships between youth-therapist alliances, involvement behaviors and outcomes of TF-CBT. The specific aims of the study were to examine the following: (1) whether youths' positive and negative involvement behaviors in trauma narration work predict their PTS treatment outcomes and (2) whether there is a significant relationship between a youth's alliance with a therapist and their involvement behaviors in the trauma narrative. Youths rated the alliance according to TASC-r (Shirk, 2003; Shirk & Saiz, 1992). Observers coded youths' involvement behaviors using the Client Involvement Rating Scale (CIRS; Chu & Kendall, 1999, 2004, 2009). For the positive involvement behaviors the results suggest that greater expression of understanding the treatment and elaborating more on trauma experiences from youths were associated with greater treatment improvements while appearing enthusiastic and taking more initiative were associated with poorer treatment responses. Negative involvement behaviors were not associated with outcomes. A stronger alliance was associated with greater initiation and enthusiasm from youths and less negative involvement behaviors. Together, these results indicate that understanding the treatment rationale is associated with talking more about trauma experiences and that this, along with a strong alliance, relate to favorable PTS treatment outcomes.

Collectively, the findings from Papers I–III suggest that therapists should focus on youths' experience of the alliance, as this predicts PTS outcomes. Overestimating youths' perspectives of the alliance seems to be associated with poorer PTS outcomes. Focusing on rapport-building early in treatment seems to strengthen the youth-therapist alliance. Addressing youths' trauma experiences does not seem to impede alliance-building but rather strengthens the alliance for passive youths. Youths' initial behaviors during trauma narrative work may serve as useful markers for therapists to appraise the treatment progress. However, more research is needed to increase understanding of therapy processes during TF-CBT with traumatized youths and how these processes may facilitate changes in treatment outcomes.

1 Introduction

> *I don't like to turn off the lights. I'm afraid someone would come in and shoot and rob us. When I wake up, I turn on the light. . . I've been in Bakersfield helping my brother. . . . At night in Bakersfield, it feels like someone broke in. Nothing is there. I hear footsteps again. I keep going to check. . . . I check where the sound is coming from. . . . I'm very frightened of the kitchen because no one's there at all. I completely avoid it. At home, I kept feeling someone was looking in and watching me. I kept the light on. I was afraid they'd come in and kill us all or take us away again.* (Terr, 1981, p. 18)

This quote was spoken by 12-year-old Rachel. In 1976, she was kidnapped from her school bus together with 25 of her peers. Three men abducted the children before burying them alive in a truck trailer, although the children managed to escape. A physician told the parents that one of the 26 children would be emotionally affected by the event. At first, none of the parents wanted to admit that their child would be the one, but five months later, some parents wrote a newspaper article complaining that no one was helping their children, who now suffered from nightmares and fears (Terr, 1979). Psychiatrist Leonor Terr interviewed the children and concluded that they were suffering from a wide range of negative reactions that were similar to adult trauma reactions (Terr, 1981). Around the same time, other researchers concluded that children's reactions to trauma are less serious than those of adults and that these reactions do not warrant inclusion within a diagnostic category of post-traumatic stress (PTS; Garmezy & Rutter, 1985). Four years later, however, the children told Terr that they had continued to suffer from PTS (Terr, 1983).

Since the time of Terr's original research (1979; 1981; 1983), focus on trauma exposure and reactions among children and adolescents (hereafter referred to as youths) has grown tremendously. The notion that youths can develop severe, pervasive, and persistent post-traumatic stress symptoms (PTSS) similar to adults is widely accepted. As such, establishing knowledge about how to help youths heal from trauma-related wounds is considered to be crucial. One recommended treatment choice for PTSS in youths is trauma-focused cognitive behavioral therapy (TF-CBT [Cohen et al., 2017]; International Society for Traumatic Stress Studies [ISTSS], 2018; National Institute for Health and Care Excellence [NICE], 2018). However, not all youths respond well to this treatment (Knutsen et al., 2020), and there is a

need to improve understanding of what facilitates positive change for youths receiving TF-CBT (Alpert et al., 2021; Hayes et al., 2017).

The overarching purpose of this thesis is to improve knowledge about therapy processes and PTS outcomes for youths in TF-CBT. More specifically, its focus is on the therapeutic alliance (Papers I–III), youths' in-session involvement behaviors (Papers II and III), and therapists' in-session alliance-building behaviors (Paper II). Data for this thesis were derived from a sample of traumatized youths (mean [*M*] age = 15.1, standard deviation [*SD*] = 2.1) who received TF-CBT as part of the Norwegian TF-CBT study that compared TF-CBT to treatment as usual (TAU) in a randomized controlled trial (RCT; Jensen et al., 2014). This RCT study supported the superior treatment effect of TF-CBT compared to TAU in reducing PTSS (Jensen et al., 2014).

1.1 Prevalence and Consequences of Trauma Exposure in Youths

Potentially traumatic events (PTEs) that youths may experience in childhood include a variety of events such as sexual or physical abuse, exposure to domestic or community violence, traumatic loss, natural or man-made disasters, war or refugee-related experiences, severe car accidents, and medical traumas. Studies show consistently high exposure rates to PTEs among youths (e.g., Copeland et al., 2007; Finkelhor et al., 2015; Landolt et al., 2013; Lewis et al., 2019; McLaughlin et al., 2013). Thus, attending to the consequences of trauma exposure and determining how to best help those in need of psychological treatment can benefit many youths and their families. Surveys conducted on representative and clinical youth populations in Norway have also shown that many Norwegian youths are exposed to PTEs. One survey, which included a representative sample of 4,530 youth (ages 18–19), showed that 21% had been exposed to physical violence from at least one parent (6% severe violence), 8% had experienced violence between parents (4% severe violence), and 23% had been exposed to sexual violence inside or outside their family (Mossige & Stefansen, 2016). A second survey, which included a representative sample of 1,5930 youth (ages 15–16 years), found that around 22% had been exposed to violence or sexual abuse in the course of one year (Schou et al., 2007). A third survey, which examined exposure rates to child maltreatment within a representative sample of 9,240 youths (ages 12–16), showed that the exposure rates were 19% for physical abuse, 18% for emotional abuse, 14% for neglect, 6% for sexual abuse from others, and 22% for sexual abuse from peers; furthermore, it found that 11% had been exposed to at least three types of child maltreatment (Hafstad et al., 2020). Finally, a study

screening for trauma experiences among 6,653 youths (ages 6–18) who received mental health care from the Child and Adolescent Mental Health Services (CAMHS) showed that 72% of youths and 71% of parents reported that the youth had been exposed to at least one PTE (Skar et al., 2021). In summary, the exposure rate to PTEs among youths seems to be consistently high, and the majority of youths in CAMHS in Norway have been exposed to a PTE.

According to the DSM-IV-TR[1] (the diagnostic manual in use at the time of data collection for this thesis; American Psychiatric Association, 2000), Criterion A for post-traumatic stress disorder (PTSD) entails exposure to one or more traumatic event(s) combined with specific reactions. In children, these reactions may be "expressed instead by disorganized or agitated behavior." The PTSD symptom criteria are as follows: one or more symptoms of intrusion (Criterion B); three or more symptoms of avoidance (Criterion C); three or more symptoms of persistent arousal (Criterion D); the duration of the disturbance (symptoms in criteria B, C and D) is more than one month (Criterion E); and the disturbance causes clinically significant distress or impairment in social, occupational, or other important areas of functioning (Criterion F; American Psychiatric Association, 2000). The intrusive symptoms (Criterion B) may be expressed differently in children compared to in adults (e.g., in children, recurring dreams of the event may be frightening dreams without recognizable content). Trauma-related symptoms typically seen in children can also be described as *affective* (e.g., fear, sadness or depressive symptoms, anger, severe emotional dysregulation), *behaviorally oriented* (e.g., avoidance, maladaptive behavior, sexual behavior, traumatic identification, substance abuse, self-harm and risk behaviors, role-reversal in parental interactions), *cognitive* (e.g., incorrect or irrational assumptions, irrational or unhelpful thoughts), *interpersonal* (e.g., social withdrawal) and *biological* (e.g., stress may cause changes in neurotransmitters and hormones in the body, which may trigger physiological reactions such as increased heart-rate, respiration, and blood pressure; distribution of blood flow to the skeletal muscles; and increased vigilance; Cohen et al., 2017).

[1] The main change from DMS-IV (2000) to DSM-5 (2013) is an added symptom criterion: Criterion D) Negative alterations in cognitions and mood associated with the traumatic event(s), beginning or worsening after the traumatic event(s) occurred (e.g., Persistent and exaggerated negative beliefs or expectations about oneself, others, or the world (e.g., "I am bad;" "No one can be trusted;" "The world is completely dangerous;" "My whole nervous system is permanently ruined"; Feelings of detachment or estrangement from others.)

A meta-study comprising 72 cross-sectional studies from North America, Europe, Australia and Asia showed that on average 16% of trauma-exposed youths develop PTSD, but the rates vary depending on type of trauma exposure and child sex (Alisic et al., 2014). Exposure to PTEs increases youths' risk for developing a range of comorbid disorders such as depression (Copeland et al., 2007; LeMoult et al., 2020; Lewis et al., 2019; Perkonigg et al., 2000), anxiety disorders (Copeland et al., 2007; Perkonigg et al., 2000), attentional-deficit disorder (Ford et al., 2000), disruptive behavior disorders (Ford et al., 2000; Lewis et al., 2019), and drug abuse (Lewis et al., 2019; Perkonigg et al., 2000). Some of the symptoms related to the comorbid disorders typically seen in traumatized youths (e.g., externalizing behavioral problems) may be more easy to identify than PTSS; thus, the trauma-specific reactions may go unnoticed (Havens et al., 2012; Saifan et al., 2021). Research suggests that the overall health costs (according to insurance data) for individuals with PTSD are more than three times higher compared to non-exposed controls in a five-year period, which relates to both PTSD and comorbid disorders (Bothe et al., 2020). Helping youths in need recover after trauma is beneficial at an individual level, at a systemic level (e.g., reducing the impact on parents, siblings, and peers), and at a societal level (e.g., reducing financial costs).

Notably, many youths show impressive resilience and considerable recovery in the first weeks after trauma exposure (e.g., Miller-Graff & Howell, 2015). A robust predictor of mental health outcomes is the level of social support that a youth is given, particularly from caregivers (e.g., Alisic et al., 2011; Birkeland et al., 2020; Jensen et al., 2019; La Greca et al., 2010; Yule et al., 2019). Furthermore, some youths even experience post-traumatic growth in the aftermath of trauma (Glad et al., 2013; Hafstad et al., 2011). This may relate to positive changes in the youth's appreciation for life, relationships with others, experience of new possibilities in life, personal strength, or spiritual growth (e.g., Tedeschi & Calhoun, 1996). Regardless, high exposure rates to PTEs combined with the many negative consequences that may occur in the aftermath of trauma exposure highlight the importance of conducting research on how to best help traumatized youths recover from PTSD.

1.2 Two of the Theoretical Models for the Development of PTSD in Youth

Several theoretical models have been suggested to provide an understanding of why people develop and recover from PTSS. The cognitive model by Ehlers and Clark (2000) aims to explain the underlying mechanisms for why people develop persistent PTSD and provide an overall framework for cognitive-behavioral treatment for PTSD. This model has been

developed for adults but is also used to explain PTS responses in youths (Meiser-Stedman, 2002), and is one of the driving theories in the development of TF-CBT (Cohen et al., 2017).

According to Ehlers and Clark (2000), individuals with persistent PTSD constantly feel as if they are in a state of serious threat. Two key processes are suggested to explain why PTSS are developed and maintained. The first key process relates to negative thoughts and appraisals of the trauma or reactions that occurred in the aftermath of the trauma. This may affect beliefs about oneself that may relate to external attributes ("the world is a dangerous place") or internal attributes ("I am broken"). The trauma-related appraisal may generate a range of negative emotions (e.g., fear, anxiety, depression, and anger) that may in turn generate a range of maladaptive and unhelpful coping strategies (e.g., avoidance of trauma reminders). In the short term, these behavioral strategies may be helpful for reducing negative emotions. However, in the long term, they may prevent the emotional processing of the trauma memories and hinder corrections of maladaptive appraisals and beliefs related to the trauma, thus maintaining and enhancing levels of PTSS. Research supports the idea that maladaptive appraisals are involved in the development and maintenance of PTSS in youths (Meiser-Stedman et al., 2009a; Meiser-Stedman et al., 2019).

The second key process for persistent PTSD, according to Ehlers and Clark (2000), relates to how traumatic memories are poorly elaborated and contextualized in comparison with more neutral memories and are therefore not adequately integrated with other automatic memories. This triggers intrusive memories. Commonly, traumatic memories lack related references; they are also not sufficiently connected with time, place, and other details. Thus, even if traumatic memories are well remembered, they are commonly incoherent and fragmented. These traumatic memories are often closely linked with sensory details (e.g., smell or sounds), which makes them vivid, often causing the person to relive the related traumatic experiences. Sensory inputs that occurred during the formation of the traumatic memories and that trigger a recollection of these memories are called trauma reminders.

Ehlers and Clark's (2000) model is closely linked to the emotional processing theory (EPT; Cahill & Foa, 2007; Foa & Kozak, 1986), and TF-CBT also builds on EPT. According to EPT, PTSD is the result of (a) a traumatic event or set of events that (b) condition(s) an individual's original unconditioned trauma response (i.e., fear) to previously neutral stimuli that serve as reminders of the trauma experience (Cahill & Foa, 2007; Foa & Kozak, 1986). The development and perpetuation of PTSD symptoms are related to post-traumatic

cognitions of the self and world (e.g., "I am permanently damaged" or "The world is an unsafe place"). In turn, trauma cognitions are maintained and strengthen by avoidance (Cahill & Foa, 2007; Foa & Kozak, 1986). In sum, trauma exposure posits a severe risk to a youth's development and gaining more knowledge of how treatment can best help is important.

1.3 A Brief Introduction to Psychotherapy Research

The overarching aim of psychotherapy research is to understand more of how and why treatment works. A central discussion in the psychotherapy research field has been whether the effect of psychotherapy relates mostly to the specific factors associated with a particular treatment or to the nonspecific and common factors shared among most if not all forms of therapy (Mulder et al., 2017; Zilcha-Mano et al., 2019). Historically, this debate can be traced back to Carl Rogers, who proposed the necessity of an accepting and genuine relationship with a therapist to release a natural human tendency towards growth, and B. F. Skinner, who related change to specific learning procedures (see Mulder et al., 2017). The camp emphasizing the critical elements of change that cut across different approaches (i.e., common factors) may be called "lumpers" (Joyce et al., 2006). According to Lambert (2013), the common factors represent three overarching categories: support (e.g., hope and development of a therapeutic alliance), learning factors (cognitive frameworks for facilitating perceptual change, such as cognitive learning and corrective emotional experience), and action factors (constructs associated with actual behavioral change, such as experimenting with new behaviors). Studies have consistently found that these common factors may be helpful for optimizing outcomes across treatment interventions, clinical samples, and ages (Asay & Lambert, 1999; Norcross & Lambert, 2018). Research from the adult literature suggests that the common relationship factors center around clients' confidence in both the therapist and their treatment (Finsrud et al., 2022). Several theoretical models do suggest that the patient-therapist alliance is a central common factor related to treatment change (Green, 2006; Karver et al., 2005; Wampold, 2015). The Third Interdivisional APA Task Force on Evidence-Based Relationships and Responsiveness supports the idea that the therapeutic relationship makes substantial and consistent contributions to the treatment outcome independent of treatment modality (Norcross & Lambert, 2018).

The camp opposite the "lumpers" may be called "splitters," as they emphasize the differentiation of treatment-specific elements (i.e., specific factors) on outcomes (Joyce et al., 2006), often using RCTs as a method for comparing the efficacy or effectiveness of different

interventions or comparing treatments and other conditions (e.g., waitlists; Joyce et al., 2006). Treatments that are documented to produce the greatest change are commonly referred to as evidence-based treatments (EBTs; Kazdin, 2008).

Today, there is no longer such a large gap between "splitters" and "lumpers." Most specific factor theorists argue that their model allows for the existence of therapist effects, allegiance effects, and other common factors, while common factors theorists seem to be increasingly tightening their definition to bona fide therapies and acknowledging that some specific techniques may be more effective than others for particular conditions (Mulder et al., 2017). APA's model of evidenced-based practice emphasizes the combination of best available evidence and clinical expertise in the context of patient characteristics, culture, and preferences (American Psychological Association, Presidential Task Force on Evidence-Based Practice, 2006). Proponents of both the common factors and the specific factors approaches seem to subscribe to a similar approach to evidence-based practice in psychotherapy (Mulder et al., 2017). Research from the Norwegian TF-CBT study suggests that traumatized youths' treatment outcomes may be optimized by combining the trauma-specific TF-CBT elements with a strong youth-therapist alliance (Ormhaug et al., 2014). This supports the idea of uniting the focus of the "splitters" and the "lumpers" when understanding treatment change and conducting psychotherapy research.

Clinical challenges related to evidence-based practice are the large number of EBTs to choose from and the overlap between strategies with different treatment manuals (Chorpita et al., 2007). In response to these challenges, Chorpita et al. (2005) have presented a "distillation and matching model" (DMM) that aims to identify techniques or "practice elements" that cut across EBTs (i.e., "distillation"), and then select the practice elements that apply to particular treatment characteristics (i.e., "matching"). The DMM may be called a "common elements approach" (Chorpita et al., 2007) This represents an approach towards personalizing interventions, which can be described as using evidence-based methods for tailoring treatments to individuals (Ng & Weisz, 2016). Chorpita and Daleiden (2009) used the DMM to aggregate practical elements of successful treatments based on RCTs with youths and aimed to identify patterns of practical elements that vary depending on client variables (e.g., symptomatology). According to results from the study, the two most frequently used practical elements in effective treatments of traumatized youths were exposure and cognitive focus, followed by psychoeducation and relaxation. These practical elements are found in TF-CBT

(Cohen et al., 2017). Following this line of research, Chorpita et al., (2009) have developed the treatment manual MATCH-ADTC that is designed to combine the common elements of EBTs for anxiety, depression, trauma-related symptoms and disruptive behavior in one protocol. This treatment model allows for a flexible use of the treatment modules that can be individually adapted to a client's fluctuations in the most present symptoms as the treatment progress. The components that comprise the trauma specific module include getting acquainted, making a fear leader, psychoeducation, safety planning, relaxation and trauma narration. As for the other treatment models of MATCH-ADTC, the trauma module builds on EBTs that include TF-CBT thus the trauma specific elements are found in TF-CBT (Cohen et al., 2017). Research suggests that the modular approach of MATCH-ADTC may help improve the utility and effectiveness for youths receiving mental health treatment, also it seem to be a promising way to build on the strengths from EBTs (Weisz et al., 2012). In a further effort to reduce complexity and to help clinicians master transdiagnostic issues and possibly reduce time-consuming training, Weisz and Bearman (2020) developed a new model based on a shared-mechanisms approach; FIRST. According to Weisz and Bearman (2020), there are five core principles that commonly appear in evidence-based therapies comprising the acronym FIRST: 1) **F**eeling calm, 2) **I**ncreasing motivation, 3) **R**epairing thoughts, 4) **S**olving problems, and 5) **T**rying the opposite). These five FIRST treatment principles are found in TF-CBT (Cohen et al., 2017). Research supports that the treatment model FIRST is an effective treatment for a range of clinical outcomes, and that a strong therapeutic alliance seems to be maintained within this treatment intervention (Cho et al., 2021; Weisz et al., 2017).

1.4 TF-CBT is a Recommended Treatment for PTSD in Youth

TF-CBT is a component-based manualized treatment specifically developed to target PTSS. As mentioned, the treatment components of TF-CBT align with treatment ingredients identified from the common elements approach and the common treatment principles approach (Chorpita et al., 2009; Chorpita & Daleiden, 2009; Weisz & Bearman, 2020) and leans on the theoretical perspectives of the cognitive model by Ehlers and Clarks' (2000) and EPT (Cahill & Foa, 2007; Foa & Kozak, 1986). In addition, TF-CBT builds on cognitive, behavioral, interpersonal, and family therapy (a full description of the model see Cohen et al., 2017). TF-CBT is organized into three phases that comprise eight core components that can be described by the acronym PRACTICE: 1) stabilization and skill building (**PRAC** =

psychoeducation and parenting skills, relaxation skills, affective modulation skills, and cognitive coping skills), phase 2) exposure and cognitive processing (**T** = trauma narration and processing), and phase 3) treatment consolidation and closure (**ICE** = in vivo mastery, conjoint child-parent session, and enhancing safety and future development; Cohen et al., 2017). Gradual exposure to traumatic memories is a central part of all treatment components. The trauma narration and processing phase involves a specific focus on the traumatic experiences, including remembering and recording the traumatic event(s) over several sessions framed by a choice of different approaches (e.g., a story or a poem; Cohen et al., 2017; Cohen et al., 2018).

Youths and parents who are evaluated to be suitable for TF-CBT (e.g., non-offending to their child) are involved in the treatment, and both parallel and conjoint sessions are provided. The parental work involves teaching parents coping and parenting skills and helping them improve their communication skills and behaviors related to their child's trauma experience(s) (Cohen et al., 2017). Attending to parents' own trauma(s) or psychopathology is not a primary focus of TF-CBT (Canale et al., 2022). Rather, parents are validated in regard to feelings and concerns they may have about their child's trauma exposure (e. g., distress, shame, guilt, and blame) and are taught ways to cope with these reactions (e.g., affective expression and modulation skills) and support their child (Cohen et al., 2017; Mastorakos et al., 2021).

To date, a growing number of meta-studies have lent strong empirical support to the effectiveness of TF-CBT in alleviating traumatized youths' PTSS in the aftermath of a wide range of trauma experiences (e.g., de Arellano et al., 2014; John-Baptiste Bastien et al., 2020; Morina et al., 2016). Research supports that TF-CBT can be implemented effectively in community settings, with similar treatment outcomes as efficacy trials in clinical settings (Webb et al., 2014). Preliminary evidence suggests that TF-CBT is an effective treatment for refugee children (Chipalo, 2021) and a feasible and promising treatment for children who experience PTSS after traumatic loss (Unterhitzenberger et al., 2020). With the introduction of Complex PTSD in the new the International Classification of Diseases-11 (Sachser et al., 2017), there is also preliminary evidence that TF-CBT is helpful for youths with this disorder (Jensen et al., submitted).

1.4.1 How May TF-CBT Relate to Treatment Change?

TF-CBT targets change within four trauma-related areas: (1) overgeneralized fear and associated avoidance; (2) physiological dysregulation; (3) maladaptive trauma-related cognitions; and (4) parental factors (Brown et al., 2020). Ehlers and Clark's model (2000) may be used to explain how treatment specific factors from a trauma specific treatment such as TF-CBT may help reduce PTSS; a first focus is directed at elaborating and integrating the trauma memories into the individual's preceding and subsequent experience, which aims to reduce intrusive re-experience. A second focus targets modifying problematic appraisals of the trauma and/or its sequelae that maintain a sense of current threat that also may reduce PTSS. A third focus is on changing dysfunctional behavioral and coping strategies that prevent memory elaboration, exacerbate symptoms or hinder reassessment of problematic appraisals that are necessary to reduce PTSS. However, the understanding of the role treatment processes play in TF-CBT seems to be in its early phase.

1.4.1.1 Gradual Exposure and Trauma Narration. One critical feature for reducing PTSS during TF-CBT is the use of gradual exposure throughout treatment, which involves gradually increasing references to the youth's personal traumatic experiences and eliciting the trauma memories. Emotional and cognitive processing of traumatic memories are proposed to be central mechanisms for reducing PTSS (Cahill & Foa, 2007; Cohen et al., 2017; Ehlers & Clark, 2000; Grasso et al., 2011). Research supports the notion that change mechanisms in TF-CBT are linked with the processing of traumatic experiences through exposure to trauma-related stimuli (Deblinger et al., 2011). The exposure work may activate the networks related to emotional, behavioral, cognitive, and physiological responses to the traumatic memories, which can be used by therapists to identify and target problematic beliefs or attributions surrounding the trauma (Cohen et al., 2006; Cohen et al., 2017).

A clinical challenge related to trauma memory exposure work is that youths are encouraged to talk about and work with trauma-related content that contrasts with the core behavioral pattern of PTSD related to actively avoiding distressing trauma-related memories thoughts and feelings (American Psychiatric Association, 2000). When focus is directed at traumatic experiences during treatment, this may trigger painful thoughts and feelings within the youth, which is a state they are likely to have spent much energy on avoiding. Youths may find trauma narration to be an intense and emotionally evocative experience (Zorzella et al., 2017). However, while this work may be difficult, many youths also report trauma narration

to be among the most helpful parts of TF-CBT (Dittman & Jensen, 2014). Thus, therapists must tolerate hearing about youths' traumatic experiences when conducting TF-CBT. However, this may be difficult, as these stories often are graphic and distressing, and both the youth and therapist may respond with the maladaptive response of avoiding discussion of the trauma (National Child Traumatic Stress Network, 2004). In fact, research suggests that therapists may hesitate to use exposure techniques for treating PTSD (Becker et al., 2004; Borntrager et al., 2013; Neelakantan et al., 2019; Reid et al., 2018; Ruzek et al., 2014). A recent study found that that there is a large gap between therapists' intention to conduct trauma narration with young patients receiving TF-CBT and their actual use of this technique (Frank et al., 2021). According to the study, some reasons that therapists gave for not conducting trauma narration were an uncertainty about the youths' readiness for doing trauma narratives, lack of parental support, and a fear that trauma narratives would worsen the youths' symptoms. Furthermore, therapists may be fearful of making youths feel too aroused or unsafe or causing them to blame the therapist for making them "relive" their trauma when conducting trauma narration (Cohen et al., 2006; Lawson, 2009). Therapists may also avoid exposure-based interventions out of a fear of ruptures in the alliance (Hultmann et al, 2014; Kendall et al., 2009). These concerns show that the trauma specific work and relational aspects of therapy are not separate and that more knowledge of how therapists can increase confidence and clinical evaluations regarding exposure work is needed.

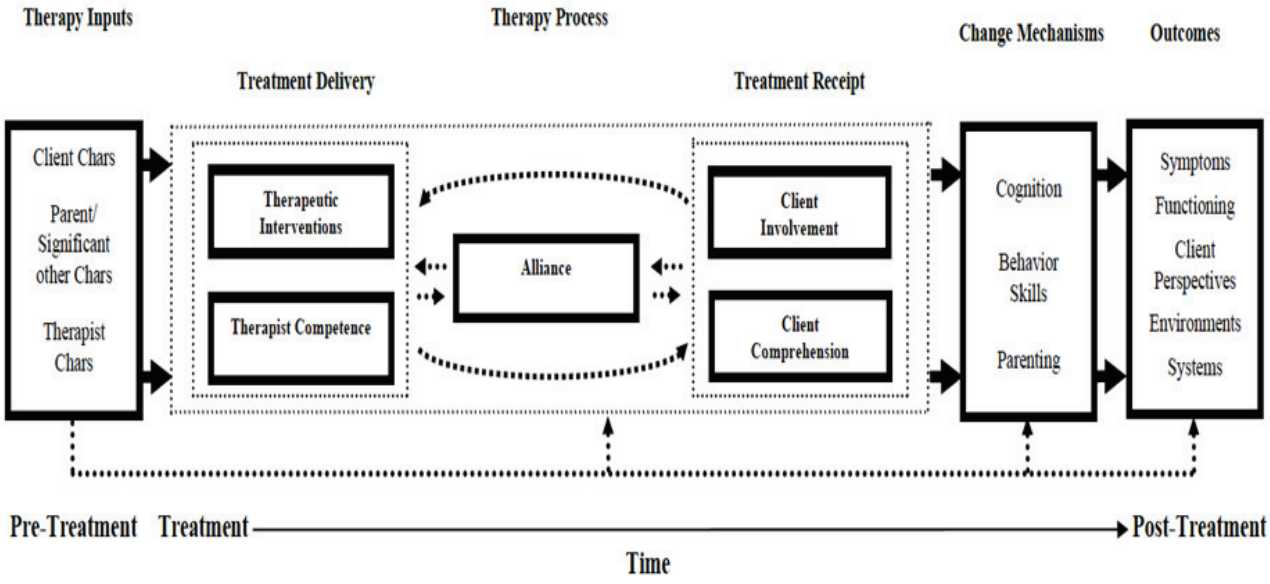
1.5 Situating the Research Aims within a Theoretical Model

After a treatment model has demonstrated effectiveness, the next step is to understand more of *what* happens in psychotherapy sessions and *how* these activities influence clinical outcomes (Hill & Lambert, 2004). Process research can enhance efficacy and facilitate the transport of treatments to real world settings (Shirk & Karver, 2006). A greater understanding of evidence-based psychotherapy relationship variables may help to personalize and improve EBTs (Fjermestad et. al, 2016a; McLeod et al., 2013; Southam-Gerow & McLeod, 2013). Furthermore, entering more process variables simultaneously within the same study can help determine which variables provide the best independent estimates of treatment outcomes that are useful for developing clinical guidelines and which variables should be discarded from further research (Karver et al., 2006). In the context of TF-CBT, a deeper understanding of some of the therapy processes that may occur and how these processes relate to treatment

outcomes may help therapists personalize treatment for youths receiving TF-CBT and facilitate their recovery from PTSS.

Fjermestad et al. (2016a) have presented a theoretical model (see Figure 1) that places therapy processes within a wider context that includes elements expected to be a part of therapeutic change in therapy for youths. This model will be used to frame the research focus of this thesis. The model suggests potential relationships and dynamics between all elements in the model (see Figure 1). "Therapy inputs" include pre-treatment characteristics of youths, caregivers, and therapists when they enter treatment. "Therapy process" includes the threefold relationship between treatment delivery (the components of therapy that have to do with the therapist), treatment receipt (the client's in-session behaviors), and the alliance. "Change mechanisms" have to do with the mechanisms expected to facilitate treatment change (e.g., restructured

Figure 1: Theoretical Model of Therapeutic Change in therapy



cognitions). Finally, "outcomes" have to do with post-treatment changes (e.g., client-perceived change in symptoms and functioning).

The main focus of the present thesis is situated in the second part of the model, which entails the "therapy process." Additionally, this thesis aims to concentrate on knowledge gaps related to the client-therapist alliance, therapist alliance-building behaviors, and client involvement behaviors during TF-CBT with traumatized youths. However, given that therapy processes may be influenced by characteristics that youths and therapists bring into further treatment processes, the individual studies (Papers I–III) aimed to rule out and control for the potential influence of general youth characteristics (e.g., age and sex), trauma specific characteristics (e.g., number of trauma exposure types and pre-treatment PTSS), and therapist effects (e.g., years of clinical experience).

The first research focus on the therapy process involves the client-therapist alliance (Papers I–III). A widely used conceptualization of the alliance is the emotional bond and the task and goal agreement between client and therapist (Bordin, 1979). A narrower conceptualization of the alliance from the youth field (not focusing on goals) is the alliance being a child's affective experience of therapy and the child's collaboration with the tasks of therapy (e.g., talking about problems and expressing feelings; Shirk & Saiz, 1992). The alliance is among the most important common factors in adult and youth treatments (e.g., Norcross & Wampold, 2011). In adult treatment studies, the alliance accounts for 3–5% of the variability in outcomes (Horvath et al., 2011). Meta-studies from the youth field have found that the alliance-outcome relationship ranges from r = .14–.29 (Karver et al., 2018; McLeod, 2011; Murphy & Hutton, 2018; Shirk & Karver, 2003; Shirk et al., 2011). The alliance seems to predict outcomes across measures, treatment approaches, and patient characteristics, and it continues to be among the most investigated variables related to success in psychotherapy (Flückiger et al., 2018). To date, the few studies that have examined the alliance-outcome relationship for traumatized youths support the idea that a stronger alliance is related to a better treatment response (Capaldi et al., 2016; Ormhaug et al., 2015; Zorzella, et al., 2015). However, how therapists should best monitor their alliance with young clients is an issue that has not been settled (Bickman et al., 2012). The research constituting this thesis was the first time that four different rater perspectives of traumatized youths' alliances were examined. The correspondence between the rater perspectives and their predictive value on therapy

outcomes was evaluated with the aim of guiding therapists on how to best monitor the alliance during TF-CBT (Paper I).

The second research focus on the therapy process targets therapists' behaviors. "Therapeutic interventions" relates to specific therapist behaviors designed to modify a specific aspect of client functioning, such as alliance-building behaviors intended to strengthen the alliance (Fjermestad et al., 2016a). In Paper II, the therapists' alliance-building behaviors with traumatized youths were examined, and their interrelationships and associations with youths' experiences of the alliance were evaluated. Because a concern raised by many therapists seems to be that a focus on trauma-related aspects could impede the alliance-building process (Cohen et al., 2006; Lawson, 2009), the relationship between therapists' focus on trauma and the youths' experience of the alliance was also examined (Paper II).

The third and final research focus on the therapy process regards youths' in-session behaviors. Youths are often not the initiators of treatment; rather, the referral to mental health care is often initiated by an adult (DiGiuseppe et al., 1996; Russell & Shirk, 1998). Youths may not recognize the need for mental health care, may hesitate about the referral process, or may feel a lack of control and agency regarding their treatment attendance. On the one hand, traumatized youths may be motivated to end their PTS-related suffering, but on the other hand, they might hesitate to enter trauma-specific treatment that focuses on trauma content that could trigger avoidance and other PTSS (American Psychiatric Association, 2000). Hence, youths often enter treatment with varying levels of interest, motivation, and resistance (Jungbluth & Shirk, 2009). Whether youths' initial behavior in treatment is related to how they experience the alliance later in treatment was examined in Paper II. Furthermore, whether youths' initial behavior in treatment could serve as an important cue to therapists in regard to which behaviors are most beneficial to building a strong alliance was examined in Paper II to help therapists individualize their alliance-building behaviors. The involvement of youths in their treatment is regarded as a vital part of optimizing treatment responses, and this may be particularly important in active treatments such as cognitive behavioral therapy (CBT; Chu & Kendall, 2004). To better understand the roles that youths' in-session behaviors play in the treatment progress, the association between youths' involvement behaviors during the trauma narrative that were expected to be positively or negatively associated with treatment outcomes was examined in Paper III. The degree to which alliance, involvement, and

resistance represent distinct constructs is not clear (Karver et al., 2018), and additional studies that investigate the relationship between involvement and alliance are needed (Karver et al., 2005; McLeod et al., 2014). With this in mind, Paper III aimed to evaluate the relationships between youths' experience of the alliance and their involvement behaviors during trauma narration and to evaluate their contribution to therapy outcomes when simultaneously examined as outcome predictors.

In regard to "outcomes," the studies (Papers I–III) focus on the therapy process and reductions in youths' levels of PTSS at post-treatment, as these symptoms are associated with a range of negative consequences and are the main target of TF-CBT. Finally, while "change mechanisms" are undoubtedly important, they are not examined in this thesis, as they are outside its scope.

1.6 Current Knowledge Gaps

The overarching purpose of this thesis is to address some of the knowledge gaps regarding the alliance, therapist behaviors and youth behaviors in treatment of traumatized youths receiving TF-CBT.

1.6.1 How Can Therapists Build a Strong Alliance with Traumatized Youths?

Decades have passed since Diamond et al. (1999) emphasized that transforming youths' initial reluctance and negativity into collaboration is the first and most critical of all therapeutic tasks. The authors also argued that this work requires the use of clinically based, empirically supported strategies. However, research on *how* therapists develop strong alliances with *which* clients is lacking (Karver et al., 2018).

It may be challenging for therapists to establish a strong alliance with youths for a number of reasons, which also include traumatized youths. Youths rarely refer themselves for treatment and may often not recognize or acknowledge the existence of problems; furthermore, they may frequently be at odds with their parents about the goals of therapy (Russell & Shirk, 1998). Younger children may not understand what therapy is or why they need it (Green, 2006), and they may not have the ability to understand treatment goals (Shirk & Saiz, 1992). Thus, it might be challenging for youths to be in agreement with a therapist on tasks and goals. Developmental aspects may also interfere with a child's ability to connect with a therapist (Zorzella et al., 2017). This may challenge the establishment of an emotional bond. Furthermore, trauma-specific aspects may exacerbate difficulties in the alliance-formation process for many reasons. For one, the experience of traumatic events within a

caregiver relationship may cause difficulties in establishing feelings of trust or safety with any adults, including a therapist (Cloitre et al., 2005; Eltz et al., 1995). This may be why studies have shown that maltreated youths are slower to establish a working alliance compared with non-maltreated youths (Eltz et al., 1995). Second, many youths suffer from negative, generalized perceptions about themselves, others, and the future after trauma exposure (Jensen et al., 2018; Meiser-Stedman, 2009a; Meiser-Stedman, 2019; Mitchell et al., 2017) and struggle with low self-esteem, global self-blame, and shame (D'Andrea et al., 2012). This might cause struggles with opening up to a therapist and difficulties in establishing an emotional bond and task and goal agreement. Given that general developmental aspects and trauma-specific aspects may challenge an alliance-formation process, it is useful to focus on what a therapist can do to build an alliance with traumatized youths (Paper II).

Although the research is arguably limited, some studies have begun to pave the way for an increased understanding of helpful and less helpful therapist behaviors for building a strong alliance with youths. In a first pioneer study, Diamond et al. (1999) compared therapist behaviors towards youths with improved (n = 5) or unimproved (n = 5) alliances when in family therapy for substance abuse. Therapists attended more to youths' emotional experiences, formulated more meaningful goals for treatment, and presented themselves as an ally more frequently in improved alliances than in unimproved alliances (Diamond et al., 1999). In a second study, Creed and Kendall (2005) examined therapist behaviors during CBT with anxious youths (n = 56), in which seven behaviors were expected to be positively related to the alliance (e.g., collaboration and validation of the child) and four behaviors were expected to be negatively related to the alliance (e.g., pushing the child to talk and being too formal). Youths' initial alliance scores were positively associated with the therapist engaging them in a more collaborative manner and negatively associated with a greater focus from the therapist on shared experiences and pushing them to talk about anxiety-related material (e.g., continuing to ask about anxiety beyond the point in which the child seems interested or comfortable). More initial pushing by therapists focused on making the youth talk about anxiety-related material (outside the youth's comfort level) continued to be associated with lower alliance scores later in treatment (Creed & Kendall, 2005). In a third study, Russell et al. (2008) examined therapists' alliance-building behaviors during treatment of depressed suicidal youths (n = 54). The authors found that the therapists' behaviors had a four-factor structure: (1) experiential socialization (i.e., shifting between focusing on the treatment model

or providing structure and eliciting objective and subjective information), (2) therapist responsiveness (e.g., support, humor, and praise), (3) therapist lapse (e.g., criticizing and failing to acknowledge emotions), and (4) remoralization (e.g., positive expectations for change and exploring motivation). The results suggested that an important aspect of alliance-building is for therapists to increase their responsiveness and focus on remoralization after socializing youths into the treatment. In a fourth study, Karver et al. (2008) examined therapists' alliance-building behaviors towards depressed youths who had attempted suicide and were receiving either CBT (n = 11) or nondirective supportive therapy (NST; n = 12). Three domains of therapists' alliance-building strategies were identified: (1) treatment socialization (i.e., presenting the treatment model, setting treatment goals, and emphasizing collaboration), (2) rapport-building (i.e., attending to the youth's experiences and providing support), and (3) therapist lapse (i.e., distorting or misunderstanding, failing to acknowledge emotion, criticizing, eliciting too much information about an event or situation, and recalling too much about prior information by the client). More rapport-building during the first two treatment sessions predicted significantly higher alliance scores for youths receiving CBT but not for youths receiving NST, despite similar levels of this therapist strategy across the treatment conditions. A greater use of the treatment socialization strategy was not significantly associated with the alliance in any of the treatment conditions; however, this strategy was used more often by therapists when conducting CBT. The last strategy, therapist lapses, predicted poorer alliance across CBT and NST. In sum, the aforementioned studies suggest that therapists' alliance-building behaviors cluster into different strategies. Therapists' rapport-building behaviors seem to strengthen the alliance, while the relationship between therapists' treatment socialization behaviors and the alliance is less evident. With this in mind, the research constituting the present thesis is the first time in which covariations in therapists' alliance-building behaviors when conducting TF-CBT and the relationships between alliance-building behaviors and outcomes are examined (Paper II).

1.6.2 Will Addressing Trauma Early in Treatment Interfere with Alliance-building?

Studies suggest that many therapists worry that an alliance-building process may be impaired if they ask youths to talk about their traumatic experiences (Cohen et al., 2006; Lawson, 2009), and some practitioners may argue for a substantial period of alliance-building prior to introducing trauma-related material (Everly & Lating, 2004). Many therapists fear that exposure to trauma memories may impede the treatment processes with traumatized

youths (e.g., Becker et al., 2004; Feeny et al., 2003). Creed and Kendall (2005) found that pushing a child to talk about anxiety-related content beyond the point in which they seemed interested or comfortable predicted a significantly poorer alliance. However, even if addressing trauma may evoke feelings of shame, hurt, and other negative emotional states, a reassuring finding is that the alliance seems to remain stable or increase over the course of TF-CBT according ratings by youths, therapists, and parents (Zorzella et al., 2017). Capaldi et al. (2016) examined the alliances of traumatized girls (n = 61) in two different treatment conditions. The girls who received prolonged exposure therapy for adolescents showed greater increases in their alliance scores and larger PTSS reductions at post-treatment compared to girls who received child-centered therapy. The authors emphasized that this was a surprising finding because focusing on the alliance is a central part of child-centered therapy; however, the authors also suggested that the trauma-specific components of prolonged exposure therapy for adolescents (e.g., trauma interviewing and treatment rationales) may have unintentionally contributed to alliance building by normalizing symptoms and eliciting a strong buy-in to treatment tasks and goals. There seems to be a gap between clinicians worrying about the negative effects of attending to trauma-related aspects in the early alliance-building process on one hand (Becker et al., 2004; Everly & Lating, 2004; Feeny et al., 2003) and results from empirical studies, which suggest that the alliance remains strong across trauma-specific treatment, on the other hand (Capaldi et al., 2016; Zorzella et al,. 2017). Whether early focus on trauma exposure and challenging traumatic memories may undermine the alliance-building process has not been empirically established. The present thesis aims to evaluate the relationship between an early focus on trauma aspects and youths' later experience of the alliance (Paper II).

1.6.3 What are the Relationships Between Youths' Initial Behaviors and the Alliance?

Research suggests that youths' initial behaviors may serve as useful markers for further treatment processes. Based on research on the adult field, hostility is found to be a predictor of later difficulties related to the client-therapist alliance (Horvath & Luborsky, 1993). Yasinski et al. (2018) found that therapeutic relationship difficulties as expressed by children in TF-CBT (e.g., arguments between the therapist and child, statements of mistrust by the child, and refusal of the child to engage in the therapeutic activities) were associated with markers of child disengagement (more avoidance and less hope). Results from Jungbluth and Shirk (2009) suggest that depressed youths who appear resistant when entering treatment

show lower levels of involvement later in treatment. However, clients' readiness for change is often a neglected aspect of current alliance research (Marker et al., 2013). The present thesis aims to examine whether traumatized youths' behaviors during their initial interactions with a therapist may serve as a useful marker for potential alliance difficulties (Paper II).

Another question relates to the relationship between initial youth behaviors and subsequent therapist alliance-building behaviors (Fjermestad et al., 2016a; see Figure 1). A study by Jungbluth and Shirk (2009) found that depressed youths who initially appeared resistant are met by more exploration of motivation and praise from the therapist. Chu and Kendall (2009) found that therapists showed more responsiveness and flexibility towards anxious youths who demonstrated greater involvement early in therapy compared to those who demonstrated less involvement. One explanation for this finding might be that youths who appeared involved affected therapists in a positive fashion, which may have led therapists to become more creative. There is currently a gap in knowledge about the associations between traumatized youths' initial behaviors in trauma-specific treatment and therapists' subsequent behaviors. The present thesis aims to investigate these associations (Paper II). Another aim of this thesis is to contribute to knowledge about whether youths' initial behaviors may serve as useful markers for how therapists may individually tailor their alliance-building behaviors (Paper II).

1.6.4 How to Monitor the Alliance?

Few studies have assessed the youth-therapist alliance using several rater perspectives within the same study (Gergov et al., 2021). Assessing multiple perspectives of the alliance may be the most optimal option (Elvins & Green, 2008). This may help avoid reporting bias and demand characteristics and can help control for errors that occur when the rater of the alliance and outcome is the same (Kazdin & Durbin, 2012). However, in clinicians' everyday work, it may not be feasible to administer several alliance assessments, and observer-rated alliance ratings are particularly resource demanding. It is arguably useful for therapists to know whether they can lean on their subjective evaluation of the youth-therapist alliance or if they should include other sources when evaluating youths' alliance.

Many studies have indicated that a stronger self-rated alliance is linked with better treatment outcomes (e.g., Cirasola et al., 2021; Gergov et al., 2021; Hawley & Weisz, 2005; Kang et al., 2020; Murphy & Hutton, 2018; Ormhaug et al., 2014; Zorzella, et al., 2015, 2017), although this finding is not consistent (e.g., Fjermestad et al., 2016b; Kaufman et al.,

2005; Kendall, 1994; Marker et al., 2013). Results from a meta-study by Murphy and Hutton (2018) suggested that the alliance-outcome link is stronger when examined from a youth perspective (r = .29) compared to the results from meta-studies that include multiple perspectives of youths' alliances and other alliances than youths' alliances (r = .14–.22; McLeod, 2011; Karver et al., 2018; Shirk & Karver; 2003; Shirk et al., 2011). Research suggests that although youths and therapists are mutually involved in the therapeutic relationship, their perspectives of the alliance are not interchangeable (Creed & Kendall, 2005). Therapists' alliance ratings seem to center on the bond and task agreement dimensions of the alliance, while youths seem to view the alliance as a one-dimensional affective construct (Ormhaug et al., 2015). Others suggest that adolescents may be even *more* concerned than adults about "agreement on the goals and tasks of therapy because of the importance of developmental issues such as dependence, independence, and self-determination for teenagers" (DiGiuseppe et al., 1996, p. 87). Thus, there might be conceptual differences between what is emphasized when evaluating the alliance. One might assume that youths' thoughts and feelings related to the alliance may be difficult to evaluate on a surface level without directly asking youths about their inner state. However, some have argued that developmental differences in self-monitoring, perspective-taking, and meta-cognition could impact children's ability to report accurately on therapy processes (Russell & Shirk, 1998). Young patients may lack the social cognitive skills to accurately evaluate the therapeutic relationship, or they could be more positively biased when evaluating the alliance than adults (Shirk & Karver, 2003). Thus, whether or not the most useful alternative for therapists is to attend to youths' own alliance perspectives when evaluating the alliance and treatment progress or if other sources should be used, is not clear cut

According to the meta-study by Shirk and Karver (2003), therapist evaluations of the alliance are a better outcome predictor than youth evaluations. However, studies suggest that youth-rated alliances, not therapist-rated alliances, predict outcomes within clinical samples of depressed youths in CBT (Shirk et al., 2008) and youths with mixed psychopathology receiving different treatment interventions (Gergov et al., 2021). In line with the results from these studies, research conducted by the Norwegian TF-CBT study suggests that youths' alliance ratings, not therapists' alliance ratings, predict outcomes across TF-CBT and TAU for traumatized youths (Ormhaug et al., 2015). Given that the alliance-outcome relationship may depend on treatment conditions, the present thesis aims to examine whether youths' and

therapists' evaluations of the alliance correspond, and to evaluate whether therapists' alliance ratings predict outcomes of TF-CBT (Paper I).

One source that may be useful for therapists when evaluating the youth-therapist alliance is to ask for parents' opinions about their child's alliance. Parents' may possess unique knowledge about their child, and they are able to observe their child's interactions with the therapist in conjoint sessions. Parents may therefore be helpful in evaluating youth-therapist alliances; however, this is not empirically studied within a sample of traumatized youths. The majority of youth alliance studies have focused on parents' evaluations of their *own* alliance with the therapist. In one of the very few studies that have examined parents' perspectives of their *child's* alliance on therapy outcomes, Marker et al., (2013) found within a sample of anxious youths in family-based treatment that mothers' and therapists' evaluations of the youth-therapist alliance predicted therapy outcomes, while youths' and fathers' perspectives of the alliance were not related to outcomes. Marker et al. (2013) argued that parents' understanding of their child's alliance may be important for optimizing treatment retention and for fostering engagement in treatment-relevant tasks in sessions and at home. The research constituting the present thesis it is the first time that parents' evaluations of their child's alliance is evaluated as an outcome predictor of TF-CBT (Paper I).

Observers' ratings of the alliance are suggested to be the gold standard for assessing alliances within youth therapies (McLeod & Weisz, 2005; Shirk & Karver, 2003), and they are suggested to be a more equitable methodological approach than reports from those subjectively involved in the treatment (Albaum et al., 2020). Observational methods are not subject to demand characteristics and youths' varying levels of ability to observe and report on their feelings (Shirk & Karver, 2003; Weisz, 2004). Studies on whether observer-rated alliances examined at one point in time can help to predict therapy outcomes show mixed results (Boyer et al., 2018; Labouliere et al., 2017; Liber et al., 2010; McLeod & Weisz, 2005). A meta-study by McLeod (2011) suggested that observer-rated alliances evidenced a lower alliance-outcome association than youth-, therapist-, and parent-rated alliances. In the literature review for the research presented in the present thesis, no studies including observers' ratings of traumatized youths' alliances were found. This thesis aims to evaluate whether the observer alliance perspective could be useful to include in TF-CBT (Paper I).

As suggested above, trauma-related aspects may interfere with the alliance-building process with traumatized youths. One may also assume that trauma symptoms such as

avoidance and trauma-related cognitions can make it difficult to understand and tune into youths' experiences of the alliance. This can be a challenge as feeling validated and understood regarding their treatment-related experiences may be an important contribution to the healing process for traumatized youths. Thus, an aim of this thesis is to examine whether a lack of an attunement into the youth-therapist alliance by parents and therapists in the tripartite relationship in TF-CBT is associated with youths' treatment responses (Paper I). This thesis also aims to evaluate whether the correspondence between the parent and therapist evaluations of the youth-therapist alliance matter for youths' treatment responses (Paper I).

To our knowledge, this is the first time that the correspondence between four perspectives of traumatized youths' alliances (rated by youth, therapist, parent and observer) and their predictive value on PTS outcomes are evaluated within the same study (paper I).

1.6.5 What is the Relationship between Youths' Involvement Behaviors and Outcome?

A meta-study by Karver et al. (2006) found that child participation and willingness to participate in treatment (including client effort, collaboration, cooperation, engagement, and involvement) were moderate outcome predictors across the 13 included studies. However, existing studies have used various measures to capture youth involvement (Karver et al., 2006). Typically, the relationship between youths' in-session involvement and therapy outcomes has included independent observers' overall involvement-ratings merged according to many behavioral facets. Among these studies, Chu and Kendall (2004) found that overall level of early involvement among anxious children in CBT did not predict therapy outcomes but that a higher level of involvement later in treatment predicted better outcomes. Thus, the involvement of youths in their treatment may be a central part of the healing process. It may, however, be more important during some parts of treatment than others. Notably, Chu and Kendall (2004) examined level of involvement just prior to in vivo exposure work; thus, youths' involvement during exposure work was not examined. Kirsch et al. (2018) found that traumatized youths' degree of collaboration during TF-CBT as rated by therapists was not associated with therapy outcomes. Karver et al. (2008) examined the relationship between involvement and outcome for depressed youths receiving CBT or nondirective supportive therapy; involvement was only positively related to outcomes for youths receiving CBT. Thus, involvement may be more important in some treatments than in others.

An alternative to studying youths' overall involvement is to examine the relationship between different types of involvement behaviors and treatment outcomes. One way to

categorize involvement behaviors, as suggested by Fjermestad et al. (2016a), is as behavioral (e.g., verbalization), affective (e.g., level of anxiety during exposure), or cognitive (e.g., challenging cognitive distortions). A second alternative is to categorize youths' in-session behaviors as positive or negative (Chiappini et al., 2020; Chu & Kendall, 2004). Examples of positive involvement behaviors are active in-session participation, enthusiasm, collaboration, cooperation, demonstrated understanding, and comprehension of therapeutic material (Chiappini et al., 2020; Chu & Kendall, 1999; Creed & Kendall, 2005; Fjermestad et al., 2016a; Jackson-Gilfort et al., 2001; Karver et al., 2005). Examples of negative involvement behaviors are avoidance, inhibition and withdrawal in therapeutic tasks, expression of hostility, direct resistance, and noncompliance (Chiappini et al., 2020; Chu & Kendall, 1999; Colson et al., 1991; Hedtke et al., 2009; Karver et al., 2005).

In support of separating rather than treating involvement as a unified construct, Morris et al. (2016) argued that youths' involvement behaviors could be treated as dimensional subscales. They suggested that a client in therapy for PTSD can willingly revisit the location of the trauma (high behavioral involvement) and have no difficulty actively exploring cognitive distortions related to vulnerability and potential threat (high cognitive involvement) but be distracted during an exposure exercise to avoid reliving the painful feelings (low emotional involvement). Most youth studies have focused on either positive or negative involvement behaviors, which has limited the ability of these studies to determine which types of behaviors have the greatest impact on therapeutic outcomes (Chiappini et al., 2020). Chiappini et al. (2020) assessed negative and positive involvement among anxious youths in CBT. Results showed that more positive behaviors during psychoeducation and skill-building (e.g., participation, "upbeatness," and understanding) were associated with greater improvements, while more negative behaviors (e.g., avoidance, reassurance seeking, and low mood) during this work were related to less treatment improvements. However, during the exposure task planning session, only positive behaviors were significantly associated with greater treatment gains. To provide therapists with specific knowledge about what types of behaviors are useful to attend to for evaluating treatment process and treatment progress, the present thesis focuses on youths' involvement behaviors that are expected to be positively or negatively linked with treatment outcomes (Paper III).

Altogether, the involvement-outcome relationship may depend on conceptualization, population, treatment type, and timing of the assessment (Chu & Kendall, 2009; Karver et al.,

2008). Given that facilitating motivation and engagement in trauma narration are regarded as central parts of different trauma treatments (e.g., prolonged exposure therapy for adolescents and TF-CBT), this thesis aims to examine whether positive involvement behaviors during the initial narrative work are associated with greater treatment responses and whether negative involvement behaviors predict poorer outcomes(Paper III).

1.6.6 What is the Relationship between Youths' Alliance and Involvement Behaviors?

Few studies have evaluated the relationship between in-session involvement and alliance within youth treatments (Karver et al., 2008; McLeod et al., 2013; Shirk & Saiz, 1992). Although the alliance and involvement are intertwined concepts, they can be divided by methodological and conceptual differences. Whereas the alliance is interactive and incorporates aspects of the relational bond and task agreement between client and therapist, involvement reflects an aspect of the client, focusing on behavioral and emotional participation or engagement (Hill, 2005). Furthermore, client involvement, as a therapeutic construct, aims to concretize how clients participate and contribute to the therapeutic process, while the construct alliance aims to explain or understand the affective relationship between the therapist and the client (Morris et al., 2016). The adult literature suggests a reciprocal and evolving relationship between alliance and involvement as the treatment progresses through distinct stages (Hill, 2005). It has been suggested that a strong alliance may directly influence treatment outcome (Norcross & Lambert, 2011). Alternatively, the alliance may provide more positive outcomes through increased client involvement in therapeutic activities (e.g., Hill, 2005; Kendall & Ollendick, 2004; McLeod &Weisz, 2005; Russell & Shirk, 1998). More specifically, a positive client and therapist relationship may promote involvement in the therapeutic work (Russell & Shirk, 1998). Thus, the therapeutic relationship may not be a sufficient facilitator of change on its own; rather, it may make clients more receptive to therapist techniques and increase participation in emotionally demanding exposure tasks and the construction of a trauma narrative (Kendall & Ollendick, 2004; Shirk et al., 2010).

Assessing both the alliance and involvement at the same time may help reveal their relative contribution to the therapeutic outcome (Karver et al., 2008). Thus far, the therapeutic alliance seems to predict engagement in therapeutic tasks (Chiu et al., 2009; McLeod et al., 2014) and treatment success (Kazdin & Durbin, 2012; Liber et al., 2010; McLeod & Weisz, 2005; Shirk & Karver, 2003; Shirk et al., 2008). Results from a study by Karver et al. (2008) showed that depressed youths' alliance with the therapist in session three during CBT or

nondirective supportive therapy was positively associated with involvement in the subsequent session. However, the relationship between involvement and alliance may be more complex. McLeod et al. (2014) examined the reciprocal relationship between the alliance and client involvement early and late in treatment (session 2 and 8, respectively) among anxious children in CBT. Session 2 involvement did not predict the session 8 alliance, and the session 2 alliance did not predict session 8 involvement. However, positive changes in involvement from session 2 to 8 predicted a stronger alliance, and positive changes in alliance from session 2 to 8 predicted greater involvement. Thus, the link between alliance and involvement is not conclusive (Chiu et al., 2010; Liber et al., 2010). Furthermore, few studies have examined the alliance and involvement in trauma-specific treatment. One suggestion is that the alliance may promote involvement in trauma-specific components (Ormhaug et al., 2014). Perhaps a strong alliance helps youths feel safer and more confident during the often challenging trauma work, reflected by more positive and less negative in-session involvement behaviors. In summary, the relations between therapeutic interventions, the client-therapist alliance, and client involvement in youth treatment has not been the focus of much empirical attention (Fjermestad et al., 2016a). As such, the present thesis aims to investigate the relationships between traumatized youths' alliances and involvement behaviors during trauma narration, and to evaluate whether or not the therapeutic alliance and involvement behaviors are interchangeable for outcomes (Paper III).

2 Objectives

The overall purpose of this thesis is to improve knowledge on how to optimize traumatized youths' treatment responses in TF-CBT and help build a bridge for transitioning the results of the conducted research into useful information in therapists' everyday clinical work. More specifically; the general objective of this thesis is to understand more about the therapeutic alliance (Papers I-III), youths' in-session involvement behaviors (Papers II-III), and therapists' alliance-building-behaviors (Paper II). Three empirical papers were conducted with the following aims:

- Paper I: The first aim of this paper was to establish which perspective of youths' therapeutic alliance (by youth, parent, therapist, or observer) best predicts youths' PTS treatment outcomes in TF-CBT. The second aim was to evaluate the correspondence

between four rater perspectives (by youth, parent, therapist, and observer) of youths' therapeutic alliance. The third aim was to evaluate whether discrepancies in youths', parents' and therapists' ratings of the alliance predicted therapeutic PTS outcomes.

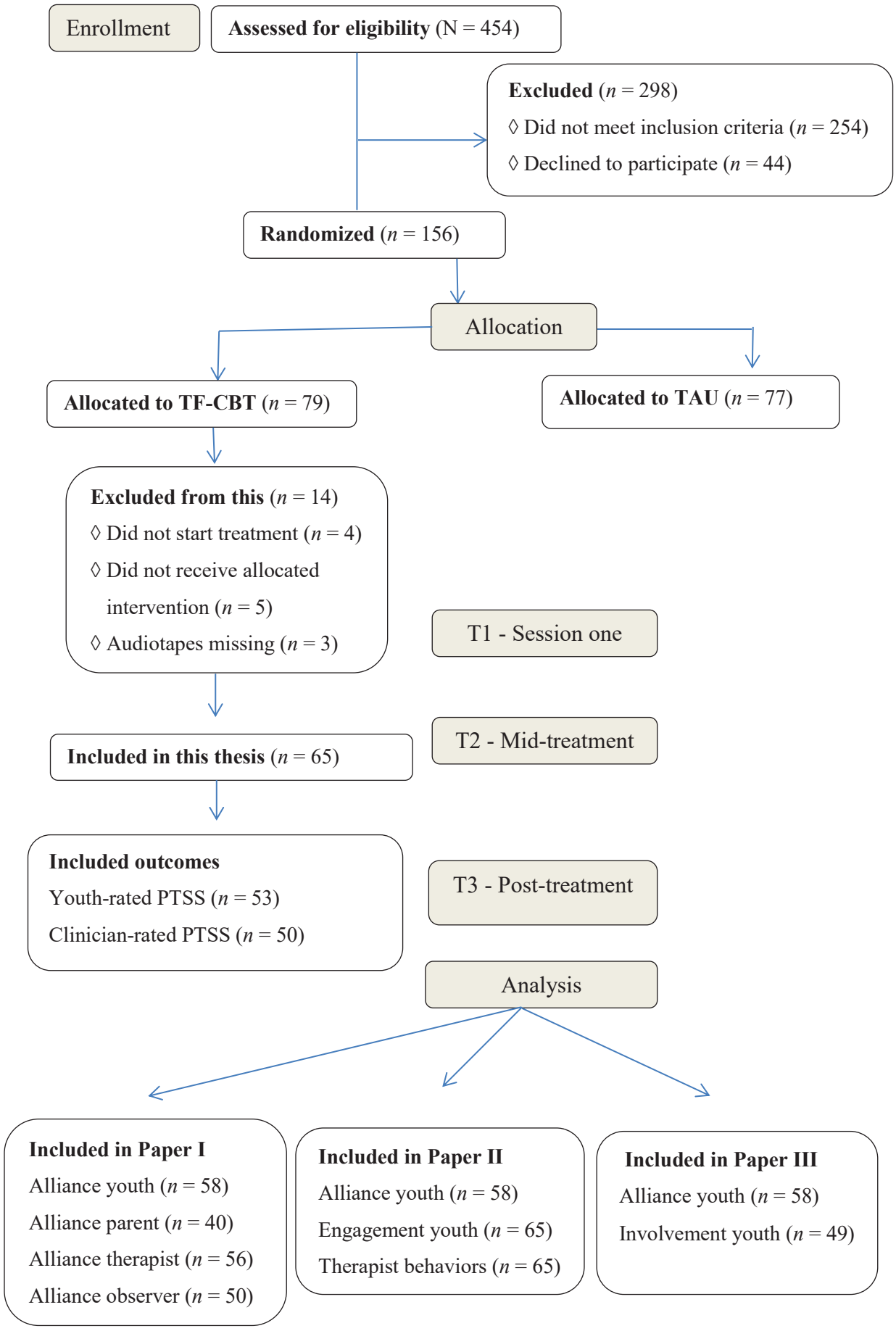
- Paper II: The first aim of this paper was to examine the predictive associations between therapists' alliance-building behaviors and youths' therapeutic alliance, controlling for youths' initial engagement. The second aim was to evaluate the relationship between therapists' trauma focus (gradual exposure) and youths' therapeutic alliance, controlling for youths' initial engagement. The third aim was to examine whether the type of initial youth engagement moderates the relationships between therapist behaviors (alliance-building behaviors and trauma focus) and youths' therapeutic alliance.
- Paper III: The first aim of this paper was to examine whether youths' positive and negative in-session involvement behaviors during the initial trauma narration predict their PST treatment response in TF-CBT. The second aim was to investigate the relationships between these involvement behaviors and how youths perceive the therapeutic alliance.

3 Materials and Methods

3.1 The Norwegian TF-CBT Study

This thesis builds on data derived from a larger RCT comparing the treatment effects of TF-CBT versus TAU for traumatized youths receiving mental health care through an examination of eight ordinary CAMHS in in Norway. Data were collected between April 2008 and February 2011. Referrals to the clinics were in accordance with standard procedures (i.e., their general practitioner or child protective service). The RCT study was approved by the Regional Committee for Medical and Health Research Ethics. All youths and respective legal guardians who were asked to participate in the study received information about the study in both written and verbal form. All youths and parents were given an informational letter that was approved by the Regional Committee for Medical and Health Research Ethics. This letter informed the participants about the study procedure, confidentiality, and the opportunity to withdraw from the study without any consequences for their treatment. On the basis of this information, both youths and parents provided written, active consent to participate in the study.

Figure 2. Flowchart Participants



To be eligible for the RCT study, youths were required to be between the ages of 10–18, to have experienced at least one traumatic event during the last four weeks or more prior to intake (assessed by The Traumatic Events Screening Inventory for Children; Ribbe, 1996), and to be suffering from significant PTS (i.e., a score of 15 or higher on the Child PTSD Symptom Scale [CPSS]; Foa et al., 2001). The exclusion criteria were acute psychosis, active suicidal behavior, intellectual disability, or the need for an interpreter due to nonproficiency in the Norwegian language. From the total of 454 youths screened for eligibility, 298 participants were excluded due to either not meeting the inclusion criteria (n = 254) or declining participation (n = 44). The remaining sample of 156 youths were randomly assigned to receive TF-CBT (n = 79) or TAU (n = 77; see Figure 2).

All sessions were audiotaped. Data were collected at pre-treatment (T1), mid-treatment (T2 = around session six), and post-treatment (T3 = session 15). Participants were assessed for a range of mental health problems at T1, T2, and T3. Additionally, youths, parents, and therapists rated the therapeutic alliance at T1 and T2. These assessments were conducted by two trained psychologists who were not employed at the clinics and who were blinded to the treatment conditions.

3.1.1 The TF-CBT Treatment Condition

To ensure adherence to the TF-CBT treatment manual, all therapy sessions were audio-recorded and coded for fidelity by at least one trained TF-CBT therapist using the treatment adherence checklist for TF-CBT (Deblinger et al., 2008). TF-CBT treatment is typically delivered over 12–15 weekly sessions. All participants included in this thesis received TF-CBT treatment in accordance with the fidelity manual (see Figure 2), and they received, on average, 16.3 (SD = 8.8) sessions before the case was discharged from the clinic.

3.1.1.1 Coding Procedure for the TF-CBT Treatment Condition. After data were collected, three coding teams coded process factors from the audiotaped treatment sessions for youths who received TF-CBT (n = 65). More specifically, coding team A coded youths' therapeutic alliances around T2 (M session number = 7.22, SD = 1.34, range 5–12). Coding team B coded youths' initial behaviors within the first (n = 26), second (n = 38), or third session (n = 1). Coding team C coded therapists' alliance-building behaviors from the second (n = 60), third (n = 3) or first session (n = 2). Coding team B also coded youths' involvement behaviors during the initial trauma work (session range = 5–12). Interrater agreement on the continuous variable was calculated with the intra-class correlation coefficient (ICC; Shrout &

Fleiss, 1979). According to Cicchetti (1994), criteria for classifying the utility of the ICC magnitudes are: < .40 = poor; .40–.59 = fair; .60–.74 = good; and .75–1.00 = excellent. Interrater reliability on the dichotomous variables was calculated by Cohen's kappa (κ), and rater agreement was interpreted as follows: ≤ 0 = no agreement, 0.01–0.20 = none to slight, 0.21–0.40 = fair, 0.41– 0.60 = moderate, 0.61–0.80 = substantial and 0.81–1.00 = almost perfect agreement (Cohen, 1960).

3.2 Sample

3.2.1 Youth Sample

Participants were 65 youths (*M* age =15.1, *SD* = 2.1, range 10–18 years, 76.9% girls). At intake, the majority of the sample (76.9%) fulfilled the diagnostic criteria for PTSD as assessed with the Clinician Administered PTSD Scale for Children and Adolescents (CAPS-CA; Nader et al., 2004). In addition, 69.2% scored above the clinical cutoff for depression (Mood and Feelings Questionnaire; Angold et al., 1995), 52.4% scored above the cutoff for anxiety (the Screen for Child Anxiety Related Disorders; Birmaher et al., 1999), and 47.7% scored above the cutoff for other mental health problems (Strengths and Difficulties Questionnaire; Goodman, 2001). The participants' backgrounds were classified into those with at least one Norwegian-born parent (*n* = 53) or those with non-Norwegian-born parents (*n* = 12). Most participants lived primarily with one parent (55.4%), 32.3% lived with or spent equal time with both parents, and 10.8% had other living arrangements (1.5% did not report their living situation).

3.2.2 Therapist Sample

The therapists (*n* = 24, 91.7% female) consisted of 19 psychologists, 2 psychiatrists, 2 clinical educational therapists, and 1 clinical social worker. Years of clinical experience ranged from 3 to 28 (*M* = 9.6, *SD* = 5.7), and on average, therapists treated 2.7 youths (*SD* = 1.4, range 1–6). The theoretical orientation of the therapists were CBT (*n* = 16), psychodynamic (*n* = 5), or systemic or family therapy (*n* = 2; one therapist did not report a theoretical orientation).

3.2.3 Parent Sample

Demographic data for parents were missing in four cases. The majority of parents were a biological parent (89.2%), while 4.6% were foster parents. Most parents came from the study country (*n* = 50, 76.9%). Approximately half (50.8%) had completed high school or vocational school, 36.8% had attended college or university, and 6.2% had completed junior

high school. The majority worked full or part time (69.2%), 18.5% were welfare recipients, and 6.2% were job seekers or students. Parents attended, on average, 7.9 sessions (*SD* = 4.9), and a majority attended ≥ 3 sessions (81.5%). For the majority (41.5%), the mean income level was > $83,300 USD, and 37% had a mean income level of ≤ $83,300 USD (21.6% did not report income; the mean income level in Norway in 2012 = $79,800 USD; https://www.ssb.no/).

3.3 Measures

3.3.1 Trauma Exposure

Building on the items described in the Traumatic Events Screening Inventory for Children (Ribbe, 1996), the research group that conducted the Norwegian TF-CBT study developed a checklist for trauma exposure, which included the following experiences: 1) severe accident, 2) natural disaster, 3) sudden death or severe illness of a close person, 4) extremely painful or frightening medical procedures, 5) violence or threats of violence outside the family context, 6) robbery or assault, 7) kidnapping, 8) witnessing violence outside the family, 9) witnessing violence within the family, 10) physical abuse within the family, 11) sexual abuse outside the family, 12) sexual abuse within the family, and 13) other frightening or overwhelming experiences. The checklist was administered as an interview by clinically trained therapists, and a traumatic event was rated as *present* if the youth reported that they had felt scared, terrified, or helpless during or immediately after the event.

The sample included in the present thesis reported on average exposure to 3.6 different types of trauma (*SD* = 1.6, range 1–8). When asked to identify the worst traumatic experience, the majority reported exposure to family violence (38.4%), followed by violence outside the family (16.9%), sudden death of a person close to the participant or involvement in a severe accident (18.5%), inter-familial sexual abuse (12.3%), and sexual abuse outside the family (13.8%).

3.3.2 Youth-rated PTSS

Youths' own ratings of PTSS were assessed using the self-completion CPSS questionnaire (Foa et al., 2001). This questionnaire covers 17 symptoms of PTSD defined in the Diagnostic and Statistical Manual of Mental Disorders-IV (American Psychiatric Association, 1994) and includes the following three factors: re-experiencing, avoidance, and hyperarousal. The measure is appropriate for children aged 8 to 18 years and has demonstrated excellent internal consistency, test-retest reliability, and convergent validity

(Foa et al., 2001; Gillihan et al., 2013). Youths rated how frequently they had experienced each CPSS item in the last two weeks on a 4-point scale (0 = *never* to 3 = *almost every day*), yielding a total score ranging from 0 to 51. The scale showed good internal consistency (total scale: α = .91, re-experience: α = .84, avoidance: α = .80, hyperarousal: α = .75) within the larger TF-CBT study (n =156; Jensen et al., 2014; see Figure 2). The scale was translated and back translated by the Norwegian TF-CBT project group, and the developers of the scale approved the Norwegian version.

3.3.3 Clinician-rated PTSS

PTSD diagnosis was assessed by independent clinicians using the CAPS-CA (Nader et al., 2004). The CAPS-CA is a structured interview that assesses the frequency and intensity of the 17 defined symptoms of PTSD (American Psychiatric Association, 1994). Items are scored on 5-point frequency scales (e.g., from 0 = *none of the time* to 4 = *most of the time*) and 5-point intensity rating scales (e.g., from 0 = *not a problem* to 4 = *a big problem, I have to stop what I am doing*) that assess the past month. Items are scored based on both the youths' answers and clinical judgment during the interview. CAPS-CA has shown good internal consistency (alpha ([a] = .75–.82), excellent interrater reliability (ICC =.97), and adequate convergent validity (Leigh et al., 2016). In the larger TF-CBT study, the scale showed satisfactory internal consistency on the total scale (α = .90; see Jensen et al., 2014). The interview was translated and back translated by the Norwegian TF-CBT project group, and the first author of the CAPS-CA approved the translation.

3.3.4 Anxiety Symptoms

The Screen for Child and Anxiety-Related Disorders (Birmaher et al., 1999), a self-report questionnaire developed for youths between eight and 18 years of age, was used to measure anxiety symptoms. The instrument consists of 41 items that cover five specific anxiety disorders: panic disorder or significant somatic symptoms, generalized anxiety disorder (GAD), separation anxiety disorder, social anxiety disorder, and school avoidance. Youths rated the problem frequency during the previous three months using a 3-point scale (0 = *not true/hardly ever true*, 1 = *somewhat true/sometimes true*, and 2 = *very true/often true*). A total score of $\geq$ 25 was considered to be within the clinical range for anxiety. The instrument showed satisfactory internal consistency on the total scale (a = .93; Jensen et al., 2014). The scale was translated and back translated by the Norwegian TF-CBT research group, and the developers approved the Norwegian version.

3.3.5 Depressive Symptoms

The Mood and Feelings Questionnaire (Angold et al., 1995), a self-report questionnaire developed for youths between 8 and 18 years of age, was used to assess depressive symptoms. The questionnaire consists of 34 items measuring both the full range of *DSM–IV* diagnostic criteria for depressive disorders and additional items reflecting common affective, cognitive, and somatic features of childhood depression. Youths rated the problem frequency of each item during the previous two weeks using on a 3-point scale (0 = *not true*, 1 = *sometimes*, and 2 = *true*). A total score of ≥ 27 was considered to be within clinical range for depression. The instrument showed good internal consistency (*a* = .91; Jensen et al., 2014). The scale has been translated and back-translated, and the Norwegian version was approved by the originator (Sund et al., 2001).

3.3.6 General Mental Health

The Strengths and Difficulties Questionnaire (Goodman, 2001) was used to assess general mental health problems. This is a self-report questionnaire that contains 25 items covering general mental health problems in five areas of clinical interest: hyperactivity or inattention (e.g., ‘‘restless, overactive’’), emotional symptoms (e.g., ‘‘has many worries’’), conduct problems (e.g., ‘‘often has temper tantrums’’), peer relation problems (e.g., ‘‘picked on or bullied by other children’’), and prosocial behavior (e.g., “kind to younger children’’). Youths rated each item according to their experiences during the previous six months on a 3-point scale for positively worded items (0 = *not true*, 1 = *somewhat true*, and 2 = *certainly true*) and negatively worded items (0 = *certainly true*, 1 = *somewhat true*, and 2 = *not true*). The total score for general difficulties is based on the four problem-oriented subscores, in which a total score ≥ 18 is considered above clinical range. The total difficulty score showed a satisfactory internal consistency (*a* = .73; Jensen et al., 2014). The authorized translated version of the Strengths and Difficulties Questionnaire was used (http://www.sdqinfo.com).

3.3.7 Youth-, Parent-, and Therapist-rated Alliance

The Therapeutic Alliance Scale for Children-revised (TASC-r; Shirk, 2003; Shirk & Saiz, 1992) was used to measure the perceived quality of the youth-therapist alliance as rated by youths, therapists, and parents. The TASC-r measure consists of 12 items, of which half assess the therapeutic bond (e.g., child version = “I like spending time with my therapist,” parent version = “My child likes spending time with the therapist,” therapist version = “The child likes spending time with me”). The other half of the items assess task collaboration (e.g.,

child version = “I work with my therapist on solving my problems,” parent version = “My child works with the therapist on solving their problems,” therapist version = “The child works with me on solving their problems”). Each item is rated on a 4-point scale (1 = not at all to 4 = very much). The scale was translated and back translated according to recommended procedures, and the scale’s first author approved the final Norwegian version. Reliability analyses with the current sample showed that the scale had good internal consistency on scores from youths (n = 58, α = .92), therapists (n = 56, α = .92), and parents (n = 40, α = .93). Youths and parents were informed that their ratings would be confidential and that the therapist would not see their responses.

3.3.8 Observer-rated Alliance

The Therapy Process Observational Coding System for Child Psychotherapy-Alliance Scale (TPOCS-A; McLeod, 2001; McLeod & Weisz, 2005) was used to assess the alliance from an observer point of view. This nine-item observer-rated instrument assesses the affective elements of the alliance and client participation. The TPOCS-A involves independent evaluators’ ratings of nine items on a 6-point scale (0 = not at all to 5 = a great deal), in which six items assess bond elements of the client-therapist relationship (e.g., “to what extent does the client demonstrate positive affect toward the therapist”) and three task items assess client participation in therapeutic activities (e.g., “to what extent does the client not comply with tasks”). The TPOCS-A scores have demonstrated fair to excellent ICC ranging from .52 to .82 (Fjermestad et al., 2012; McLeod et al., 2021).

3.3.8.1 Coding Procedure. Two graduate students in psychology (coding team A) coded the youth-therapist alliances from one session around mid-treatment (session number M = 7.22, SD = 1.34, range 5–12) from audiotapes using the TPOCS-A coding manual. One of the scale’s authors (Professor McLeod) trained the coders, and the coders practiced coding on TF-CBT patients from another study. The coders then used the TPOCS-A to code the alliances of youths in this thesis. The youths were randomly assigned to the coders, and the coders were blinded to the treatment outcomes. A random selection of nine patients (18%) was double-coded, and the mean score from double-coded youths was used to prevent coders from drifting. The coders also held weekly meetings. A two-way random, single measure ICC was calculated to assess the reliability of alliance scores between the raters (McGraw & Wong, 1996; Shrout & Fleiss, 1979). Interrater agreement on the included cases was ICC = .90, which is excellent (Cicchetti, 1994).

3.3.9 Youths' Initial Engagement Behaviors

The Behavioral Index of Disengagement Scale (BIDS; Peterson et al., 2011; Peterson & Shirk, 2012) was used to code initial youth in-session disengagement behaviors. The BIDS includes two items: 1) BIDS active (e.g., negative attitude, sarcasm) and 2) BIDS passive (e.g., lack of verbal elaboration, therapist must pull for information). The BIDS has shown good convergent validity with the Vanderbilt Negative Indicators Scale (Strupp et al., 1981), acceptable interrater reliability, and stability across the first two sessions (Peterson et al., 2011; Peterson & Shirk, 2012). BIDS scores for both the active and the passive variables were nonnormally distributed (skewness: 3.42 and 1.54, respectively; kurtosis: 14.21 and 0.97, respectively). These variables were thus converted to dichotomous variables (*absent* = 0 or *present* = 1), in line with Jungbluth and Shirk (2009).

3.3.9.1 Coding Procedure. In Paper II, the BIDS was coded from the first 15 minutes that the therapist and youth spent alone, which occurred during session one (n = 26), two (n = 38), or three (n = 1). Each type of disengagement was coded as absent (= 0) or present (= 1) across five 3-minutes segments; scores from each segment were summed (range 0 to 5). A graduate student in psychology and I (coding team B) independently conducted the BIDS coding, and the coders were blinded to the treatment outcomes. One of the scale's authors (Professor Shirk) trained the coders, and the coders practiced coding on TF-CBT cases from another study. When satisfactory coder agreement was obtained, reliability was examined by double-coding a randomly selected 23% (n = 15) of the included cases. Double-coded cases were chosen from the middle and the end of the coding process to check for drifting, and any cases of coder disagreement were discussed and solved in cooperation with the scale author. Coder agreement according to Cohen (1960) almost perfect for BIDS active (κ = .87) and BIDS passive (κ = .89).

3.3.10 Youths' In-session Involvement Behaviors

The Client Involvement Rating Scale (CIRS) was used to code involvement (Chu & Kendall, 1999, 2004, 2009). CIRS consists of six items. Four items aim to examine assess positive involvement behaviors: (**C1**) does the child initiate discussion or introduce new topics?, (**C2**) does the child demonstrate enthusiasm in therapy-related tasks?, (**C3**) does the child offer information about self (self-disclosure)?, and (**C4**) does the child elaborate on points made by the therapist or demonstrate understanding?. The remaining two items aim to examine negative involvement behaviors: (**C5**) is the child withdrawn or passive (e.g., not

responding to therapist)? and (**C6**) is the child inhibited or avoidant in participation (e.g., not fully participating)?. Each of the six items are rated on a 6-point scale (0 = *Not present* to 5 = *a great deal*), emphasizing both quantity and quality according to the coding manual. McLeod et al. (2014) found that CIRS shows strong interrater reliability (ICC = .91) and internal consistency (*a* = .88).

3.3.10.1 Coding Procedure. The CIRS was coded from five 3-minute segments based on audiotapes of the first 45-minutes of the trauma narration and processing phase, starting at session five (*n* = 6, 12.2%), six (*n* = 7, 14.3%), seven (*n* = 18, 36.7%), eight (*n* = 14, 28.6%), nine (*n* = 2, 4.1%), 10 (*n* = 1, 2%), or 12 (*n* = 1, 2%). To meet the 45-minutes requirement, segments were taken from one (*n* = 12, 25.8%), two (*n* = 37, 74%) or three (*n* = 1, 2%) subsequent sessions. A graduate student in psychology and I conducted the CIRS coding (coding team B). The team carefully read the coding manual and discussed all items in detail with Professor Jensen and Dr. Ormhaug as a reference team. The coders practiced coding on TF-CBT patients from another study. When satisfactory rater agreement was obtained, the coders began coding all available cases included in the current thesis. A selection of 15 cases (30%) was double-coded to examine rater agreement, and each case included five 3-minute segments. To check for coder drifting, the double-coded cases were selected from different stages of the coding process. A two-way random, single measure ICC was calculated to assess reliability between the raters on session involvement scores (McGraw & Wong, 1996; Shrout & Fleiss, 1979). Within this thesis, the interrater reliabilities of the coded CIRS items were excellent (ICCs range = .77 to .95; Cicchetti, 1994).

3.3.11 Therapists' Alliance-building Behaviors

An updated version of the Adolescent Alliance Building Scale-revised (AABS-r; Shirk & Jungbluth, 2014) was used to assess therapists' in-session alliance-building behaviors. The AABS-r consists of eight specific items assessing the degree to which the therapist: (**A1**) attends to the adolescent's experience (e.g., "How did you feel when you met him again?"), (**A2**) presents themselves as an ally (e.g., "Things shouldn't be like this for you, maybe we can work on it"), (**A3**) orients the adolescent to the collaborative nature of treatment (e.g., "We'll be working to building new coping skills together"), (**A4)** presents the treatment model (e.g., "In therapy you'll learn new skills to help you cope"), (**A5**) expresses positive expectations for change (e.g., "Lots of kids have benefited from this treatment"), (**A6**) explores the adolescent's motivation for therapy (e.g., "How would life be different if you

were less scared?"), (**A7**) employs cognitive restructuring (e.g., "So you think you're lazy at school, might it be because you sleep so little at night?"), and (**A8**) praises the adolescent (e.g., "It took a lot courage to bring that up, great work!"). These items were rated according to a two-step coding procedure to improve reliability.

Step 1 rated the *level* of therapist behavior on a 3-point scale (0 = *not present*, 1 = *broad/generic*, and 2 = *specific/personalized*). For example, item A1 (i.e., "Therapist attends to adolescent experience") would be rated as 0 if the behavior was not present, whereas elicitation of basic information (e.g., "What is your favorite subject") would be rated as 1 and eliciting information about significant events or experiences (e.g., "What thoughts did you have when you went to sleep") would be rated as 2. Step 2 rated the *extent* of therapist behavior on a 4-point scale (0 = *not present,* 1 = *passing focus [one of many interventions, virtually no follow-up, very limited therapist elaboration],* 2 = *some sustained focus [marked by some follow-up or more than a single conversational turn, some therapist elaboration],* and 3 = *primary focus*). Next, an extensiveness score (range 0–6) for each specific therapist behavior is computed by multiplying the level (range 0–2) and extent scores (range 0–3), representing both the frequency and the thoroughness of each specific therapist behavior (Karver et al., 2008).

In addition, the AABS-r contains two global items that are each rated on a 4-point scale. (**A9**) is global structure (0 = *minimal structure, adolescent talks the most, direction of the session is set by the adolescent, therapist follows adolescent's discourse*; 1 = *therapist provides some structure but gives adolescent room to talk, adolescent leads at times, adolescent talks somewhat more than therapist*; 2 = *therapist provides clear structure and moderate direction through active questioning or by providing examples*; and 3 = *therapist is highly directive, actively leads session, therapist talks far more than client*). (**A10**) is global support (0 = *therapist is matter-of-fact, takes care of business, exhibits virtually no reflections or expression of understanding;* 1 = *therapist provides low support with a very limited number of reflections and validating statements;* 2 = *therapist provides a moderate level of support, multiple reflections and validating statements are present in the segment;* and 3 = *therapist provides a high level of support, expressions of empathy and concern are highly prominent in the segment, numerous reflections and validating segments are present*).

For the purpose of the present study, an additional item (A11) (i.e., "therapist elicits trauma content"), was added to the AABS-r rubric. The aim of this item was to capture the

degree of therapists' elicitation of information about the traumatic experiences from the youths. This included eliciting general information about the traumatic event(s) (e.g., "How old were you when it happened?"), potential external trauma cues (e.g., "How does the smell of his cologne affect you now?"), and potential internal trauma cues (e.g., "Can you describe your nightmares about the rape?"). This item was coded using the same two-step procedure as the other specific items: first the level (0 = *not present*, 1 = *elicits basic trauma content*, [e.g., when did it happen?], and 2 = *elicits in-depth trauma information*, [e.g., how did you feel?]) and then the extent (0 = *not present* to 3= *primary focus* or *substantial reflections or prompting*). Additionally, an extensiveness score (range 0–6) was computed for this item by multiplying the level (range 0–2) and extent scores (range 0–3). Of note, general psychoeducation about the trauma that did not include elicitation of information from the youth did not receive a score on the A11 item. Additionally, the A11 item did not receive a score when the therapist attended to the youths' non-trauma-related experiences. However, item A1 was always coded simultaneously with item A11.

3.3.11.1 Coding Procedure. The AABS-r was used to assess dyadic interaction between youths and therapists during the initial time they spent alone, and sessions were coded in 5-minute segments with a minimum requirement of six segments. A mean number of 9.5 segments was coded (*SD* = 2.24, range 6–16). Because a parent was typically present for some portion of session one (*n* = 39), most coded segments were from session two (*n* = 60). However, to meet the minimum requirement of six segments, two cases involved dyadic interactions from session one (without parent), and three cases included segments from session three (without parent).

A clinical psychologist and a graduate student in psychology (coding team C) conducted the AABS-r coding. One of the scale's authors (Professor Shirk) trained the coders, and they practiced coding on TF-CBT cases from another study. When satisfactory coder agreement was obtained, reliability was examined by double-coding 22 randomly selected cases (34%), including 201 segments. To check for coder drifting, cases were randomly selected at different stages of the coding process. Cases of coder disagreement were discussed and resolved in cooperation with the aforementioned author of the scale. Prior research with the AABS-r items has shown adequate to excellent interrater reliability (Fjermestad et al., 2021; Karver et al., 2008). Within this thesis, the two items (A2) allying and (A6) exploring motivation were transformed into dichotomous because they showed low frequency and were

nonnormally distributed. The interrater reliability for (A2) allying and (A6) exploring motivation (κ = .53; κ = .56, respectively) were moderate (Cohen, 1960). Based on their low frequency, nonnormally distribution and moderate rater agreement these items were removed from further analyses. The interrater reliabilities of the remaining AABS-r items that were included in the further analyses were good to excellent (ICCs range = .68–.87; Cicchetti, 1994).

3.4 Statistical Analyses

3.4.1 Initial Analyses and Controlling for Therapist Effects (Papers I–III)

In step one of the preliminary analyses (Papers I–III), means, standard deviations, skew, and kurtosis for the independent variables (IVs) in each model were estimated and inspected to examine reliability and transform data if necessary.

For Papers I and III, the following analyses for the preliminary analyses were conducted. Bivariate correlations were used to examine the relationships between the continuous IVs from step one. Bivariate correlations were used to examine the relationships between the continuous IVs in all models with the continuous variables of youth's age (Papers I and III) and therapist's level of experience (Paper I). Potential relationships between continuous IVs from step one and dichotomous variables sex and background (Papers I and III) were examined using paired sample *t*-tests. Finally, due to unequal sample sizes, nonparametric tests were used to evaluate missing data on the IVs. In Paper I, missing data analyses were conducted on the alliance by investigating potential differences between youths with an alliance score on each of the four alliance measures (from TASC-r and TPOCS-A) and those without. Mann-Whitney *U* tests were used on continuous variables (age and pre-treatment symptoms of PTS), and chi-squared tests were used on categorical variables (sex and background). In Paper III, missing data analyses were conducted on the alliance by investigating potential differences between youths with an alliance score (from TASC-r) and those without and between youths with involvement scores (from CIRS) and those without. Mann-Whitney *U* tests were used on continuous variables (age, pre- and post-treatment CPSS scores and number of types of trauma experiences), and chi-squared tests were used on categorical variables (sex and background).

For Paper II, the inspection of the results from the initial preliminary analyses showed that the BIDS scores for both the active and the passive variables were nonnormally distributed (skewness: 3.42 and 1.54, respectively; kurtosis: 14.21 and 0.97, respectively).

These variables were thus converted to dichotomous variables (absent = 0 or present = 1), in line with Jungbluth and Shirk (2009). A three-tier categorical IV for initial youth behavior (engaged = 0, passively disengaged = 1, actively disengaged = 2) was then computed. An assessment of whether the AABS-r items would co-occur and covary in clusters similar to rapport building and treatment socialization strategies was then conducted. The inter-item correlation patterns among the AABS-r items were evaluated, and whether the AABS-r was suitable for conducting a factor analysis was checked. This was done by inspecting whether the Kaiser-Meyer-Olkin value was above the recommended 0.71 value (Kaiser, 1974), whether Bartlett's test of sphericity was significant, whether the diagonals of the anti-image correlation matrix were within recommended values (> 0.5), and whether communalities were within recommended values (> 0.3). Based on the results from these analyses, the AABS-r items were evaluated to be suitable for a factor analysis; thus, a principal-axis factoring (PAF) was conducted. The factors were expected to be correlated; therefore, an oblimin rotation for the PAF was used. Any AABS-r items that cross-loaded > .30 were excluded from the final factor solution. Based on the scree-plot and Kaiser criterion of an eigenvalue (≥ 1), a two-factor solution was obtained. Final factors were based on the results from the correlational matrix, PAF, and empirical findings of alliance-building strategies (Jungbluth & Shirk, 2009; Karver et al., 2008; Russell et al., 2008), and Cronbach's alpha was used to evaluate inter-item consistency. The means, standard deviations, skew, and kurtosis for the obtained factors from the PAF were then estimated. Due to unequal sample sizes, Mann–Whitney *U* tests were used to examine potential differences in therapists' in-session behaviors toward youths who were engaged at treatment initiation compared with youths who were passively or actively disengaged. Finally, missing data analyses were conducted on the alliance by investigating potential differences between youths with an alliance score (from TASC-r) and those without. Mann-Whitney *U* tests were used on continuous variables (age, number of traumatic experiences, pre-treatment CAPS-CA score, and AABS-r variables), and chi-squared tests were used on categorical variables (sex, background, and BIDS).

Given the nested data structure of youths nested within therapists, different approaches to adjust for potential therapist effects were used on all main models (Papers I–III). First, attempts were made to estimate linear mixed-effects (LME) models with random effects for therapists with R version 3.6.1 (Hornik, 2012). The models for Paper II were stable; thus, all models in Paper II were conducted using LME and the approach was evaluated as sufficient to

control for potential therapist effects. For the relevant main analyses of Papers I and III, however, the mixed models were unstable, likely due to the small number of youths treated by some therapists; thus, the advice of Pinheiro and Bates (2000) was followed, and single-level analyses were performed. All the relevant models in Papers I and III were then run as single level analyses without controlling for therapist effects. Second, a single multi-category categorical level for therapists was computed. The models were then recomputed with the single multi-category categorical entered as an additional IV in each of the primary models. Third, the Akaike information criterion (AIC) was used to compare model fit between each of the primary models with each of the recomputed primary models (including the multi-categorical therapist variable). Fourth, the AIC values for each of the primary models were estimated and compared with the recomputed model. The model with the lowest AIC value was evaluated to show best model fit (Field, 2013). In Paper III, all recomputed models provided poorer fit according to AIC values, so the results from the primary models that did not control for therapist effects were kept. In Paper I, all recomputed models except one recomputed model provided poorer fit according to AIC. The recomputed model predicting CPSS posttreatment outcomes from the discrepancy in parent-youth alliance showed better model fit according to AIC values compared with the primary model however the results from this model did not change the results. Finally, in Paper I, the primary models were recalculated with the interactional terms between the primary IVs in each model with the single multi-category categorical level for therapists on outcome. These recomputed models indicated a better model fit according to AIC for all models. The only significant interactional effect was between the discrepancy between therapist-parent alliance scores and the single multi-category categorical level for therapist variable on CPSS outcomes. Overall, the interactional models provided higher *p*-values and increased the standard error for all models, so the results from the primary models that did not control for therapist effects were kept for Paper I. The level of statistical significance was set at $p = .05$ for all analyses (Papers I–III).

3.4.2 Primary Analyses: Paper I

To examine the first research question (i.e., which [alliance] perspectives predict PTS outcomes?), each alliance perspective was separately entered as an IV in two linear regression models that predicted (1) posttreatment CPSS score (dependent variable [DV]) with pre-treatment CPSS score as an additional IV and (2) posttreatment CAPS-CA score (DV) with pre-treatment CAPS-CA score as an additional IV. Post-hoc analyses were then conducted to

further dismantle the discrepancies between youths' ratings of the therapeutic alliance and other respondents' ratings of the alliance by using bivariate correlations between youths' bond scores and other responders' bond scores and between youths' task scores and other respondents' task scores.

To examine the second research question (i.e., to what extent is there a concordance between youth, parent, therapist, and observer ratings of youths' therapeutic alliance?), bivariate correlations between each of the four alliance perspectives were conducted. Pearson *r* was calculated to examine the effect sizes for these analyses, with *r* interpreted as 0.1 = small effect, 0.3 = medium effect, and 0.5 = large effect (Cohen, 1988).

To examine the third and final research question (i.e., does the level of discordance between youths', parents' and therapists' alliance perspectives predict poorer PTS outcomes?), three deviation scores between the alliance perspectives from youths, parents, and therapists were first computed: (1) the therapist- minus youth-rated alliance score, (2) the parent- minus youth-rated alliance score, and (3) the therapist- minus parent-rated alliance score. Each of the three discrepancy scores were then entered as an IV in two regression models that predicted (1) posttreatment CPSS score (DV) with pre-treatment CPSS score as an additional IV and (2) posttreatment CAPS-CA score (DV) with pre-treatment CAPS-CA score as an additional IV.

3.4.3 Primary Analyses: Paper II

Five LME models with youths nested within therapists were conducted to examine the three research aims. Youths' alliance scores (TASC-r) were treated as the DV in all models.

The first research aim (i.e., to examine predictive associations between therapists' alliance-building behaviors and youths' reports of the therapeutic alliance at mid-treatment, controlling for initial youth engagement) was examined through model one. In this model, the two alliance-building strategies identified from the PAF of the AABS-r items (i.e., rapport-building and treatment socialization) were entered as IVs along with the three-tier categorical youth behavior variable (engaged, passively disengaged, actively disengaged) entered as an IV.

The second research aim (i.e., to evaluate the degree of therapists' trauma focus [gradual exposure] as a predictor of the subsequent alliance, while controlling for initial youth engagement) was examined through model two. In this model, therapists' trauma-eliciting behaviors (from the added item on AABS-r) were entered as an IV along with the three-tier

categorical youth behavior variable (engaged, passively disengaged, actively disengaged) entered as an IV.

The third and final research aim (i.e., to examine whether the type of initial client engagement moderates the relationship between therapist behaviors and the therapeutic alliance) was examined through models three, four, and five. In these models, TASC-r (DV) values and confidence intervals for youths in the passive disengagement group and the active disengagement group were estimated, while youths in the engaged group were treated as the reference group. To examine potential interactional effects between therapist behavior and youth behavior, the slopes of each youth behavior (engaged, passive, and active) on the DV were investigated. Between-therapist random estimates, within-therapist standard errors, AIC, and the Bayesian information criterion for these models were calculated. In model three, the interactional term between rapport-building and youth behavior (engaged, passively disengaged, and actively disengaged) was entered. In model four, the interactional term between treatment socialization and youth behavior (engaged, passively disengaged, and actively disengaged) was entered. Finally, in model five, the interactional terms between therapists' trauma eliciting behaviors and youths' behaviors (engaged, passively disengaged, and actively disengaged) was entered.

3.4.4 Primary Analyses: Paper III

To examine the first research question (i.e., do youths' involvement behaviors in trauma narration work predict their treatment response?), two hierarchical regression models were conducted with the CPSS post-treatment score treated as the DV in both models. Furthermore, in the first step of both models, the CPSS mid-treatment scores, TASC-r scores, and potential variables found related to CPSS post-treatment score from the preliminary analyses (i.e., sex) were entered as IVs. In the second step of model one, the positive CIRS item scores were entered as IVs. To test if data met the assumption of collinearity, whether the levels of tolerance were below < 0.1 (Field, 2013) and whether variance inflation factors (VIF) were below 10 (Myers, 1990) were examined. To test if the data met the assumption of independent errors, whether the Durbin-Watson value of the IV values were ≥ 1 and ≤ 3 was examined (Durbin & Watson, 1951).

To examine the second research question (i.e., is there a significant relationship between the therapeutic alliance and youths' involvement behaviors in the trauma narrative?), bivariate correlations between the TASC-r score and the CIRS item scores were conducted.

Pearson *r* was calculated to examine the effect sizes for these analyses, with *r* interpreted as 0.1 = small effect, 0.3 = medium effect, and 0.5 = large effect (Cohen, 1988).

3.4.5 Statistical Software (Papers I, II, and III)

All preliminary analyses (Papers I–III) were conducted using SPSS version 22 (IMB, 2013). In Papers I–III, mixed-effects models with random effects for therapists were estimated with R version 3.6.1 (Hornik, 2012) and the R package nlme (Pinheiro & Bates, 2000). However, because the models within the analyses of both Papers I and III were unstable, IBM SPSS version 22 (IBM, 2013) was used to conduct the primary analyses of these papers, with the exception of AIC values, which were calculated using R.

3.5 Ethical Considerations

Before conducting the Norwegian TF-CBT study, the project was approved by the Regional Committee for Medical and Health Research ethics in Norway. All participants were referred and recruited from a local CAMHS, in line with ordinary procedures. This selected sample of youths (n = 65) in this thesis represented minors with high levels of psychological stress who might not be able to address their needs to the same extent as adults. The UN Convention on the Rights of the Child (1989) ratifies the right of children to express their views on matters concerning their lives. Accordingly, children are entitled to express their opinion about participation in psychotherapy research. Thus, steps were taken to ensure that both the participants and their legal guardians were thoroughly informed in an age-adapted manner, both in written and oral form, about what participation in this study entailed. As a part of this process, all participants were informed that they could withdraw from the study at any point in time and that they would still receive mental health care at CAMHS in accordance with ordinary practice if they declined to participate in or decided to withdraw from the study. Written consent was obtained from all study participants and their legal guardians in accordance with the Helsinki Declaration.

Several steps were taken to minimize stress and burdens on the participants who agreed to participate in the study. First, all participants received mental health care from therapists who are specifically trained to provide help to children with mental health problems. Second, all assessments and interviews were conducted by clinical psychologists with expertise in trauma and experience talking to youths about difficult life situations. The assessors adjusted the assessment settings to meet individual needs, and participants were allowed to take breaks if needed. Third, the collected data were treated confidentially unless

the assessors were required to take action (e.g., cases of severe suicide ideation or ongoing abuse). Participants were assured that the collected data would be handled carefully so they could feel safe and their level of stress could be reduced. Finally, participants were asked about the assessment procedures in the post-treatment measurement to give them the opportunity to provide direct feedback about the assessment procedures, address potential weaknesses during the data collection period, and help guide improvements in research on vulnerable youths and families in future studies.

4 Results

4.1 Main Findings: Paper I

In Paper I, the correspondence and outcome predictions of four perspectives of the youth alliance (rated by the self, parent, therapist, and observer) in TF-CBT was examined. First, only youths' *own* perspective of their alliance was found to predict treatment response; more specifically, a higher alliance score predicted greater PST outcomes. The results also showed that only parents' perspective of youths' therapeutic alliance significantly correlated with youths' alliance ratings. Furthermore, parents' and therapists' alliance ratings significantly correlated, as did therapists' and observers' alliance ratings. Finally, an overestimation of youths' perception of the alliance by parents and therapists was found to significantly predict poorer PST outcomes.

4.2 Main Findings: Paper II

In Paper II, the focus was on identifying favorable therapist behaviors for building a strong alliance with traumatized youths in TF-CBT. Therapists' alliance-building behaviors from the second session of TF-CBT were assessed using observational coding of AABS-r, which contains eight specific items in addition to two global items. Two specific items showed low scores (presenting the self as an ally and exploring motivation), and these items were removed from further analyses. Two main therapist alliance-building strategies were identified from the remaining AABS-r items using PAF: 1) rapport-building (including attending to the youth's experience, cognitive restructuring, and global support), and 2) treatment-socialization (including collaboration, presentation of a treatment model, positive expectations for change, and global structure). The item praise loaded on both dimensions, so it was removed from further analyses. Given that this study was the first to examine alliance-

building behaviors among traumatized youths, an additional item that targeted the extensiveness of therapists' trauma-eliciting behavior was added to AABS-r. Furthermore, youths' initial engagement behaviors in the treatment were coded using BIDS, and were categorized from this coding as 1) engaged, 2) passively disengaged, or 3) actively disengaged.

The results from the preliminary analyses showed that the expression of disengagement behaviors (passive or active) from youths during the first 15 minutes spent alone with the therapist during TF-CBT was associated with lower mid-treatment alliance scores from youths. Therapists' alliance-building behaviors differed towards youths who entered treatment engaged versus towards those who entered treatment disengaged. More specifically, therapists seemed to elicit more information, including trauma-related content, from engaged youths than from passive youths. Additionally, therapists used the rapport-building strategy more and the treatment-socialization strategy less towards engaged youths than towards passively disengaged youth. Furthermore, therapists were found to be oriented more to the collaborative nature of treatment with actively disengaged youths compared to with engaged youths. The extensiveness of therapists' use of the two alliance-building strategies was not different towards actively or engaged disengaged youths.

A first finding from the primary analyses was that more extensive use of the rapport-building strategy by therapists was associated with stronger alliance reports from youths across the three groups of youths' initial behavior (i.e., engaged, passively disengaged, and actively disengaged). However, a second finding was that therapists' use of the treatment socialization strategy was not associated with youths' alliance scores across the three groups. A third finding was that the relationship between therapists' trauma-eliciting behavior and youths' alliance at mid-treatment was nonsignificant across the three initial behavior groups (i.e., engaged, passively disengaged, and actively disengaged). A fourth finding from the inspection of potential interactional effects between therapists' alliance-building strategies (i.g., rapport-building or treatment socialization) and youths' initial behavior (i.e., engaged, passively disengaged, and actively disengaged) on youths' evaluations of the alliance at mid-treatment provided no support for any interactional effects between therapist strategies and youths' initial behavior on youths' alliance scores. A fifth and final finding from the inspection of potential interactional effects between therapists' trauma-eliciting behavior and

youths' initial behavior on youths' mid-treatment alliance was that more trauma-eliciting behavior was associated with a stronger alliance for youths in the passively disengaged group.

4.2 Main Findings: Paper III

In Paper III, youths' in-session involvement behaviors in TF-CBT were examined, more specifically how these behaviors relate to youths' therapeutic alliance and treatment outcome from TF-CBT. Preliminary analyses showed that the two positive involvement items "initiates discussions" and "demonstrates enthusiasm" were highly correlated (r = .85). Thus, to address multicollinearity concerns and because the items were conceptually overlapping, these items were summated into the one item "initiates discussions and demonstrates enthusiasm." Furthermore, two sex differences in the variables used in the primary analyses were found. First, females showed significantly higher CPSS scores (at mid- and post-treatment) compared to males. Second, females "elaborated on points made by the therapist or demonstrated an understanding of the treatment rationale" more compared to males. The only age difference found was that higher age was associated with more of the positive involvement behavior "elaborated more on points made the therapists or demonstrated a greater understanding of the treatment rationale" in comparison to younger youths.

First, mixed support for the hypothesis that greater treatment improvements would be associated with more of each positive involvement behavior and less of each negative involvement behavior was found. More specifically, more of the positive involvement behaviors "self-disclosure" and "elaborated understanding of the treatment rationale" by youths was found to be associated with lower levels of PTSS at post-treatment. However, more of the positive involvement behavior "initiating discussions and demonstrating enthusiasm" was also found to be associated with more PTSS at post-treatment. The negative involvement behaviors did not significantly predict youths' level of PTSS at post-treatment. Notably, however, results showed that more inhibited or avoidant behavior was a trending predictor (p = .072) of lower levels of PTSS at post-treatment. A stronger youth-rated alliance predicted therapy outcomes regardless of youths' involvement behaviors.

Second, partial support for the hypothesis that a stronger youth alliance would be associated with more of each positive involvement behavior and less of each negative involvement behavior was found. In line with the expectations, a stronger alliance was found to be associated with more of the positive behavior "initiating discussions and demonstrating enthusiasm" and less of the negative behaviors "passivity or withdrawal" and "inhibition or

avoidance." However, the strength of youths' therapeutic alliance was not found to be significantly associated with the extensiveness of the positive involvement behaviors "self-disclosure" or "elaborated on points made by the therapist or demonstrated understanding of the treatment rationale."

5 Discussion

5.1 Discussion of the Main Findings

The overarching goal of this thesis was to increase knowledge on how to optimize the treatment response of traumatized youths, and the theoretical model by Fjermestad et al. (2016a; Figure 1) was used as an overall framework to present the research aims situated in the "therapy process" part of the model. More specifically, this thesis focused on youths' alliance with a therapist (Papers I–III), youths' in-session involvement behaviors (Papers II–III), and therapists' in-session alliance-building behaviors (Paper II).

5.1.1 Alliance Perspectives and Treatment Outcomes

In Paper I, two significant associations appeared between the alliance and TF-CBT treatment outcomes. The first was that a higher youth-rated alliance was a strong predictor of lower PTSS, and the second was that overestimating a youth's alliance predicted a worse treatment response. Youths' own experience of their alliance with a therapist predicted treatment outcomes across self-rated and clinician-rated levels of PTSS. Furthermore, a stronger youth-rated alliance was found to predict greater reductions in PTSS in Paper III, even when the contribution of youths' involvement behaviors was taken into consideration. A surprising finding in the present thesis was that neither parent, therapist, nor observer ratings of the alliance significantly predicted PTS outcomes (Paper I). This result suggests that the relationship between alliance and outcome for traumatized youths only seems to be captured by youths' experience of the alliance.

There may be several reasons for why youths' alliances are related to outcomes in trauma treatment. Traumatized youths often struggle with trust issues and self-blame for what happened to them. At the same time, they are expected to share their trauma experiences, as this is thought to be a driving force for reducing PTSS. The sharing of the trauma narrative may in turn lead to re-experiencing and negative feelings. In sum, this may challenge the establishment of a solid agreement on the therapeutic tasks, which is a core element of an

alliance. However, youths who feel a stronger emotional connection with their therapist may have greater trust in the therapist and feel more supported. This may help ease the emotionally difficult process of working through trauma-specific tasks and make it easier for youths to accept the therapist's approach when gradual exposure is used. This could facilitate a better treatment response. Furthermore, youths who feel that they are on the same page as their therapist with regard to how trauma-specific treatment tasks should be done may feel greater ownership of the treatment process, which may increase their beliefs and confidence in doing the treatment tasks. This could also boost their level of engagement when doing the tasks, which may help propel the effect of the trauma-specific components and relate to a better treatment response. Altogether, a stronger alliance may scaffold youths to get engaged in the therapeutic project, even if it may be emotionally difficult, thus facilitating a healing process. Results from Papers I-III suggest that most youths perceived their alliance to be strong at mid-treatment, which indicate that trauma specific components in TF-CBT is compatible with developing a strong alliance as results from other studies also suggest (Capaldi et al., 2016; Zorzella et al., 2017).

Results from Paper I suggest that therapists, parents, nor trained observers are accurate in their assessments of youths' therapeutic alliances, which suggests that the therapeutic alliances of traumatized youths may not be easy for others to observe.

Results from Paper I suggest that an overestimation of youths' therapeutic alliance by therapists and parents predicts poorer outcomes. This resonates well with the adult literature suggesting that empathic resonance (i.e., "being on the same wavelength" as the client and the client being "fully heard") seems to contribute to positive treatment outcomes (Orlinsky & Howard, 1986). One could say that when parents or therapists overestimate a youth's therapeutic alliance, they are not at the same wavelength as the youth. When youths attend trauma-specific treatment, parents represent a central part of the treatment, and it may be crucial for them to feel understood and supported by parents throughout the treatment process. When parents overestimate their child's alliance, the child may feel a lack of support and understanding from their parents, which may explain why a lack of attunement to the alliance by parents seems to negatively affect youths' response to treatment (Paper I).

When therapists overemphasize youths' experience of the alliance, they may not be sufficiently sensitive to the youths' experience. As mentioned, attending trauma-specific treatment can be an emotionally rough experience that warrants trust and confidence in the

therapist. If the therapist oversees a poor alliance, this may further undermine the alliance and make the youth's engagement in the therapeutic tasks more difficult. Therapists who overestimate a youth's experience of the alliance may believe that the youth is more in agreement when doing a task than they actually are which may be a negative experience for the youth. For example, therapists who are not sufficiently focused on the collaborative nature of the treatment may proceed too quickly in their use of gradual exposure without checking in with the youth about whether the pace of the work is okay or not. This may lead to resistance from the youth to the exposure, making the work less efficient and resulting in poorer outcomes. Results from Paper II suggest that when therapists direct the session more and talk more than the youth (i.e., global structuring) in the early treatment phase, this is associated with a weaker youth-rated alliance later in treatment. Together with the results from Paper I that suggest the overestimations of the alliance can result in poorer outcomes, this finding suggests that providing enough space for youths' to express their opinions about and contributions to the therapy process and allowing their feedback to guide the therapeutic process are core therapeutic tasks.

In the tripartite relationship that entails the youth, the caregiver, and the therapist in TF-CBT, one could say that the youth is in a minority position when it comes to age and developmental level. As such, parents and therapists are required to be conscious about not letting the "adults' point of view" overshadow the therapeutic process. Youths should be asked about their opinions about the alliance and the treatment in an age- and developmentally appropriate manner. Notably, disagreements about the alliance should not automatically be interpreted as something negative by therapists, but they might indicate that discussion about the relationship could be helpful or necessary (Flückiger et al., 2018). Repairing ruptures in the alliance can provide an opportunity for facilitating change, while not addressing ruptures adequately can inhibit change (Elvins & Green, 2006; Eubanks et al., 2018). Actively addressing potential disagreements about the alliance within the tripartite relationship may provide an opportunity for treatment progress. For example, hearing a therapist express that they initially thought the youth agreed on doing a task a certain way but realized that they were wrong may be a good experience for the youth. This implies that spending enough time on addressing the alliance, tuning into the alliance, and (if weak) strengthening a youth's experience of the alliance as well as including parents in this process seem helpful for treatment progress.

5.1.2 Therapists' Alliance-building Behaviors and Youths' Therapeutic Alliance

Because a strong youth-rated alliance is predictive of treatment outcomes (Papers I and III), understanding how to establish a strong alliance from the beginning of treatment seems imperative. The results from the coding of therapists' alliance-building behaviors in Paper II suggest that these behaviors comprise two main therapeutic strategies: rapport-building (i.e., eliciting information from the youth and providing support along with cognitive restructuring) and treatment socialization (i.e., presenting the treatment model, expressing positive expectations for change, focusing on the collaborative nature of treatment, and structuring the session). Results from Paper II showed that more rapport-building by therapists was associated with a stronger youth-rated alliance, while therapists' use of treatment socialization was not associated with the strength of the alliance.

Youths enter treatment and the therapeutic relationship with various levels of readiness. The good news is that more use of rapport-building seems to strengthen the therapeutic alliance regardless of whether a youth appears engaged, passively disengaged (e.g., providing limited responses to the therapist), or actively disengaged (e.g., openly sharing dissatisfaction with the therapist) at the start of treatment. This implies that focusing on rapport-building may be a useful strategy in an initial alliance-building process regardless of a youth's expressed readiness for the treatment. Karver et al. (2008) also found that more rapport-building during the first two treatment sessions of CBT predicted higher subsequent alliance scores from depressed youths. Diamond et al. (1999) found that more extensive focus on youths' experiences was associated with improved alliances for youths with substance abuse receiving family therapy. Thus, rapport-building may be helpful for building an alliance with a youth regardless of their symptomatology. Furthermore, rapport-building behaviors may also have beneficial effects on treatment outcomes, as more attending to experience and support by therapists are found associated with better treatment response for anxious youths in CBT (Fjermestad et al., 2021).

Tam and Ronan (2017) suggest that youths have an increased need for autonomy and that the formation of a strong alliance in youth treatment may be challenged if a youth experiences a power imbalance in the therapeutic relationship. From a clinical perspective, it is reasonable to assume that meeting a therapist that shows genuine interest in getting to know them and who actively listens to difficult thoughts and feelings in a supportive manner can help a youth feel validated and empowered in the therapeutic relationship. This might explain

why rapport-building seems to strengthen the alliance (Paper II). Research suggests that active listening, facilitating trust and demonstrating care and empathy is associated with a stronger alliance (Dunne & Parker, 2020). These behaviors comprise rapport-building, which may also explain why more of this strategy seems helpful for strengthening the therapeutic alliance.

Expressing support is particularly important when painful experiences are discussed (Karver et al., 2018). TF-CBT involves a continuous focus on gradual exposure to traumatic memories, and a greater level of support by the therapist may positively influence the alliance-building process (Paper II). Furthermore, the rapport-building strategy includes cognitive restructuring (Paper II). For traumatized youths, the use of cognitive restructuring may be particularly helpful for building an alliance, as it can target youths' negative trauma cognitions (e.g., "*I am worthless," "Things will never change*;" Meiser-Stedman et al., 2009b; Meiser-Stedman et al., 2019). An active challenge to negative trauma-related cognitions by a therapist may increase a youth's experience of the therapist as a helper and may strengthen the alliance. The information elicited during rapport-building may also help the therapist define a meaningful treatment agenda for the youth and help them individually tailor subsequent treatment components. This may increase the youth's experience of the therapeutic work as a mutual and collaborative project and help strengthen their perception of the alliance. An initial use of more rapport-building behaviors may also signal to the youth that an essential part of the treatment comes from their own contribution to the treatment. This could set the scene for a more active engagement from the youth in further treatment and contribute to treatment improvements such as enabling them to elaborate on their traumatic experiences, which, according to Paper III, seems to be associated with better outcomes.

Therapists' use of treatment socialization was not associated with the strength of youths' therapeutic alliance regardless of youths' initial behavior (Paper II). The literature on the relationship between treatment socialization and the alliance is inconsistent. In line with results of Paper II, a study of depressed youths showed that overall use of treatment socialization was not significantly associated with a stronger youth alliance (Karver et al., 2008). Research suggests that some of the specific behaviors entailed in treatment socialization may be linked with the alliance; studies of anxious youths receiving CBT suggest that focusing on the collaborative nature may help strengthen the alliance (Creed & Kendall, 2005; Fjermestad et al., 2021), while a greater emphasis on the treatment model and positive expectations for change seem to be associated with a subsequently stronger therapist-

but not youth-rated alliance (Fjermestad et al., 2021). Although the primary focus of Paper II was on therapist behaviors that were expected to strengthen the alliance, results showed that greater overall structuring of the session by therapists (e.g., directing the session, talking more than the youth) that entailed the treatment socialization strategy was associated with a weaker alliance. Fjermestad et al. (2021) also found that more structuring of the session was associated with a weaker youth alliance. Thus, the relationship between treatment socialization and alliance might not be so straightforward; rather, it might depend on the clinical population, the respondent of the alliance, and whether one examines overall use of treatment socialization or the specific behaviors within this strategy.

Karver at al. (2018, p. 351) encourage therapists to "socialize the youth to treatment by providing an explicit, consistent, and credible framework for how the planned treatment is supposed to work, orienting the youth to the therapist and client roles in treatment, and establishing hopefulness/expectancy that the treatment will be useful in the client's life." Although results from Paper II indicated that treatment socialization is not associated with the therapeutic alliance, there may still be good reasons for using this strategy. Socializing youths' into the treatment does not only include what the therapists say (e.g., "We are going to collaborate", "TF-CBT involves…") but also entail how therapists adapt the pace and content to the individual youth. For example, it could be that the relationship between treatment socialization and youths' experience of the alliance depends on the therapists' dosage of structure when socializing a youth into the TF-CBT treatment model. Furthermore, treatment socialization behaviors may be positively related to other beneficial therapy processes such as involvement. One suggestion is that focusing explaining the model, talking about the "we" aspect of treatment, and emphasizing how TF-CBT help youths to get a better understanding of the treatment model, which was found to be related to greater treatment improvements in Paper III. Overall, treatment socialization neither hinders nor strengthens the alliance; however, therapists are encouraged to ensure that this strategy does not impede with rapport-building in the initial alliance-building phase as this seem to be the main strategy for building a strong alliance with traumatized youths.

5.1.2.1 Monitoring Youths' Behaviors May be Useful in Alliance-building.

Youths' therapeutic alliance is thought to be influenced by youths' pre-treatment characteristics (Fjermestad et al., 2016a; see Figure 1). Results from Paper II indicate that youths who showed signs of passive disengagement (e.g., limited utterances, no verbal

responses) or active disengagement (e.g., hostility towards the therapist, expressing not wanting to attend therapy) when they first met their therapist rated their alliance as weaker at mid-treatment. This aligns with research suggesting that an initial negative impression of the therapist or treatment in the first few sessions may result in less involvement and a weaker alliance (McLeod et al., 2013). At the treatment start, therapists may not be familiar with youths' predisposition to or readiness for developing a strong alliance; thus, the results from Paper II suggest that attending to youths' behaviors may give therapist an important cue regarding the further alliance-building process. More specifically, when youths appear open to the therapist and ready for the treatment, the alliance-building process may be smoother, while signs of disengagement behaviors may indicate a more demanding alliance-building process.

Results from Paper II indicate that therapists may have noticed youths' disengagement behaviors, as they appeared to use the alliance-building behaviors differently towards engaged youths compared to with disengaged youths. Therapists seemed to focus less on eliciting information from youths who initially gave little response and who appeared silent compared to with engaged youths (Paper II). Youths who responded little and appeared passive seemed to be met with more emphasis on the expected positive treatments effects of TF-CBT and more structuring of the session by therapists (Paper II). Perhaps the therapists attempted to convince passive youths to get on board with the therapeutic project by "sales pitching" how the treatment might be helpful for them. However, they may have dominated the session too much as a response to these youths' passive behaviors. According to results from Paper II, structuring the session less and instead inviting youths to talk about themselves in a supportive manner (rapport-building) might be more helpful for strengthening youths' experience of a strong alliance.

Results from Paper II indicate that youths who expressed dissatisfaction with the therapist or the treatment (i.e., actively disengaged) were met by a greater focus on the collaborative nature of treatment, which, according to other studies, is helpful for building an alliance with youths (Creed & Kendall, 2005; Fjermestad et al., 2021). The interactional paths between specific therapist behaviors (e.g., emphasizing collaboration or positive expectations for change) and youths' initial behaviors were not examined in Paper II; thus, it is unclear whether or not this particular therapist behavior was helpful for strengthening the alliance depending on the youths' initial behavior. However, because results from Paper II suggest that

actively disengaged youths rated their alliance as weaker, it may have been useful for therapists to spend more time on rapport-building to help strengthen the alliance.

5.1.2.2 Consulting Parents May be Helpful in Building and Evaluating Youths' Alliances. Caregiver involvement is integrated in the TF-CBT model. The tripartite relationship in TF-CBT provides therapists with a unique opportunity to obtain a second opinion on a youth's therapeutic alliance. According to Paper I, this seems to be an option that therapists should take advantage of, as this study showed a significant correspondence between parents' and youths' alliance ratings. There might be several reasons why parents are in a unique position for evaluating their child's alliance compared to therapists. For one, parents have known their child for longer than the therapist. Parents are also familiar with their child's developmental history and social interaction patterns, and this may be useful when evaluating the alliance. Second, parents can observe verbal- and non-verbal interaction between their child and the therapist during the conjoint sessions, which can be useful when evaluating the alliance. Finally, parents typically see their child before and after treatment sessions, whereas therapists usually see the child only within the therapeutic context. Parents may obtain important cues about their child's alliance between sessions, such as their opinion about going to therapy (e.g., "I look forward to seeing my therapist" or "I don't want to talk to my therapist today") or their reactions after sessions (e.g., "I work so well with my therapist" or "I don't understand why my therapist keep asking those difficult questions about the horrible thing I went through"). Thus, it may be helpful for therapists to use parents as "interpreters" when trying to understand the youth-therapist alliance.

Eliciting feedback from parents may also lead to secondary gains by strengthening the parent-therapist alliance. A stronger parent-therapist alliance seems to be associated with greater treatment responses for youths in TF-CBT (Kirsch et al., 2018) and to better outcomes across clinical youth populations (de Greef et al., 2017; McLeod, 2011; Shirk et al., 2011). However, a notable finding from Paper I was that even if parents seemed to understand their child's alliance more than therapists, neither the parents' nor therapist's perception of the child's alliance predicted the therapy outcome. As such, parents may be a useful source of information when evaluating the youth-therapist alliance, but attending to youths' inner experience of the alliance is still essential for facilitating treatment change.

5.1.2.3 Talking About Trauma Does Not Impede Alliance-building but Rather Strengthens Passive Youths' Alliances. Gradual exposure to traumatic memories is a central

element throughout TF-CBT (Cohen et al., 2017). According to the results from Paper II, eliciting traumatic information from a youth early in treatment does not seem to hinder the alliance-building process. This is good news considering that therapists seem to fear that talking about the trauma might impede the development of a strong alliance (Becker et al., 2004; Feeny et al., 2003), potentially causing them to avoid exposure-based interventions due to fear of ruptures in the alliance (Hultmann et al, 2014; Kendall et al., 2009). Laying the groundwork for talking about the trauma early in treatment might also be beneficial for further treatment progress, as youths who share more about their traumatic experiences during initial trauma narration seem to have greater reductions in PTSS at post-treatment (Paper III).

Although not typically viewed as an alliance-building behavior, results from Paper II showed that therapists' initiative to talking about youths' traumatic experiences was associated with a stronger alliance for youths who appeared passive at the start of treatment. This is notable considering that a study by Creed and Kendall (2005) involving anxious youths found that pushing youths to talk about their anxiety outside of their comfort level was associated with a weaker alliance. One might have expected that limited responses and silence from a youth at the start of treatment would indicate that they are not yet ready to talk about their traumatic experiences and that when the therapist initiates discussion of the trauma, this could be perceived as "pushy" behavior. The potential underlying reasons for the lack of verbalization and initiative expressed by some youths were not examined in Paper II. However, one assumption is that the passive behavior could have reflected a lack of confidence in the therapist's readiness to contain the traumatic experiences. Thus, when a therapist actively addressed the trauma, this might have conveyed that they were ready to actively listen to and contain the emotionally difficult content of the youth's traumatic experience. This may have increased the youth's confidence in the therapist as a trusting helper and strengthened the emotional bond. Another assumption is that when a therapist initiates discussion about the trauma, this might send signal that the therapeutic environment is a safe context for sharing traumatic experiences together with the therapist. Therapists might even be the first to signal a readiness to talk about the trauma and express a tolerance for hearing about the traumatic content. Furthermore, they may be among the first to contain youths' difficult thoughts and feelings related to their traumatic experiences. One may assume that because most therapists are sensitive and tuned into youths' feelings when talking about their traumatic experiences, this does not interfere with the alliance-building process. Overall,

this might help explain why therapists' receptiveness to talking about the trauma is associated with a stronger alliance for passive youths and why it does not seem to impede alliance-building for traumatized youths in general (Paper II).

5.1.3 Relationships between Youths' Involvement Behaviors, Alliance, and Outcomes

Whether the alliance and involvement are distinct or overlapping constructs is not clear (Karver et al., 2018). The results from Paper III showed mixed correspondence between youths' alliance and different types of involvement behaviors. This result suggests that youths' alliance and involvement behaviors are associated but not interchangeable. The hypothesis in Paper III that more positive and less negative involvement behaviors would be associated with better outcomes was only partially supported.

5.1.3.1 Positive Involvement Behaviors, Alliance, and Outcomes. Youths who expressed that they understood what treatment is and why it may be helpful showed a better treatment response (Paper III). A greater understanding of the treatment may install hope and confidence when engaging in the treatment components and may lead to positive expectations for change that may facilitate a better treatment response. Understanding why trauma narration is helpful might help increase youths' level of tolerance for the difficult thoughts and emotions that may follow from conducting this work. According to Paper III, there was a nonsignificant relationship between youths' alliance and treatment understanding. Although we cannot rule out that there might be a relationship that was not captured in our sample, it might also be that there is a difference between *understanding* why a task may be helpful versus *agreeing* on doing the task.

Talking with the therapist about the traumatic experiences also seemed helpful for alleviating PTSS (Paper III). This aligns with trauma theory suggesting that exposure can help reduce the sense of current threat by elaborating and integrating traumatic memories, modifying problematic trauma cognitions, and changing dysfunctional behaviors and maladaptive coping strategies (Ehlers & Clark, 2000), which is part of the theoretical rationale for conducing trauma narration during TF-CBT (Cohen et al., 2017). This finding also corresponds with research suggesting that youths find talking about the trauma experiences to be among the most helpful parts of TF-CBT (Dittman & Jensen, 2014). Cummings et al., (2013) have suggested that a positive therapeutic relationship might be needed to help clients engage in exposure tasks and skill building exercises. However, the results from Paper III suggest that there is a nonsignificant relationship between the strength of a youth's alliance

and how much they talk about their trauma during the initial trauma narration. There may be several reasons for this finding. The youths in this study had high alliance ratings on average, and it might have been sufficient for the alliance to be "good enough" to decide to talk about traumatic experiences, indicating that strengthening the alliance above this level did not impact how much youths talked about trauma-related aspects. Youths expressing an understanding of the treatment and why it might be helpful for reducing their trauma symptoms seemed to be positively linked with how much they shared about their traumatic experiences during initial trauma narration (Paper III). This result suggests that youths may find it easier to disclose what happened to them during the trauma and elaborate on difficult feelings and thoughts related to the trauma when they know why sharing this may be helpful.

A surprising finding from Paper III was that youths who appeared more enthusiastic and took a greater lead during initial trauma narration showed a poorer treatment response. To some extent, this finding contrasts with the finding that more trauma talk was associated with better outcomes. One suggestion is that youths who are very eager when they begin the trauma narrative may work too quickly through this component. Youths appearing enthusiastic and initiating more discussions could also imply that they are not sufficiently emotionally activated or that they have engaged the trauma content at a surface level rather than going more in depth, which may reduce the effect of the trauma narrative work (Cahill & Foa, 2007; Ehlers & Clark, 2000; Foa & Kozak, 1986). In line with the hypothesis, a stronger alliance was associated with more initiation and enthusiasm from youths. However, a puzzling finding was that a stronger alliance was associated with better treatment response while more initiation and enthusiasm from youths were associated with poorer outcomes. More research is needed to understand this finding. For now, the findings suggest that youths' involvement behaviors and alliance are not interchangeable for treatment outcomes.

5.1.3.2 Negative Involvement Behaviors, Alliance, and Outcomes. According to Paper III, more negative involvement behaviors, such as withdrawal and avoidance, from youths was not associated with poorer outcomes. However, more negative involvement behaviors were associated with a weaker alliance. Thus, negative involvement might be an indicator that a therapist should focus on strengthening the alliance. However, the expression of negative involvement behaviors during the initial trauma narration may also be a natural response when talking about very difficult and often emotionally loaded experiences. In fact, a trending relationship between *more* avoidance from youths and *less* PTSS at post-treatment

(p = .072) was found in Paper III. EPT may be helpful when trying to understand this finding. According to EPT, psychopathology following trauma is represented by a pathological network of stimuli, response elements (emotional, cognitive, behavioral, and physiological), and their meanings (Cahill & Foa, 2007; Foa & Kozak, 1986). Building on this theory, one aim in TF-CBT is to reverse these alleged pathways. A central target in TF-CBT is therefore to address overgeneralized fear and associated avoidance to help the youth to master their fear (Cohen et al., 2017). Emotional processing occurs when the pathological network is activated and incompatible information is introduced. This new information might promote corrective learning of more adaptive associations and responses (Cahill & Foa, 2007; Foa & Kozak, 1986). Thus, the avoidant behavior may have been a result of greater emotional activation that enabled the therapeutic work to reduce PTSS. Results from Alpert et al. (2021) suggest that changes in youths' avoidance across the narrative work may relate to better outcomes, as they found that an initially high level of avoidance followed by a decrease in avoidance as the narrative work progresses is related to greater reductions in PTSS.

Research suggests that many therapists hesitate to use exposure techniques (Becker et al., 2004; Borntrager et al., 2013; Neelakantan et al., 2019; Reid et al., 2018; Ruzek et al., 2014). Furthermore, therapists seem to regard trauma narration work as among the most challenging parts of trauma-specific treatment due to youths' avoidance behaviors (Ascienzo et al., 2020). The finding that youths' expressions of negative involvement behaviors during initial trauma narration does not seem to impede the treatment effect (Paper III), may help strengthen therapists' confidence when conducting trauma narrative work. However, little is known about what therapists can do to balance exposure and avoidance to expand youths' "window of tolerance" (Siegel, 1999). More research is needed to understand the relationship between youths' involvement behaviors and treatment response.

5.1.4 Relationships between Therapists', Observers', and Youths' Alliance Ratings

Observers' and therapists' alliance ratings were found to correspond (Paper I). On the one hand, this was not so surprising given that both perspectives represent clinically trained evaluations of the alliance. On the other hand, therapists have more knowledge about their clients, have directly observed the client over time across treatment sessions, and are active agents of change during treatment. In comparison, observers base their alliance ratings on limited information (e.g., from audiotapes) without directly interacting with the client or the treatment process. Furthermore, the observers only observed youths during trauma narration.

For youths, this treatment component may be emotionally loaded and difficult to engage in, and symptoms of negative trauma cognitions and avoidance may be present. Regardless, therapists and observers seem to use the same "clinical lens" when evaluating traumatized youths' therapeutic alliance, although this lens does not seem to correspond well with the "subjective lens" used by youths when evaluating their own alliance (Paper I).

There may be many reasons for why tuning into traumatized youths' alliance may be difficult for others. The alliance is a subjective experience, and rating this inner state may be challenging for others to do at face value without directly asking the person whom it concerns. In line with this notion, Elvins and Green (2008) emphasize that observer measurements are unable to directly capture the subjective, attitudinal, or motivational aspects of the alliance. For example, task agreement may be evaluated differently: youths might evaluate the actual task agreement, while trained professionals may include how they perceive the quality of a task. Alternatively, therapists may be influenced by how they perceive treatment progress (e.g., symptom reductions) when evaluating the treatment process (e.g., quality of the therapeutic alliance). One might also assume that youths' trauma symptoms could obscure therapists' and observers' interpretation of their alliance. Since one hallmark of PTSD is avoidance (American Psychiatric Association, 2000; Ehlers & Clark, 2000), there is a possibility that therapists and observers could interpret trauma-related avoidance as a weak emotional bond or poor task agreement. For example, one may think that a youth's hesitation towards doing an exercise relates to disagreement about doing the task when the actual reason may be that a trauma-focused task has triggered avoidance. When the observers coded the alliance from trauma narration sessions, youths may have been exposed to trauma triggers and responded with avoidance (Ehlers & Clark, 2000). In support of this suggestion, youths seemed to express some level of avoidance during the initial narrative session (Paper III). Second, negative trauma-related cognitions are typically seen in traumatized youths (Meiser-Stedman et al., 2009b; Meiser-Stedman et al., 2019). These cognitions relate to unhelpful representations of the self (e.g., "I don't trust people") and others (e.g., "everyone lets me down"). Traumatized youths are constantly affected by their trauma cognitions. Although speculative, one might assume that when youths evaluate the strength of their alliance, they may adjust their scores according to how they are globally affected by their trauma cognitions. To exemplify, a traumatized youth may have the trauma cognition "nobody can be trusted" but may feel a little confidence in the therapist, causing them to provide a higher

alliance rating. Professionals who do not know the youth's particular struggles with trusting others might only see that the youth seems to lack confidence in the therapist and provide lower alliance scores.

Some have argued that developmental aspects may limit a youth's ability to evaluate their therapeutic alliance (Russell & Shirk, 1998; Shirk & Karver, 2003; Shirk & Saiz, 1999). Others have suggested that therapists should consider using sources other than self-report for assessing youth-therapist alliances, as "children might be too young to have an observing ego or enough perspective to assess their thoughts and feelings about their therapist and their treatment" (Feindler & Smerling, 2022, p. 6). Results from Paper I suggest that asking youths about their opinion of the alliance may be necessary to obtain a useful indicator of its strength. Relevant questions should target the emotional bond (e.g., "How do you like us working together?") and task collaboration (e.g., "Do you understand why we do this?" or "Do you agree on doing this?"). It is important to bear in mind that it may be difficult for youths who experience a poor alliance to express feelings of a weak emotional bond and dissatisfaction with task agreement. This may be particularly difficult for youths struggling with negative trauma-related cognitions related to themself and others (Meiser-Stedman et al., 2009b; Meiser-Stedman et al., 2019). Thus, consulting parents about the strength of the alliance may be helpful.

Assessing the alliance in routine practice may help therapists detect unsatisfactory progress and identify premature terminations (Flückiger et al., 2018). Results from a meta-analysis by Tam and Ronan (2017) suggest that youths' alliance and treatment progress may be enhanced by routinely collecting and promptly communicating and responding to their feedback and needs. Implementing a strategy for eliciting youths' opinions of the alliance throughout treatment can help guide therapists on whether or not the alliance is "on track" or if more focus on alliance-building is needed.

5.2 Methodological Considerations

This thesis has several strengths. First, data were derived from a naturalistic sample of traumatized youths who were referred according to ordinary procedures to eight ordinary mental health clinics situated in smaller communities and larger cities in Norway. This increases the ecological validity of this study. Second, a major strength was the coding of multiple youth and therapist in-session behaviors, as very little research has been conducted on what happens within TF-CBT sessions (Canale et al., 2022). The research conducted as

part of this thesis was, as far as known, the first to have observers rate youth-therapist alliances (using TPOCS-A), therapists' alliance-building behaviors (using AABS-r), and youths' in-session behaviors (using BIDS and CIRS) within a sample of traumatized youths (Papers I–III). The approach of coding in-session behaviors was resource- and time-consuming. However, the coding of therapy processes provides unique insights and sheds light into what occurs during treatment. For example, the results suggest that the coding of youths' involvement behaviors during initial trauma narration seems helpful for predicting outcomes (Paper III), while the coding of the alliance during trauma narration may not be as useful (Paper I). Third, three independent teams conducted the therapy process coding. Team A coded the youth-therapist alliances (TPOCS-A), Team B coded youths' disengagement behaviors (BIDS) and involvement behaviors (CIRS), and Team C coded therapists' alliance-building behaviors (AABS-r). PTSS were assessed by self-report (CPSS) and rated by clinicians (CAPS-CA). The youth-therapist alliances were evaluated from four rater perspectives (i.e., youth, caregiver, therapist, and observer) using two instruments (TASC-r and TPOCS-A) specifically adapted to assessing the alliance. The use of different measures helped to reduce same-rater bias. However, potential methodological issues and limitations that apply to this thesis must also be considered.

5.2.1 Concerns Regarding Validity and Reliability

Validity refers to whether measures assess what they were set out to measure (Field, 2013). Convergent validity refers to whether similar constructs correspond with one another (Campbell & Fiske, 1959). The mixed relationships between the four alliance perspectives (Paper I) may indicate a lack of convergent validity for these measures, indicating that they may not measure the exact same construct. Previous research suggests that the BIDS shows good convergent validity with Strupp et al.'s (1981) Vanderbilt Negative Indicators Scale (Peterson et al., 2011; Peterson & Shirk, 2012). However, the convergent validity of the BIDS was not evaluated within the current study.

Predictive validity relates to the degree to which it can be concluded that a treatment variable caused a change in an outcome variable (Shadish et al., 2002). Only youth ratings of the alliance predicted therapy outcomes (Paper I), which strengthen the predictive validity of this measure on outcomes compared to the remaining three measures of the alliance. The predictive value of the BIDS is strengthened by its predictive value on the TASC-r (Paper II). However, to draw firm conclusions about whether one variable caused change in another

variable, the underlying causal mechanisms of the observed patterns must be known (Kievit et al., 2013). The results from this thesis do only give information about significant associations between the IVs on the DV. The lack of a significant relationship may indicate that the concepts are not related, although firm conclusions cannot be drawn, as an absence of evidence does not equal evidence of absence (Altman & Bland, 1995). The Simpsons paradox might occur when drawing inferences from patterns observed between people to determine patterns that occur within people over time (Kievit et al., 2013). This applies to the assumptions about significant relationships between the IVs on DVs in this study (Papers I–III). To exemplify, youths who reported their alliance as stronger showed the greatest symptom decline from pre- to post-treatment. However, we cannot know whether an increase in the alliance strength of youths who rated their alliance as weaker would indicate a greater symptom reduction from pre- to post-treatment, as this assumption was not examined within the group of youths who rated a weaker alliance. This limits the predictive validity of the findings of this study.

Construct validity refers to the degree to which the variables in a study accurately reflect the construct of interest (Shadish, et al., 2002). A critical caveat in the youth psychotherapy literature is the lack of a common definition of the youth-therapist alliance (Shirk et al., 2011; Zack et al., 2007). In this thesis, the alliance was assessed using the TASC-r (Shirk & Saiz, 1992) and the TPOCS-A (Mcleod, 2001; McLeod & Weisz, 2005). Both instruments are specifically adapted for youths, and they measure the alliance as a two-dimensional construct (i.e., emotional bond and task agreement). However, the goal dimension of the alliance as defined by Bordin (1979) is not included. Additional studies are needed to establish whether the goal dimension of the alliance applies to traumatized youths. AABS-r was used to examine therapists' alliance-building behaviors (Paper II). Previous studies using other instruments to assess therapists' alliance-building behaviors (e.g., Therapist Alliance-Building Behavior Scale; Creed & Kendall, 2005) have suggested that therapist behaviors not captured by AABS-r might also contribute to the alliance (e.g., not being overly formal; Creed & Kendall, 2005). Thus, some concern relate to the construct validity of AABS-r. Furthermore, only the six-item version of the CIRS (Chu & Kendall, 1999; 2004; 2009) was used to examine youth involvement (Paper III). Research suggests that adding diagnosis-specific involvement behaviors may be useful (e.g., Hudson et al., 2014). As such, behaviors that target typical involvement behaviors in traumatized youths during

narrative work should potentially have been added (e.g., does the youth disclose negative trauma-related appraisals?). More research is needed to evaluate the construct validity of the AABS-r and the CIRS.

Discriminant validity refers to whether or not measurements and concepts that are not intended to be related are actually unrelated (Campbell & Fiske, 1959). The total TASC-r score obtained from youths and the CIRS item scores suggested evidence of discriminant validity, as they were only partially correlated (Paper III). However, the relationship between the TASC-r and the CIRS item scores were not tested; thus, more research is needed to evaluate the discriminant validity of these measures. The BIDS that was used to code youths' initial engagement in Paper II is a fairly new measure that has not been used in previous studies. The construct validity for this particular measure was not evaluated, so the idea that other types of behaviors could also entail initial engagement cannot be ruled out. More research is needed to evaluate the measurement properties of the BIDS.

Reliability refers to the ability of a measure to produce consistent results when the same entities are measured under different conditions (Field, 2013). Broadly defined, a reliable measure is one that delivers consistent results and is free from measurement error. An instrument cannot be valid unless it is reliable (Tavakol & Dennick, 2011). One type of reliability is interrater reliability, which refers to the extent of agreement among data collectors (McHugh, 2012). Interrater reliability can be evaluated using the κ (Cohen, 1960) or the ICC (Shrout & Fleiss, 1979). Coder agreement for the BIDS was high (BIDS active κ = .87; BIDS passive κ = .89). The coder agreement for the AABS-r items allying and exploring motivation were poor (κ = .53 and κ =.56, respectively), and these items were therefore removed from further analyses (Paper II). Thus, the possibility that these therapist behaviors might help to build the alliance cannot be ruled out. Future studies may examine this within samples that involve a more frequent use of these therapist behaviors and greater coder agreement. The remaining ICCs for the AABS-r items used in Paper II were good to excellent (Cicchetti, 1994), which indicate sufficient interrater reliability for AABS-r. The ICCs for the CIRS items (Paper III) and the TPOCS-A (Paper I) were excellent (Cicchetti, 1994). These results indicate high agreements between the coders, which strengthens the inter-rater reliability for the process coding. However, the possibility that false-positive or false-negative results occurred due to coding bias cannot be ruled out (observer, instrument, recall, etc.).

Second, Cronbach's alpha (α) is a test score reliability coefficient that estimates a scale's internal consistency (Cronbach, 1951). This is important for testing how closely a related set of test items are as a group. The recommended alpha values for a scale are within the range of .70–.90 (Tavakol & Dennick, 2011). Within the larger RCT study that this thesis builds on, the internal consistency for the PTSS measures was found to be excellent (CAPS-CA α = .90; CPSS α = .91; Jensen et al., 2014). Thus, there is reason to believe that the internal consistency of these scales was also sufficient within the current sample (Papers I-III). Internal consistency for the alliance measures within the current sample was sufficient (TPOCS-A α = .90; TASC-r child α = .92; TASC-r therapist α = .92; TASC-r parents α = .93). However, alphas above > .90 might indicate that some items could be redundant when measuring the underlying construct (Streiner, 2003). Perhaps some TASC-r items could have been removed and reduced the assessment burden for youths, parents, and therapist, but this was not further evaluated. As for the two alliance-building strategies that were identified from the AABS-r using PAF (Paper II), α's were, according to Tavakol and Dennick (2011), below recommended values (rapport building α = .37; treatment socialization α = .64). The term "internal consistency" is somewhat misleading, as the alpha is a measure of not only the magnitude of the interrelatedness among items but also the number of items included in the scale (Streiner, 2003). The low α's might be explained by the number of items that comprised rapport-building (n = 3) and treatment socialization (n = 4). Given the low number of items that comprised each alliance-building strategy, inspection of the correlation matrix for the AABS-r items and theoretical claims, rapport-building and treatment socialization were used for the main analyses despite the low α*'s*. However, the low α's may have caused the results to be biased. Future studies should attempt to replicate the findings to evaluate the rapport-building and treatment socializations strategies and their relationships with treatment outcomes.

5.2.2 Concerns Regarding the Timing and Source of Ratings

Because the aim of this study was to investigate process factors, and a process by nature is not static, the timing of the assessments may have influenced the findings. First, youths, parents, therapists, and observers rated the alliance at only one point in time (Papers I-III). This research design prevented a determination of whether intrapersonal changes in the alliance (i.e., state-like component) would predict changes in symptoms (Zilcha-Mano, 2017). The limitation that applies to assessing IVs at one point in time also applies to youths' and

therapists' in-session behaviors in Paper II. Research suggests that changes in the therapists' alliance-building strategies within treatment sessions may promote a subsequently stronger alliance (Russell et al., 2008). Future studies should assess the aforementioned variables at multiple points in time within and across treatment sessions to untangle the inter-relationships between the variables and to help promote an understanding of their predictive value on therapeutic outcomes.

Second, correlational analyses were conducted to examine the interrelationships between the four alliance perspectives (Paper I) and between youths' alliance and involvement behaviors (Paper III). This approach prevented the identification of growth-curve estimates and control for potential third variables. A common assumption among psychotherapy researchers is that a patient or therapist who is satisfied with the *process* of therapy is likely to rate its results as beneficial (Horvath & Symonds, 1991). A potential third variable may be the possibility that the alliance measured mid-treatment was confounded with treatment effects (Kazdin, 2008). In the context of stronger associations for late versus early measures of the therapy relationship, it is likely that participants who were pleased with progress were inclined to rate the process positively. Thus, we cannot rule out the possibility that youths who perceived greater treatment progress at session six might also have evaluated their alliance as stronger, which may have affected the result of a significant alliance-outcomes association. However, previous research from the Norwegian TF-CBT study suggests that changes in youths' CPSS scores from pre- to mid-treatment are not associated with the strength of youths' evaluations of the alliance at mid treatment (Ormhaug et al., 2014). This finding suggests that treatment response did not affect the alliance ratings at session six in the current study (Papers I-III).

Third, the TASC-r and TPOCS-A scores were not taken from the exact same treatment session, and they were not coded in the same order (Paper I). This might be problematic given that the alliance can vary between sessions. However, research suggests that TPOCS-A and TASC-r scores remain stable across treatment (McLeod et al., 2021), which strengthens the reliability of the results.

Fourth, therapists' alliance-building behaviors were examined within the three first treatment sessions, while youth-therapist alliances were examined at session six (Paper II). This gap in time reduced the contamination effects for these measures. However, it might have also reduced the ability to detect potentially significant effects between these measures,

increasing the likelihood of a type II error (i.e., concluded that there is no association when there actually is one).

5.2.3 Concerns Regarding the Participant Sample and Generalizability

The data used in this thesis (Papers I-III) was taken from a larger RCT study; however, the current sample only included youths from the TF-CBT arm (see Figure 2). This choice was made because TF-CBT is the recommended treatment choice for traumatized youths (ISTSS, 2018; NICE, 2018). Furthermore, the selected sample was predominantly female and mostly of Norwegian descent. Thus, the results of this study may not generalize as well to males with a non-Norwegian background. To generalize the findings, the research should be replicated across other TF-CBT samples with more males and more background diversity as well as across other treatment interventions and clinical populations. This thesis aimed to help guide an understanding of how therapists may optimize outcomes for youths receiving TF-CBT. The lack of a control group prevented a comparison of findings across treatment conditions and may limit the generalizability of the results (Papers I–III). Whether the results are limited to TF-CBT or if they apply to other health conditions, interventions, or treatment settings are not clear. This precludes definitive causal conclusions about the unique effects of TF-CBT on the findings. Most of the features of TF-CBT do not necessary account for associated cultural values within youth populations, which may be challenging for some refugee children and caregivers when participating in TF-CBT (Chipalo, 2021). Thus, the results should be replicated in more diverse samples to strengthen generalizability. Power analyses were calculated for the sample size needed for the lager RCT study. Accordingly, a sufficient number of participants were included in the TF-CBT arm and the TAU arm (see Figure 2). Power analyses were not calculated for the sample size needed for the analyses conducted within the current study. Participants were recruited within a limited time period that preceded the initiation of this thesis. It was not possible to include more participants due to restrictions related to study approvals for the larger RCT study and the administrative capacity and finical cost that more data collection would require. This thesis therefore comprised a sample of 65 youths receiving TF-CBT (Papers I-III). This *n* reduced the statistical power, as smaller effect sizes are more difficult to detect in smaller samples. This increases the likelihood of a type II error in the results. The limited *n* also restricted the number of predictors that could be included in each regression model (Papers I-III). This might have prevented detection of potential third variables that could apply to the relationship

between IVs and outcomes. Arguably, the results of the current study would have been stronger if based on a larger sample size.

5.2.4 Concerns Regarding Potential Therapist Effects

Studies from the adult field suggest that some therapists obtain generally higher alliances with their clients than other therapists and that these clients have better outcomes than clients treated by therapists with lower average alliance scores (Baldwin, et al., 2007; Baldwin & Imel, 2013). Additionally, evidence suggests that a therapist's ethnicity matching that of the client is associated with better outcomes for some groups (Ryan et al., 2021). Furthermore, research from the youth field suggests that some therapists tend to use certain therapist behaviors more across different clients compared to other therapists (i.e., therapist effects), but it is also found that therapists tend to vary their use of alliance-building behaviors across the clients they see (i.e., client effects; Fjermestad et al., 2021). Rather than assuming that all observations are independent, steps were taken in this thesis to control for therapist effects by first conducting mixed-models with clients nested within therapists (Papers I–III). This approach takes into consideration the possibility that youths with the same therapist may be more similar than they are to youths with another therapist (within subject effect) and that therapists might vary (between subject effects). For Paper II, these models were stable, and potential therapist effects were controlled for. For Papers I and III, however, the mixed models were unstable, likely due to the limited sample size and the relatively small number of cases treated per therapist (*M* therapist to client ration = 2.71). The models were recomputed using single-level analyses with a single multi-category categorical level for therapists as an additional IV, but most of the recomputed models provided poorer fit (according to AIC values), higher *p*-values, and larger confidence intervals. The recomputed models with improved model fit did not provide interpretable results (Paper I). Single-level analyses were therefore conducted and used to present the relevant main analyses for Papers I and III without controlling for therapist effect. This means that the possibility that potential therapist effects may have affected the results for Papers I and III cannot be ruled out.

5.3 Implications for Practice

A first main clinical implication of the current study is that therapists should treat traumatized youths' own experience of the alliance as the gold standard for monitoring and optimizing the treatment outcomes from TF-CBT. This is important since only youths' own opinions of their emotional connection and task agreement with the therapist were

significantly associated with treatment change (Paper I). Given that therapists do not seem to be very precise at tuning into youths' experience of the therapeutic alliance, they cannot lean solely on their own clinical expertise when evaluating the strength of youths' alliance. One might think it would be helpful to consult parents, as they might be better at capturing their child's experience of the therapeutic alliance. However, not even parents seem to fully grasp those aspects of their child's alliance that are related to treatment change. Furthermore, using observers' evaluations of traumatized youths' alliance does not seem to be very useful, at least not if youths' alliance is coded during trauma narration, which was the time that the observers coded the alliance within this study (Paper I). Taking all this into account, it seems advisable that therapists initiate a dialogue with youths about the alliance or use written schemes for assessing youths' experience of the alliance. Furthermore, validate youths' experience of the alliance even if it might be negative. Regularly checking in with youths about their experiences of the alliance is also important for evaluating whether parents or therapists have overestimated youths' subjective experience of the alliance, as overestimations of youths' alliance seem to be associated with poorer treatment response (Paper I). For therapists, it may be reassuring to know that most youths in the current study seemed to have developed strong alliances with their therapists despite the fact that traumatized youths often struggle with trauma symptoms such as avoidance and negative trauma-related thoughts about themselves and others. However, if therapists find out that youths experience the alliance as weak, they should focus on strengthening it as this may facilitate youths' response to treatment for the trauma-specific components that entail TF-CBT.

A second main clinical implication of this thesis is that therapists do not need to be concerned that focusing on youths' trauma experiences early in the treatment will negatively affect youths' experience of the alliance later in treatment. On the contrary, it might be useful for therapists to keep in mind that opening up to talk about youths' trauma experiences may be particularly helpful for strengthening the alliance with youths who appear marginally engaged at the start of treatment. To model that it is okay to talk about the traumatic experiences might give important signals to passive youths that the therapist is ready to contain the content of the trauma experiences even though that content may be disturbing and emotionally difficult to talk about. The finding that therapists' focus on trauma-related content did seem to be alliance-building for passively disengaged youths and did not seem to impede the alliance-building process for engaged or actively disengaged youths suggests that

therapists' use of gradual exposure from the start of TF-CBT seems to be compatible with the simultaneously building of a strong alliance.

A third main clinical implication of this thesis is that more rapport-building by therapists at the start of treatment seems to strengthen youths' experience of their alliances with their therapists later in the treatment. Rapport-building seems to be an effective alliance-building strategy with traumatized youths regardless of their expression of being ready for the treatment or engaged in the therapeutic relationship from the start of treatment. For the therapist to be focusing on rapport-building involves eliciting from the youth personal information, which may include trauma-related content, in a supportive manner, and focusing on cognitive restructuring. Using this strategy might send an important signal to youths regarding the therapist's genuine interest in getting to know them, which may facilitate youths' experience of a stronger alliance. Furthermore, using rapport-building may help therapists "personalize" the treatment-specific tasks that also may strengthen the therapeutic alliance. Therapists' use of the treatment socialization strategy (structuring [i.e., leading and directing] the session, focusing on the treatment model, expressing positive expectations for change, and emphasizing collaboration) was not associated with the strength of youths' alliance. This suggests that socializing youths into the treatment model is compatible with alliance-building as long as therapists' use of this strategy does not override rapport-building. Also, therapists should be conscious about providing youths with enough space to become engaged in the collaborative therapeutic project that TF-CBT entails, as results suggest that when therapists take too much leadership of the session and talk far more than the youths themselves (i.e., structuring the session) youths report the alliance as weaker later in treatment (Paper II).

A fourth main clinical implication from Paper III of this thesis is that youths' involvement behaviors during initial trauma narration can provide useful information to therapists. First, youths who express an understanding of why the emotionally challenging exposure work may be helpful may be better equipped to tolerate the heightened emotional distress that the telling and elaborating of their trauma experiences entail. This implies that the therapist should provide information about the framework, content, and purpose of treatment in an age-appropriate manner, check in with the youth about their understanding of the treatment rationale, and sufficiently elucidate and resolve what might be unclear. Second, youths who elaborate more on the trauma narrative seem to have better treatment responses.

Thus, therapists should try to facilitate more exposure to the trauma content, since for youths to be actively working with the traumatic experiences seems to be related to greater treatment improvements. As part of this work, it seems advisable that therapists be transparent about the reasons for conducting the trauma narration as this seems to facilitate youths' process of opening up to the therapist about their trauma experiences during trauma narration. Third, neither signs of avoidance nor signs of passivity and withdrawal seem to be related to poorer outcomes from TF-CBT. Often, the content of trauma narratives may be graphic and emotionally disturbing, so it is natural that this work may be emotionally challenging for both therapists and youths. This finding suggests that therapists should support youths' emotions but continue with the trauma narration process rather than confirm youths' avoidance even if youths in the initial phase of trauma narration express signs of negative involvement behaviors. Fourth and last, it may be useful for therapists to keep in mind that more initiative and enthusiasm from youths during initial trauma narratives may not indicate greater treatment improvements.

The research for this thesis was conducted with a sample of traumatized youths receiving TF-CBT, and there may be some specific challenges related to the alliance with traumatized youths, given that their traumatic symptoms are inner experiences. However, there is reason to believe that the findings of this thesis may also be useful for therapists who treat youths with other mental health problems using other interventions. A key message for therapists working with youths is the importance of tuning into youths' experiences of the treatment process and treatment progress and the importance of ensuring that youths feel they are the main agent in their own treatment. This means walking walk side by side with the youth, being in an active dialogue with them, explicitly checking in with them about the treatment process and progress, listening to their feedback, and making adjustments accordingly.

5.4 Suggestions for Further Research

The papers comprised in this thesis aim to address some of the knowledge gaps that relate to treatment processes with traumatized youths. However, more research is needed to better understand the interrelationship between treatment processes and change. The results of this thesis suggest some directions for future research.

First, it may be useful to examine therapists' in-session alliance-building behaviors across multiple sessions and to examine trajectories in therapist behaviors and the youth-

therapist alliance. Furthermore, more studies of potential moderating effects of client characteristics (e.g., type of trauma exposure) on the link between therapist behaviors and the alliance are needed to help guide therapists on how to individually tailor their alliance-building behaviors. Future studies should focus on discovering what therapists may do to help strengthen the alliance with youths who may be at risk for a weaker alliance (e.g., initially disengaged youth). One path may be to examine whether the use of praise, allying with the youth, or focusing on the emotional aspects of treatment would be helpful in building an alliance, as these behaviors are expected to be good for alliance-building but are not examined in Paper II. It may also be relevant to examine the relationship between therapist behaviors and other therapy processes, such as youths' involvement behaviors. For example, coding therapists' behaviors before the trauma narrative work and examining how these behaviors relate to youths' involvement behaviors during the trauma narration could be useful. Future studies may also examine youths' in-session behaviors during other treatment components. Future studies should examine session-by-session changes in alliance and involvement to understand the direction of effects, such as whether the strength of the alliance predicts in-session involvement behaviors or whether in-session behaviors predict the strength of the alliance for youths receiving TF-CBT.

It would also be relevant to study all the alliances with the tripartite relationship that TF-CBT entails. This would mean extending the research in the present thesis by also examining the parent-therapist alliance. For example, it would be relevant to examine whether parents evaluate their child's alliance differently from how they evaluate their own alliance with the therapist and how potential discrepancies might relate to treatment outcomes. Future studies are also encouraged to examine different perspectives on the alliance across the treatment, as this may provide unique insights into the interactional terms between the perspectives across the treatment. It may also be worth examining whether having observers code the youth-therapist alliance during other treatment components (other than the trauma narration) may be more helpful or whether coding on video rather than on audiotapes could enable observers to capture nonverbal behaviors.

The participants in this thesis knew that their alliance scores would be confidential and not disclosed to their therapists; however, the possibility that youths might adjust their alliance scores if they were accessible to their therapist cannot be ruled out. Perhaps youths might rate their alliance more highly (increasing the risk of ceiling effects) due to social

desirability if they knew that their alliance scores would be visible to their therapist. Thus, it might be useful to evaluate whether youths would respond differently if they openly shared their alliance scores with their therapists. In relation to this suggestion, it might also be relevant to study how often and in what ways therapists should best assess alliances with traumatized youths. In particular, it would be useful to find ways to encourage youths who feel that their alliance is weak to share this opinion with the therapist and perhaps determine how parents might be helpful in this process.

Future studies may also examine therapists' and youths' in-session behaviors and other variables, such as dropout, as therapeutic relationship difficulties between the child and therapist during the initial phase of TF-CBT (stabilization and skill-building) and child avoidance seem to be associated with higher treatment dropout rates (Yasinski et al., 2018). Finally, future studies are encouraged to attempt to replicate the findings of this study within other trauma populations as well as within other clinical populations and in other treatment interventions.

6 Conclusion

TF-CBT builds on trauma theory and emotional and cognitive processing of traumatic memories are proposed to be central mechanisms for reducing PTSS in youth (Cahill & Foa, 2007; Cohen et al., 2017; Ehlers & Clark, 2000; Grasso et al., 2011). Core elements of the treatment are the use of gradual exposure and trauma narration (Cohen et al., 2017). Research suggests, however, that it is the combination of the trauma-specific elements in TF-CBT combined with a strong youth–therapist alliance that seems to optimize treatment response (Ormhaug et al., 2014). The studies that comprise this thesis build on this finding, and the aim was to understand more about how a therapist can build a strong alliance and how youth involvement in trauma-focused interventions relates to outcomes. The thesis thus leans on two strains of research; one relates to the alliance and outcome literature and the other to trauma theory and treatment outcome. Taken together, the findings support that youths' experience of a strong alliance is beneficial for optimizing their treatment response, while an overestimation of youths' alliance by parents and therapists relates to poorer treatment response. More rapport-building by therapists is associated with higher alliance reports from youths. Therapists' focus on socializing youths into the treatment model does not seem to improve or

worsen youths' experience of their alliances; however, directing the session too much and talking far more than youths relate to lower alliance scores from youths. Focusing on youths' trauma experiences early in the treatment does not impede the alliance-building process; on the contrary, opening up to talk about the trauma strengthens the alliance with youths who initially appear marginally engaged. When youths understand the reasons for doing the trauma narration work and elaborating more on their trauma experiences, this seems to facilitate their healing process. These results align with the trauma theories on which TF-CBT builds, which emphasize the beneficial role of actively working with the trauma experiences for alleviating PTSS. The findings contribute to a greater understanding of how therapists can individually tailor TF-CBT to facilitate a more optimized healing process for alleviating PTSS in youths.

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Appendices (Papers I-III)

I

Psychotherapy Research

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Four perspectives on traumatized youths' therapeutic alliance: Correspondence and outcome predictions

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EMPIRICAL PAPER

Four perspectives on traumatized youths' therapeutic alliance: Correspondence and outcome predictions

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ABSTRACT

Objective Does the rater-perspective of youths' therapeutic alliance matter? To answer this, we evaluated the relationships between four perspectives of youths' alliance, then, we examined whether each perspective and potential discordance between the perspectives predicted outcomes.
Method Participants were 65 youth (*M* age = 15.11, *SD* = 2.14; 76.9% girls) undergoing trauma-focused cognitive behavioral therapy (TF-CBT) and their therapists (*n* = 24). Youths' alliance was rated by youth, therapists and parents using the Therapeutic Alliance Scale for Children-revised and by observers using the Therapy Process Observational Coding System-Alliance scale. Posttraumatic stress symptoms (PTSS) were assessed with the Child PTSD Symptom Scale (CPSS) and the Clinician Administered PTSD Scale for Children and Adolescents (CAPS-CA).
Results The alliance ratings by youth-parent, parent-therapist, and therapist-observer significantly correlated. Only a higher youth-rated alliance significantly predicted fewer PTSS. Furthermore, a higher therapist-rated than youth-rated alliance significantly predicted higher scores on CPSS and CAPS-CA, and a higher parent-rated than youth-rated alliance predicted significantly higher CPSS score.
Conclusion Therapists should explicitly check in with youth clients about the alliance; because only youths' evaluation of their alliance predicted the outcome and an overestimation of their alliance by therapists and parents predicted more PTSS.
Trial registration: ClinicalTrials.gov identifier: NCT00635752..

Keywords: alliance; trauma; outcome research; child psychotherapy; trauma-focused cognitive behavioral therapy

Clinical or methodological significance of this article: This study is the first to evaluate four perspectives of traumatized youths' therapeutic alliance in TF-CBT, in which suggests that the rater-perspectives are not interchangeable. The results highlights the importance of directly assessing youths' evaluation of their alliance; only a stronger alliance as rated from youths' perspective predicted greater treatment improvements, furthermore, an overestimations of youths' alliance by therapists and parents were associated with poorer outcomes. Thus, therapists should monitor and take steps to understand and tune into youths' subjective experience of the alliance as the treatment progresses, also, it can be useful to consult parents about their evaluation of their child's alliance.

Numerous studies show that the therapeutic alliance is an important predictor of treatment outcomes in youth and adult therapy (Flückiger et al., 2018; Karver et al., 2018; Murphy & Hutton, 2018). The therapeutic alliance, involving an emotional bond between the client and therapist and their agreement on the tasks and goals of the treatment (Bordin, 1979), has typically been treated as a dyadic construct. This is partly because most therapeutic alliance studies have evaluated adult therapy relationships that usually consist of one patient and one therapist. Therapy relationships differ in child

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therapy, where the child is commonly accompanied by a parent; thus, the therapeutic relationship becomes more complex. The therapist has to involve one or two parents in the therapeutic tasks and goals and secure good alliances in the triangulated relationship that involves both the child and his or her parents (Green, 2006; Karver et al., 2018; Kirsch et al., 2018). In youth therapy in particular, the question then becomes which perspective would be most helpful to assess the alliance: the child's, the parent's, the therapist's or an observer-rated alliance. To answer this question, we need to know which perspective(s) predicts the treatment outcome, whether different perspectives are in accordance with each other, and whether discordance among perspectives is associated with the outcome.

For traumatized children, studies have found that both a strong alliance and trauma-specific interventions may be necessary to alleviate posttraumatic stress symptoms (PTSS) (Ormhaug et al., 2014; Zorzella et al., 2015). However, establishing and assessing the therapeutic alliance with youth exposed to trauma may be particularly challenging for several reasons. First, many traumatized youth, particularly those who have experienced complex trauma, struggle with interpersonal problems (Cloitre et al., 2013). Second, trauma commonly leads to maladaptive thoughts about self-worth, the world as a safe place and negative expectancy to change (Meiser-Stedman et al., 2009; Meiser-Stedman et al., 2019). Such negative appraisals may affect the establishment of mutual task agreement and goals for the future (e.g., "I will never be able to have normal feelings again," "I can't cope when things get tough," "I am permanently damaged"). Third, the hallmark of trauma and posttraumatic stress symptoms is avoidance of trauma triggers (World Health Organization, 2018). Talking or even thinking about traumatizing experiences can lead to re-experiencing with subsequent avoidance of performing the therapeutic tasks—particularly the exposure work. Fourth, re-experiencing often leads to heightened stress responses. Observers may interpret this as something negative in the working relationship instead of constructive trauma processing. Lastly, many trauma related stress responses such as re-experiencing, dissociation, and avoidance of traumatic thoughts are not easily observable. If the child does not verbally express these feelings and responses, it may be very difficult for an observer to correctly assess how the therapeutic relationship is evolving. Even though some of these issues are not exclusive for trauma (i.e., avoidance for anxious children, negative foresight for depressed), there are some additional challenges when evaluating traumatized youths' alliance

When it comes to rater perspectives on youth's alliance on outcomes, youths' subjective evaluation of their alliance has been found to be a reliable predictor of outcomes across studies and diagnoses. A systematic review and meta-analysis that solely included youths' alliance perspective found a significant mean relationship of $r = .29$, suggesting that the youths' alliance perspective accounts for an unprecedented 8% to 12% of explained variability in treatment outcomes across clinical populations (Murphy & Hutton, 2018). This effect size is larger than the results from earlier meta-studies ($r = 0.11–0.22$) that included multiple perspectives and therapeutic relationships (McLeod, 2011; Shirk et al., 2011). Additionally, studies that include traumatized youth have identified youths' alliance perspective to be a significant outcome predictor in trauma treatment (Ormhaug et al., 2014; Zorzella et al., 2015).

Thus far, the predictive value of therapists' ratings of youth alliance on outcomes is unclear. On the one hand, an early meta-study by Shirk and Karver (2003), found that therapists' rating of youths' alliance was a better predictor than youths' own rating. Since then, therapists' rating of youths' alliance is identified to predict treatment improvements across different youth populations (Kazdin et al., 2006; Marker et al., 2013; Shirk et al., 2008). On the other hand, McLeod (2011) did not find a significant difference between the effect sizes of therapists' and youths' evaluations of their alliance as outcome predictors. As noted above, trauma related aspects may affect the therapeutic alliance differently than other patient populations, and to date, evidence suggests that therapists' perspective on traumatized youths' alliance does not serve well as an outcome predictor (Ormhaug et al., 2015; Zorzella et al., 2015).

Research on parental reports of the alliance within youth treatment has mainly focused on parents' *own* relationship with the therapist (McLeod, 2011), and to a lesser degree on parents' perceptions of the *youths'* alliance. Parents possess unique knowledge about their child's emotional, social and cognitive development, which in combination with parents' direct observations in therapy can inform therapy outcomes. Thus, the limited research on parents' evaluation of their child's alliance is surprising. In one of the few studies to include parental reports of their anxious child's alliance, the results showed that mother-rated alliance predicted outcomes, but father-rated alliance did not (Marker et al., 2013). Whether parents' perception of their child's alliance predicts the outcome in the treatment of traumatized youth has yet to be evaluated.

Because the findings on the predictive value of therapist-, and parent-rated alliance on youths' outcomes are inconsistent, some have argued that an

observer's rating of the alliance might be a more equitable methodological approach than the report from those subjectively involved in the treatment (Albaum et al., 2020; McLeod & Weisz, 2005; Shirk & Karver, 2003). However, few studies have examined this issue, and the available findings are mixed. Studies have found that a stronger observer-rated alliance predicted treatment improvements for depressed youth (Labouliere et al., 2017) and youth with autism (Albaum et al., 2020; Kang et al., 2021). Furthermore, McLeod and Weisz (2005) found that a higher observer-rated child alliance predicted greater reductions in anxiety symptomatology but not depressive symptomatology or other internalizing symptoms post-treatment. To evaluate the utility of observer-rated alliance, more studies of its relationship with outcomes are required, and a knowledge gap exists in the evaluation of the predictive value of observers' alliance perspective on the outcome for traumatized youth.

Since youth therapy most often involves at least three participants (the youth, parent and therapist) one important question is whether these have a similar perception of the alliance (Zandberg et al., 2015). It may be helpful for therapists to know if they are on track and can lean on their own clinical perception of how their youth patients experience the alliance, or if they need to use other sources to evaluate its quality. The results from studies that investigate the level of concordance between youth and therapist alliance ratings are mixed; in some studies, youths' and therapists' evaluations of the alliance were found to be significantly associated (Bickman et al., 2012; Kazdin et al., 2006; McLeod et al., 2017), while other studies did not find this association (Fjermestad et al., 2016; van Benthem et al., 2020). One consistent finding is that therapists tend to underestimate the strength of the alliance compared to youths' alliance reports (Hawley & Garland, 2008; Loos et al., 2020; Ormhaug et al., 2015; Zandberg et al., 2015). In regards to studies of traumatized youth, we are currently aware of only two studies that have investigated concordance between alliance ratings by youth and therapists. In the first study, Zorzella et al. (2015) found significant correlations between therapists' and children's (ages 7–12) ratings of the alliance at three-time points of trauma-focused cognitive behavioral therapy (TF-CBT). In the second study that included an older sample (ages 10–18), we found that therapists' and youths' alliance ratings across TF-CBT and therapy as usual (TAU) at session six were significantly correlated, $r = .39$ (Ormhaug et al., 2015).

Regarding the evaluation of parents' ratings of their child's alliance, the literature is scarce. In one study, the concordance between parents' evaluations of their own alliance with the therapist significantly correlated with their traumatized child's perception of the alliance with the same therapist (Kirsch et al., 2018). The concordance between traumatized youths' alliance rated by self-report and parents, in addition to the concordance between parents' and therapists' perspectives of traumatized youths' alliance, have yet to be evaluated.

Few studies have simultaneously included an evaluation of youth alliance from self- and observer-reports (McLeod, 2011). In one study, a significant correlation was found between the alliance rated by observers and anxious youth receiving CBT (Creed & Kendall, 2005). In line with this, Karver et al. (2008) found alliance reports from depressed youth receiving CBT to be significantly correlated with observers' ratings of the alliance. In contrast, a recent study did not find observers' alliance reports to be significantly correlated with alliance reports from youth with autism spectrum disorder (Kang et al., 2021). In the aforementioned study by McLeod et al. (2017), youths' alliance scores were only weakly correlated with observers' alliance scores. The concordance between observers' and youths' ratings of traumatized youths' alliance remains to be examined.

The last question we examine is whether the level of discordance between different rater perspectives is related to outcomes. Several studies of the alliance within the dyadic relationship in adult treatments suggest that a mutual agreement of the strength of the alliance is associated with better treatment outcomes (e.g., Jennissen et al., 2020; Marmarosh & Kivlighan, 2012; Zilcha-Mano et al., 2017). Among the few studies to examine discrepancies in alliance ratings as outcome predictors within the child field, Zandberg et al. (2015) found that a larger discordance in client and therapist alliance ratings was not associated with treatment outcomes for anxious youth. Fjermestad et al. (2016) found that a greater concordance between therapists and anxious youth on changes of the alliance during CBT was related to greater treatment improvements. In our previous research, we investigated the concordance in alliance ratings between traumatized youth and their therapist—results showed that an overestimation of youths' alliance by their therapists predicted poorer outcomes (Ormhaug et al., 2015). One could assume that a large discrepancy between the child's perspective and the adults' perspectives indicates that the child is not being accurately understood, and this could potentially affect outcome.

In sum, little is known about the best way to monitor the alliance in youth therapy (Bickman et al., 2012), and very few studies have examined

ways to monitor traumatized youths' alliance in therapy. On the one hand, it may be helpful to evaluate multiple perspectives of the alliance, as this could help avoid demand characteristics and help to control for common rater variance that may occur because the rater of the alliance and outcome is the same (Hawley & Garland, 2008; Kazdin & Durbin, 2012; McLeod & Weisz, 2005). On the other hand, it may not be practical in a clinician's everyday practice to administer several assessments, and observer-rated alliance ratings are especially resource demanding. More knowledge on whose perspective to monitor may improve evidence-based practice and help clinicians to be more efficient in their clinical work.

Research Aims and Hypotheses

We aimed to extend existing studies by examining four perspectives on traumatized youths' alliance (self-report, therapist, parent and observer) during a trauma specific treatment (TF-CBT), building on secondary analysis from a randomized controlled trial showing better treatment improvements for youth receiving TF-CBT compared to those receiving therapy as usual (Jensen et al., 2014). We examined three research questions and formed hypotheses based on the reviewed literature. (1) Which perspectives predict outcomes? We hypothesized that a strong youth-rated alliance would predict larger decline in PTS symptoms, while therapists' ratings of the alliance would not predict decline in PTS symptoms. Given the mixed findings on observers' ratings, the limited studies on parents' ratings, and no studies within a trauma population, we had no predefined hypothesis regarding their predictive value. (2) To what extent is there a concordance between youth, parent, therapist and observer ratings of youths' alliance? We hypothesized that the four perspectives would be moderately positively correlated. (3) Does the level of discordance predict poorer outcomes? We hypothesized that an overestimation of youths' alliance by parents and therapist would predict poorer treatment outcomes. We had no hypothesis as to whether discordance between parents' and therapists' alliance reports would predict the outcome.

Methods

Participants

Clients. Participants were 65 youth (*M* age = 15.11, *SD* = 2.14, range 10–18 years, 76.9% girls) who received TF-CBT as part of a clinical trial in Norway. Information about the study was given both verbally and in written form, and written consent was obtained from both caretakers and youth. Procedures were reviewed and approved by the Regional Committee for Medical and Health Research Ethics. For a full description of the source study, see (Jensen et al., 2014). Inclusion criteria for this trial were referral to one of the eight participating community clinics, age 10–18 years, exposure to at least one traumatic event and significant symptoms of PTS (i.e., a score of 15 or higher on the Child PTSD Symptom Scale (CPSS); Foa et al., 2001). The majority of the sample (76.92%) fulfilled the diagnostic criteria for PTSD as assessed with the Clinician Administered PTSD Scale for Children and Adolescents (CAPS-CA; Nader et al., 2004). In addition, 69.2% scored above the clinical cut-off for depression (Mood and Feelings Questionnaire [MFQ]; Angold et al., 1995), 52.4% over clinical cut-off for anxiety (Screen for Child Anxiety Related Disorders [SCARED]; Birmaher et al., 1999), and 47.7% on other general mental health problems (Strengths and Difficulties Questionnaire [SDQ]; Goodman, 2001). Pretreatment traumatic experiences were assessed using an adapted version of the Traumatic Events Screening Inventory for Children (TESI-C; Ribbe, 1996). Participants reported on average exposure to 3.63 different types of trauma (*SD* = 1.62, range 1–8). When asked to identify the worst traumatic experience, the majority reported exposure to family violence (38.4%), followed by violence outside the family (16.9%), sudden death of a person close to the participant or involved in a severe accident (18.5%), inter-familial sexual abuse (12.3%), or sexual abuse outside the family (13.8%). Participants' background was classified into those with at least one Norwegian-born parent (*n* = 53) or those with non-Norwegian-born parents (*n* = 12). Most participants lived primarily with one parent (55.4%), 32.3% lived with or spent equal time with both parents, and 10.8% had other living arrangements (1.5% did not report their living situation). For the majority (41.5%) the mean level income was > 83,300 USD, and 37% had a mean level income ≤ 83,300 USD (21.6% did not report income; mean level income in Norway in 2012 = USD 79,800; https://www.ssb.no/).

Caregivers. The majority of caregivers were a biological parent (89.2%); 4.6% were foster parents. Most parents came from the study country (*n* = 50, 76.9%). Approximately one-half (50.8%) had completed high school/vocational school; 36.8% had attended college/university and 6.2% had completed junior high school. The majority was working full/part time (69.2%), 18.5% were

welfare recipients, 6.2% were job seekers/students. Demographic data for caregivers were missing in four cases.

Therapists. The therapists ($n = 24$, 91.7% female) consisted of 19 psychologists, 2 psychiatrists, 2 clinical educational therapists and 1 clinical social worker. Years of clinical experience ranged from 3 to 28 ($M = 9.63$, $SD = 5.72$), and on average, therapists treated 2.71 youth ($SD = 1.40$, range 1–6). The theoretical orientation of the therapists were CBT ($n = 16$), psychodynamic ($n = 5$), or systemic/family therapy ($n = 2$; one therapist did not report a theoretical orientation). All therapists volunteered to receive TF-CBT training and participate in the study (for further details, see Jensen et al., 2014).

Treatment

TF-CBT is a component-based manualized treatment specifically developed to target PTSS (for a full description of the model, see Cohen et al., 2017). The model is based on theoretical principles from cognitive, behavioral, interpersonal and family therapy. The components are organized into three treatment phases: stabilization and skills building (psychoeducation, relaxation and stress-management skills, affective modulation skills, and cognitive coping), exposure and cognitive processing (creating a trauma narrative, alteration of posttraumatic cognitions), and finally consolidation and closure (in vivo mastery of trauma reminders, enhancing safety and future development). Gradual exposure to the youth's traumatic experience(s) is a central part of the model and therapists are encouraged to continuously focus on building and maintaining a strong alliance by validating the youth's experiences, being supportive and trustworthy, and using gradual exposure techniques before the trauma narration to not overwhelm the youth. Youth and their nonoffending parents are involved in the treatment, and both parallel and conjoint sessions are provided. The treatment is typically delivered over 12–15 weekly sessions. In this study, youth had, on average, 16.26 ($SD = 8.76$) sessions before the case was discharged from the clinic. Parents attended, on average, 7.94 sessions ($SD = 4.93$), and a majority attended ≥ 3 sessions (81.5%). All therapy sessions were audio-recorded and coded for fidelity by at least one trained TF-CBT therapist using the treatment adherence checklist for TF-CBT (Deblinger et al., 2008). All included cases were in accordance with the treatment manual.

Instruments

Youth-, therapist- and parent-rated youth alliance. The Therapeutic Alliance Scale for Children-revised (TASC-r; Shirk, 2003, november; Shirk & Saiz, 1992) was used to measure the perceived quality of youths' alliance as rated by youth, therapists and parents. The TASC-r measure consists of 12 items, of which half assess the therapeutic bond (e.g., *I like spending time with my therapist*) and the other half of the items assess task collaboration (e.g., *I work with my therapist on solving my problems*). Each item is rated on a 4-point scale (0 = *not at all* to 4 = *very much*). The scale was translated and back translated according to recommended procedures, and the scales' first author approved the final Norwegian version. Reliability analyses with the current sample showed that the scale had good internal consistency on scores from youth ($n = 58$, $\alpha = .92$), therapists ($n = 56$, $\alpha = .92$) and parents ($n = 40$, $\alpha = .93$).

Observer-rated youth alliance. The Therapy Process Observational Coding System for Child Psychotherapy—Alliance Scale (TPOCS-A; McLeod, 2001) was used to obtain an observer-rated measure of youths' alliance. The TPOCS-A is rated by independent evaluators on nine items on a 6-point scale (0 = *not at all* to 5 = *a great deal*), in which six items assess bond elements of the client–therapist relationship (e.g., *to what extent does the client demonstrate positive affect toward the therapist*), and three task items assess client participation in therapeutic activities (*to what extent does the client not comply with tasks*). Two studies have demonstrated that TPOCS-A has adequate interrater reliability, good internal consistency, and mixed convergent validity with other alliance measures (see McLeod et al., 2021; McLeod & Weisz, 2005). In the present study, the internal consistency between items was excellent ($\alpha = .95$).

Two graduate students in psychology coded the sessions from audiotapes using the TPOCS-A coding manual. One of the scale's authors trained the coders, and the coders practiced coding on 22 TF-CBT patients from another study, in which they reached a coder agreement of $\alpha = .89$, which is excellent (Cicchetti, 1994). Then, the coders used the TPOCS-A to code the alliance for youth in the present study. The patients were randomly selected for the coders, and the coders were blinded to the treatment outcome. A random selection of nine patients (18%) was double coded, and the mean score was used from the patients that were double coded to prevent coders from drifting; also, the coders had weekly meetings. Interrater agreement

on the included cases was $\alpha = .90$, which is excellent (Cicchetti, 1994).

Youth-rated PTSS. PTSS were assessed using the self-completion questionnaire CPSS (Foa et al., 2001), which covers 17 symptoms of PTS disorder (PTSD) defined in the Diagnostic and Statistical Manual of Mental Disorders-IV (American Psychiatric Association, 1994). This includes the three factors re-experiencing, avoidance, and hyperarousal. Symptom frequency in the last two weeks is rated on a 4-point scale (0 = *never* to 3 = *almost every day*), yielding a total score ranging from 0 to 51. The scale was translated and back translated, and the developers of the scale approved the Norwegian version. The measure is appropriate for children aged 8–18 years and has demonstrated excellent internal consistency, test-retest reliability, and convergent validity (Foa et al., 2001; Gillihan et al., 2013). Within the larger RCT study, in which the present study is a subsample, the scale showed good internal consistency (total scale: $\alpha = .91$, re-experience: $\alpha = .84$, avoidance: $\alpha = .80$, hyperarousal: $\alpha = .75$; for further details, see Jensen et al., 2014).

Clinician-rated PTSS. PTSD diagnosis was assessed with the CAPS-CA (Nader et al., 2004). The CAPS-CA is a structured interview that assesses the frequency and intensity of the 17 *DSM–IV* defined symptoms of PTSD. Items are scored on 5-point frequency scales (e.g., from 0 = *none of the time* to 4 = *most of the time*) and 5-point intensity rating scales (e.g., from 0 = *not a problem* to 4 = *a big problem, I have to stop what I am doing*), assessing the past month. Items are scored based on both the youths' answers and clinical judgment during the interview. The interview was translated and back translated, and the first author of the CAPS-CA approved the translation. CAPS-CA has shown good internal consistency (Cronbach's alpha = .75-.82), excellent interrater reliability (ICC = .97), and adequate convergent validity (Leigh et al., 2016). In the larger RCT study in which the present study is a subsample, the scale showed satisfactory internal consistency (total scale: $\alpha = .90$, re-experience: $\alpha = .87$, avoidance: $\alpha = .77$, hyperarousal: $\alpha = .79$; for further details, see Jensen et al., 2014).

Procedure

All measurements were administered by licensed psychologists that were blinded to the treatment condition. The CAPS-CA was administered at pre-treatment and post-treatment (after completion or the 15th session). The self-completion instrument CPSS was administered pre-, and post-treatment, and TASC-r was administered at mid-treatment (around session six, *M* session number = 6.47, *SD* = 1.25, range 3–9). In order to provide consistency, TPOCS-A was coded during the first narrative session (*M* session number = 7.22, *SD* = 1.34, range 5–12).

Data Analysis Plan

We adopted an eight-step approach to data analysis. First, we estimated and inspected skewness, kurtosis, means and standard deviations for all scores on the CPSS, CAPS-CA, TASC-r, and TPOCS-A. Second, we examined the relationships between pre-treatment symptom scores (from CAPS-CA and CPSS) and the alliance scores (from TASC-r and TPOCS-A) using bivariate correlations. Third, we used bivariate correlations to examine the relationships between the variables in step one and the continuous variables; youths' age and therapists' level of experience. We then used independent sample *t*-tests to examine potential differences in gender and background (at least one Norwegian-born parent versus non-Norwegian-born parents) on the variables in step one. Fourth, missing data on the alliance (youth with vs. youth without an alliance score on each of the four alliance measures) were examined with nonparametric tests because of the unequal sample sizes. Potential group differences in continuous variables (age and pretreatment symptoms of PTS) were assessed using Mann–Whitney *U* tests. Potential differences in categorical variables (gender and background) were assessed using chi-squared tests. Fifth, each alliance perspective was separately entered as an independent variable (IV) in two linear regression models: (1) posttreatment CPSS score as the dependent variable (DV) and pretreatment CPSS score as the IV and (2) posttreatment CAPS-CA score as the DV and pretreatment CAPS-CA as the IV. Sixth, bivariate correlations were used to examine associations between TASC-r and TPOCS-A scores. Seventh, to examine discordance between the rater perspectives on youths' alliance, we computed three scores: the (1) therapist-minus youth-rated alliance score, (2) parent- minus youth-rated alliance score, and (3) therapist- minus parent-rated alliance score. Then, each score was separately entered as an IV in the two linear regression models as described in step five. Finally, in order to adjust for potential therapist effects we recomputed all models from step five and seven by entering a single multi-category categorical level for therapists as an additional IV, and used the Akaike

information criterion (AIC) to compare model fit between models.

Given the nested data structure, we first attempted to estimate mixed-effects models with random effects for therapists with R version 3.6.1 (The R Foundation for Statistical Computation, Vienna, Austria) and the R package nlme (Pinheiro & Bates, 2000). Results showed that the models came out unstable, probably due to the small number of youth treated for some therapists, thus, we followed the advice by Pinheiro and Bates (2000) and performed single-level analyses. The level of statistical significance was set at $p < .05$. Analyses were conducted using IBM SPSS, version 22 (IBM, 2013). AIC values were computed using R (The R Foundation for Statistical Computation, Vienna, Austria)

Results

Preliminary Analyses

The means and standard deviations for the scores on CPSS (pre- and posttreatment), CAPS-CA (pre- and posttreatment), TASC-r (rated by youth, therapists, and parents) and TPOCS-A showed substantial variability (See Table I), and skew and kurtosis were within acceptable ranges (1.36 — 1.32; −0.85–1.82, respectively), indicating a non-problematic deviation from the assumption of the normality. Correlations between pretreatment symptom scores (CPSS and CAPS-CA) and the alliance measures (TASC-r and TPOCS-A) were all non-significant (see Table I). The variables in step one were not associated with youths' age or therapists' level of experience (Table I), neither did any differences appeared on these variables across youth' gender and background. Missing data analyses showed no significant differences between groups of participants with or without TASC-r scores from youth or therapists. Participants with a TASC-r parent score were significantly younger ($M = 14.20$) than those without this score ($M = 16.52$, $U = 165$, $z = -4.60$, $p < .001$, $r = -0.57$). Participants with a TPOCS-A score were significantly younger ($M = 14.82$) than those without this score ($M = 16.07$, $U = 229$, $z = -2.31$, $p = 0.21$, $r = -2.29$). Participants with a TPOCS-A score were more likely to have at least one Norwegian-born parent than those without a TPOCS-A score, X^2 (1, $N = 65$) = 6.00, $p = 0.14$.

Primary Analyses

First, we examined the four perspective(s) of youths 'alliance as PTS outcome predictors in TF-CBT (see Table II). As hypothesized, higher alliance scores by youth significantly predicted lower PTS scores on CPSS (Est. = −0.52, $p = .004$, 95% CI [−0.86, −0.17]) and CAPS-CA (Est. = −0.84, $p = .046$, 95% CI [−1.66, −0.02]), while therapists' alliance scores were not significantly associated with PTS outcomes. Furthermore, our exploratory analyses showed that neither parents' nor observers' alliance scores significantly predicted PTS outcomes.

Secondly, we examined the relationships between the four perspectives of youths' alliance (see Table I). As predicted, youths' and parents' alliance scores were significantly positively correlated ($n = 40$, $r = .46$, $p = .003$), with medium strength. Furthermore, significantly positive correlations were found between the parent-therapist rated alliance scores ($n = 39$, $r = .55$, $p = < .001$) and observer-therapist-rated alliance scores ($n = 48$, $r = .39$, $p = .006$), both with medium strengths. Contrary to our prediction, youths' alliance scores were not significantly correlated with the alliance scores by therapists or observers ($n = 54$, $r = .15$, $p = .276$ and $n = 50$, $r = .23$, $p = .107$, respectively), neither was parent-rated alliance scores significantly correlated with observers' ratings ($n = 37$, $r = .16$, $p = .349$). To further dismantle the discrepancies from youths' alliance ratings by the other respondents we did post-hoc analyses to examine the correlations between youths' bond scores with the other informants' bond scores; and youths' task scores with the other informants' task scores. Results showed that youths' bond scores significantly correlated with parents' ($r = .53$, $p < .001$) but not therapists' or observers' task scores ($r = .25$, $p = .069$ and $r = .26$, $p = .069$, respectively). Youths' task scores significantly correlated with parents' ($r = .35$, $p = .027$) but not with therapists' or observers' task scores ($r = .02$, $p = .882$ and $r = .19$, $p = .175$, respectively).

Third, we examined discrepancies between youths', therapists' and parents' alliance scores as PTS outcome predictors controlling for pretreatment PTS (see Table III). As predicted, a higher therapist- than youth-rated alliance score was a significant predictor of higher posttreatment PTSS scores on CPSS (Est. = 0.57, $p < .001$, CI [0.27, 0.87]) and CAPS-CA (Est. = 0.90, $p = .017$, CI [0.17, 1.63]). Furthermore, our hypothesis that a higher parent- than youth-rated alliance score would predict poorer PTSS outcomes was partially supported; a larger discordance in terms of parental overrating of the alliance compared with youths' own reports significantly predicted higher scores on CPSS (Est. = 0.54, $p = .008$, 95% CI [0.15, 0.93]), but it did not predict scores on CAPS-CA (Est. = 0.81, $p = .116$, CI [−0.21, 1.83]). Our last exploratory

Table I. Means, standard deviations and bivariate correlations for youths' age, therapists' years of experience, PTSS and alliance scores.

Variables	*n*	*M*	*SD*	1	2	3	4	5	6	7	8	9	10
1. Youths' age	65	15.09	2.19	-	.19	.11	.12	-.02	.12	-.07	.19	.09	.09
2. Therapists' yrs. experience	65	9.42	5.33		-	-.07	.14	.02	.08	-.13	.24†	-.17	.06
3. Pretreatment CPSS	65	27.40	7.41			-	.26†	.60***	.36*	.04	.15	.24	.03
4. Posttreatment CPSS	53	11.72	10.73				-	.39**	.93***	-.37**	.24†	.19	-.06
5. Pretreatment CAPS	65	58.95	19.08					-	.47**	.01	.11	.20	-.04
6. Posttreatment CAPS	50	31.66	25.79						-	-.28†	.18	.16	-.05
7. Youth TASC-r	58	37.83	7.83							-	.15	.46**	.23
8. Therapist TASC-r	56	36.13	5.63								-	.55***	.39**
9. Parent TASC-r	40	39.42	7.78									-	.16
10. Observer TPOCS-A	50	29.11	6.80										-

Note: *n* = number of participants; *M* = mean; *SD* = standard deviation; Therapists' yrs. Experience = Therapists years of clinical experience. CPSS = Child PTS Symptom Scale; CAPS-CA = Clinical Diagnostic Interview of Adolescents' PTSS; TASC-r = Therapeutic Alliance Scale for Children-revised; TPOCS-A = Therapy Process Observational Coding System-Alliance scale. $^{\dagger}p < 0.10$, $^{*}p < 0.05$, $^{**}p < 0.010$, $^{***}p < 0.001$.

analysis showed that the discrepancy between therapist-parent alliance scores did not predict outcomes on CPSS (Est. = 0.52, $p = .004$, 95% CI [−0.86, −0.17]) or CAPS-CA (Est. = 0.52, $p = .004$, 95% CI [−0.86, −0.17]).

Finally, results showed that the recomputed models from step five with the entrance of a single multi-category categorical level for therapists as an additional IV provided poorer fit according to AIC for all models except for the model predicting CPSS T3 from the discrepancy in parent-youth alliance score in which provided a better model fit. The results from the recomputed models showed that higher alliance scores from youth significantly predicted lower outcome scores on CPSS (Est. = −0.75 CI [−1.26, −0.24], $p = .005$) and CAPS (Est. = - 1.60, CI [−2.68, −0.51], $p = .006$), while neither parents', therapists' nor observers' alliance scores significantly predicted outcomes. Furthermore, the discrepancy between therapist- youth alliance scores, and the discrepancy between parent-youth alliance scores significantly predicted higher outcomes on CPSS (Est. = 0.75, CI [0.24, 1.26], $p = .005$ and Est. = 0.80, CI [0.08, 1.53], $p = .032$, respectively). The discrepancy between therapist-youth alliance scores significantly predicted outcome scores on CAPS-CA (Est. = 1.54, CI [0.40, 2.68], $p = .010$), while the discrepancy between parent-youth alliance scores was a trending predictor of outcome scores on CAPS-CA (Est. = 1.60, CI [−0.10–3.30], $p = .063$). The discrepancy between therapist-parent alliance scores did not predict outcomes. Of note, the single multi-category categorical level for therapists was not a significant outcome predictor in any of the models. The recomputed models from step five and seven that included the interactional terms between the primary IVs in each model with the single multi-category categorical level for therapists on outcome indicated a better model fit according to AIC for all models. The only significant interactional effect was between the discrepancy between therapist-parent alliance scores and the single multi-category categorical level for therapists variable on CPSS outcomes ($p = .026$).

Table II. Posttreatment PTSS outcomes predicted by Pretreatment PTSS outcomes and alliance measures.

Predicting Posttreatment CPSS scores				Predicting Posttreatment CAPS scores			
Variables	Est.	95% CI	*p*	Variables	Est.	95% CI	*p*
Pretreatment CPSS scores	0.38	[0.02, 0.75]	.039	Pretreatment CAPS scores	0.58	[0.26, 0.90]	.001
Youth TASC-r	−0.52	[−0.86, −0.17]	.004	Youth TASC-r	−0.84	[−1.66, −0.02]	.046
Pretreatment CPSS scores	0.34	[−0.08, 0.75]	.110	Pretreatment CAPS scores	0.65	[0.29, 1.01]	.001
Therapist TASC-r	0.44	[−0.14, 1.03]	.134	Therapist TASC-r	0.66	[−0.66, 1.98]	.317
Pretreatment CPSS scores	0.60	[0.12, 1.09]	.016	Pretreatment CAPS scores	0.67	[0.27,1.06]	.002
Parent TASC-r	0.13	[−0.32, 0.57]	.568	Parent TASC-r	0.24	[−0.83, 1.30]	.655
Pretreatment CPSS scores	0.40	[−0.01, 0.81]	.055	Pretreatment CAPS scores	0.50	[0.15, 0.86]	.007
Observer TPOCS-A	−0.12	[−0.61, 0.38]	.629	Observer TPOCS-A	−0.10	[−1.24, 1.04]	.860

Note. Est. = estimate; CI = confidence interval. CPSS = Child PTSD Symptom Scale; CAPS-CA = Clinician-Administered PTSD Scale for Children and Adolescents; TASC-r = Therapeutic Alliance Scale for Children-revised; TPOCS-A = Therapy Process Observational Coding System-Alliance scale.

Table III. Posttreatment PTSS outcomes predicted by Pretreatment PTSS outcomes and discrepancies in alliance scores by youth, therapists and parents.

Predicting Posttreatment CPSS scores				Predicting Posttreatment CAPS scores			
Variable	Est.	95% CI	*p*	Variable	Est.	95% CI	*p*
Pretreatment CPSS score	0.35	[−0.02–0.72]	.063	Pretreatment CAPS score	0.62	[0.28–0.96]	.001
Therapist minus Youth TASC-r	0.57	[0.27–0.87]	<.001	Therapist minus Youth TASC-r	0.90	[0.17–1.63]	.017
Pretreatment CPSS score	0.51	[0.06–0.94]	.027	Pretreatment CAPS scores	0.59	[0.20–0.99]	.004
Parent minus Youth TASC-r	0.54	[0.15–0.93]	.009	Parent minus Youth TASC-r	0.81	[−0.21–1.83]	.116
Pretreatment CPSS score	0.63	[0.14–1.11]	.013	Pretreatment CAPS score	0.74	[0.34–1.14]	.001
Therapist minus Parent TASC-r	−0.07	[−0.59–0.46]	.799	Therapist minus Parent TASC-r	−0.08	[−1.31–1.14]	.890

Note. Est. = estimate. CI = confidence interval; CPSS = Child PTS Symptom Scale; CAPS = Clinician-Administered PTSD Scale for Children and Adolescents; TASC-r = Therapeutic Alliance Scale for Children-revised.

Overall, the interactional models provided higher *p*-values and increased the standard error for all models as was expected given the increased number of degrees of freedom in the models when entering the single multi-category categorical level for therapists in the primary models from step five and seven.

Discussion

It is widely recognized that a strong therapeutic alliance is important for optimizing treatment outcomes. However, the attention given to rater perspective has been scant and it is uncertain which rater perspective is best to monitor the alliance in youth treatment (Bickman et al., 2012). In response to this gap, we first investigated the predictive role of four perspectives of youths' alliance on PTS outcomes from TF-CBT. In line with our hypothesis, a stronger youth perceived alliance predicted less PTSS, while neither therapists', observers' nor parents' perspectives of youths' alliance predicted outcomes. In terms of concordance, results showed that youth and parent ratings were significantly related, as well as parent—therapist, and therapist—observers. Lastly, we investigated the predictive role of rater discordance on youths' alliance on outcome. As hypothesized, an overestimation of youths' alliance by therapists and parents was associated with poorer treatment response, however, discordance between therapists' and parents' perception of youths' alliance was not related to treatment outcomes.

Our finding that a stronger youth-rated alliance predicted better treatment response is in accordance with results from previous studies involving traumatized youth (Ormhaug et al., 2014; Zorzella et al., 2015). For traumatized youth to experience their therapist as trustworthy, caring and knowledgeable can help reduce an initial fear of talking about their traumatic experiences and help to establish a strong working relationship. Thus, perhaps the feeling of being in an emotionally containing and collaborative working relationship with a therapist during the mid-treatment phase is associated with a more beneficial trauma processing. For youth to experience that they are on the same page as their therapist on the treatment's task, along with having a mutually strong emotional bond, may be curative on its own but may also be a prerequisite for treatment involvement in therapeutic activities (Kendall & Ollendick, 2004; Shirk & Karver, 2003). Future studies are encouraged to examine the associations between youths' alliance and in-session involvement behaviors in trauma treatment.

According to the current study's results, professionals' evaluations of traumatized youths' alliance, either based on direct or indirect observations of the youth, do neither predict traumatized youths' treatment response nor significantly correspond with youths' own view of their alliance. There may be several reasons why it may be challenging for therapists and observers to capture both facets of traumatized youths' alliance. First, assessing traumatized youths' alliance may be more complicated compared to other clinical populations due to the typical PTS symptoms of re-experiencing, avoidance and hypervigilance, and the role trauma reminders play in activating these responses. Results from a qualitatively study by Dittmann and Jensen (2014) indicated that many youth in TF-CBT experience that working with their trauma history is among the most challenging but also among the most helpful part of TF-CBT. However, this in-session activation/stress and avoidance during the trauma exposure work could be interpreted as poor task collaboration by the observers and therapists. Second, many symptoms of PTS are internalizing and commonly include negative appraisals of self and the world (Meiser-Stedman et al., 2009; Meiser-Stedman et al., 2019), that may affect traumatized youths' working models and schemas of interplays in close

relationships. Thus, it might be necessary to directly ask youth to describe their emotional bond with a therapist as well as frequently assess symptom development given that these are inner experiences that are not easily observed (Smith et al., 2019). Third, therapists' and observers' evaluations of the alliance were significantly associated, indicating that clinical training may be associated with common conceptualizations of the alliance. It is possible that professionals that are trained to evaluate youths' alliance do not consider that the conceptualization of a therapeutic alliance may be differently perceived by profesionals and youth. Research suggests that therapists' alliance scores center around the bond and tasks dimensions while it seems that youth rather perceive the alliance as a unidimensional affective construct (Accurso et al., 2013; Ormhaug et al., 2015). Thus, it is necessary that therapists also directly adress youths' perception of the mutual task cooperation, and weighten the focusing on this alliance facet up agains the importance of a strong therapeutic bond.

According to the current study's results parent-rated alliance does not predict youths' treatment outcomes from TF-CBT, even though there was a high concordance between parents' and youths' alliance ratings. There may be several reasons that parents seem to be particularly good at tuning in to their child's alliance. For one, parents are often well informed about their child's referral process and the child's attitude and expectations regarding therapy. Secondly, parents possess unique insights into their child's lifespan, developmental stage and relational response patterns. Lastly, parents observe their child across the therapeutic context and in private situations. This enables parents to evaluate their child's alliance based on the combination of direct observations of the child's interaction with the therapist with relevant information of the therapeutic relationship provided from the child between sessions (e.g., verbal expressions about the therapist or about attending therapy). Despite this, we did not find parents' evaluation of their child's alliance to predict youths' treatment response. Again, this underscores that an evaluation of traumatized youths' alliance through an adult's point of view may not be sufficient to capture the working ingredient(s) of the alliance, thus, youths' own voices must be heard when evaluating their alliance. Evidence suggests however that parents' perspective of their child's alliance is linked to other aspects of treatment, such as optimizing treatment retention and fostering engagement in treatment-related strategies (Marker et al., 2013). According to McLeod's (2011) study, parents' own alliance is a stronger outcome predictor in youth treatment than youths' alliance rated by self-report and observers. Also, parents' own alliance seems to be a good predictor of the outcome for youth receiving TF-CBT (Kirsch et al., 2018). Thus, we encourage future studies to simultaneously assess parents' and traumatized youths' alliances. In sum, it may be fruitful for therapists to attend to parents' views of their traumatized child's alliance in clinical work. Parents' evaluation of their child's alliance also deserves more attention in future youth alliance studies in general.

In line with our last hypothesis, we found that when therapists and parents overestimate the alliance compared with youths' own alliance ratings that this is associated with poorer treatment response. This implies that when adults are not mindful of traumatized youths' experience of the therapy process, undesired treatment outcomes can occur. For youth to perceive that the adults involved in the tripartite therapeutic relationship do not have a common understanding of whether they like their therapist or agree on the treatment tasks could result in a feeling of not being understood or that they lack control of their own treatment process. Perhaps traumatized youth are particularly vulnerable to such feelings. A lack of understanding during therapy could serve to confirm internal maladaptive schemas related to their trauma experiences (e.g., "my feelings do not matter"; "nobody can be trusted"; "nobody understands"), thus, negatively affect their healing process from trauma related wounds.

Strengths and Limitations

The current study was the first to assess four perspectives of traumatized youths' alliance. The study's sample represents a natural sample from an ordinary mental health clinic, however, with an overweight of girls and youth with at least one Norwegian-born parent. The alliance was assessed by two alliance measures specifically designed to evaluate youths' alliance; PTSS were assessed by self- and clinician reports, which helped to reduce shared method variance. However, some study limitations must be mentioned. First, the relatively low n is a limitation; the risk of incurring a Type II error would have been reduced if the sample size were larger. Second, our attempt to control for therapist-effects by the use of hierarchical analyses resulted in unstable models, so we only used single-level analyses. Although an inclusion of therapists as a control variable in the recomputed models did not change the overall findings, the improvement in model fit from entering this variable in the model predicting CPSS T3 from the discrepancy in

parent-youth alliance score, and from the significant interaction effect between the discrepancy of the therapist-parents alliance scores and the therapist variable on CPSS outcomes indicates that the relationships between the alliance perspectives and PTS outcomes may differ between therapists. Thus, we cannot rule out that therapist effects may have affected the results and a reliable investigation of therapist effects would require a substantially larger data set. Third, each alliance perspective was assessed at only one time point and not from the exact same treatment session, which is problematic given that the alliance may vary somewhat between sessions. On the other hand, McLeod et al. (2021) found that TPOCS-A and TASC-r scored remained stable across treatment. Forth, we cannot rule out that different trauma experiences have different effects on alliance formation; e.g., the exposure to a sexual abuse versus being involved in a serious accident may relate differently to youths' internal schemas that may be activated in the therapeutic relationship. Thus, future studies should examine the relationships between different alliance perspectives, and how they pertain to treatment outcomes, within different trauma populations. Last, the study included traumatized youth receiving TF-CBT in a mental health outpatient clinic, and the results may not generalize to other conditions, interventions, or treatment settings.

Conclusion

A main clinical implication from the current study is that therapists should treat traumatized youths' own alliance ratings as the gold standard for monitoring and optimizing the outcomes from TF-CBT. We found that when youth perceived their alliance to be strong in the mid-treatment phase that includes the trauma narrative work they had better outcomes. This may be related to greater involvement by youth in this task followed by more profitable processing of their trauma experiences. Assessing youth perceived alliance can also help therapists uncover motivational problems that hinder client engagement in therapy (Zandberg et al., 2015). Given the importance of having a strong alliance, it was encouraging that the majority of the youth rated their alliance as high. In general, therapists seem to have succeeded in developing the youths' sense of being in a trusting and collaborative relationship during TF-CBT. Nonetheless, from the current study's results, it seems that therapists are not very precise at assessing the therapeutic relationship thus they cannot lean solely on their own clinical expertise. It may also be helpful for the therapist to consult parents about their perspective of the child's alliance since they seem to be able to capture their child's therapeutic experiences. Furthermore, therapists should continuously monitor the youths' perceived alliance and symptom development since an overestimation of the alliance was related to poorer treatment responses. Therapists' use of rapport-building behaviors seems to strengthen traumatized youths' experience of the alliance and attending to trauma-related aspects does not seem to hinder the alliance-building process (Ovenstad et al., 2020). Thus, providing and soliciting continuous feedback from traumatized youth on the therapeutic bond and agreement on the treatment tasks may be important for maintaining an optimal agreement and collaboration during the therapeutic process, and facilitate greater treatment response.

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III

The Relationship between Youth Involvement, Alliance and Outcome in Trauma-Focused Cognitive Behavior Therapy

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Abstract

Objective: To understand more about the relationship between traumatized youths' involvement behaviors, alliance, and treatment outcomes. **Method:** The participants were 65 youth (*M* age = 15.5, *SD* = 2.2; 77% girls) receiving Trauma-Focused Cognitive Behavioral Therapy (TF-CBT) and their therapists (*n* = 24). Posttraumatic stress symptoms were assessed with the Child PTS Symptom Scale. Involvement behaviors were assessed with the Client Involvement Rating Scale. The alliance was assessed with the Therapeutic Alliance Scale for Children-revised. **Results:** Greater treatment improvements were significantly predicted by more self-disclosure and demonstration of understanding of the treatment rationale and elaboration on points made by the therapist and less initiation of discussions and showing enthusiasm. A stronger alliance was significantly associated with more initiating discussions and enthusiasm and less passivity or withdrawal and inhibition or avoidance. A stronger alliance predicted significantly better outcomes regardless of the youths' involvement. **Conclusion:** More self-disclosure by youth may help alleviate PTSS; for youth, expressing a greater understanding of the treatment rationale is associated with more self-disclosure and better outcomes. Furthermore, youths' involvement behaviors and alliances appear to be associated but not fully overlapping; thus, therapists should focus on both aspects to help traumatized youth optimize their treatment responses.

Keywords: youth, TF-CBT, trauma, alliance, involvement

Clinical or Methodological Significance of this Article

This study is the first to evaluate associations between traumatized youths' involvement behaviors, alliances and PTS outcomes from trauma-specific treatment. Our study indicates that more trauma-related self-disclosure is associated with a greater understanding of the treatment rationale and points made by the therapist, which helps alleviate PTS along with a strong alliance. Therapists do not need to be too concerned that signs of negative involvement during the initial trauma narrative work relates to poorer outcomes but should remember to explicitly check in with the youth that trauma narration is perceived meaningful even though it might be challenging.

The Relationship between Youth Involvement, Alliance and Outcome in Trauma-Focused Cognitive Behavior Therapy

It is well documented that Trauma-Focused Cognitive Behavioral Therapy (TF-CBT) efficaciously reduces posttraumatic stress symptoms (PTSS) in youth (e.g., Cohen et al., 2018; de Arellano et al., 2014; Morina et al., 2016), and the model is the recommended treatment of choice for PTSS (ISTSS, 2018; National Institute for Health and Care Excellence, 2018). However, not all children and adolescents respond well to TF-CBT, and relatively little is known about what facilitates change within this treatment (Alpert et al., 2021; Hayes et al., 2017). Across youth treatment studies, a stronger alliance is found to predict a better treatment response (Karver et al., 2006, 2018; McLeod, 2011; Murphy & Hutton, 2018; Shirk & Karver, 2003; Shirk et al., 2011). A strong alliance may be curative on its own, but it may also prerequisite for the effective implementation of therapeutic techniques and tasks (DiGiuseppe et al., 1996; Garcia & Weisz, 2002). Our previous study suggests that the combination of a strong alliance along with the trauma-focused components of TF-CBT helps to optimize the treatment response for traumatized youth (Ormhaug et al. 2014). One assumption is that youth who report a stronger alliance will involve themselves more in the different aspects of treatment and that a strong alliance may be particularly helpful in the demanding aspects of trauma treatment, such as processing the trauma. Thus, the overarching purpose of the current study is to provide a better understanding of in-session involvement, alliance, and outcome for youth receiving TF-CBT.

This study's first aim is to examine whether youths' level of involvement in their treatment is associated with their treatment response. According to an early meta-study by Karver et al. (2006), youths' expressed willingness to participate in therapy along with their actual participation in treatment are among the most consistent predictors of outcome. In support

of this finding, in-session involvement is found to be positively linked with treatment response among anxious and behaviorally disruptive youth (Chu & Kendall, 2004; Hudson et al., 2014; Lindhiem & Kolko, 2010; Tobon et al., 2011). However, in a study of depressed youth, a greater level of involvement was associated with treatment improvements for youth receiving CBT but was not associated with outcomes for youth receiving nondirective supportive therapy (Karver et al., 2006). Thus, treatment type may moderate the link between involvement and outcome. It may also be that treatment outcome is more related to involvement in particular phases of a treatment and not so important for other parts. For instance, in the treatment of depression with a CBT protocol, Karver et al. (2008) and Shirk et al. (2013) found conflicting results regarding the importance of involvement for outcome. However, Karver et al. (2008) examined involvement during the problem-solving skills training of CBT and found an effect of involvement, while Shirk et al. (2013) examined involvement during the identification of negative automatic thoughts and cognitive restructuring work and found no effect. Perhaps behavioral involvement is more important during problem-solving skills training than it is during therapeutic work that focuses on changing cognitive distortions, but this has not been examined. Together, the aforementioned studies suggest that the association between involvement and outcome may depend on treatment type and timing of the assessment. To understand more about the relationship between in-session involvement behavior and treatment response, we would argue that studying involvement in the key components of a treatment is particularly helpful. In TF-CBT, exposure to trauma through trauma narration and processing are thought to be essential for reducing posttraumatic stress (PTS; Cohen et al., 2017). However, exposure can elicit re-experiencing and avoidance, a hallmark of PTS (World Health Organization, 2018), and it is reasonable to expect that this may affect traumatized youths' level of involvement during this

particular phase. In fact, youth do report that the narration work is emotionally challenging, albeit the most helpful (Dittmann & Jensen, 2014). Additionally, for therapists, trauma narration work is considered the most challenging part of trauma-specific treatment due to youths' avoidance behavior (Ascienzo et al., 2020). Unfortunately, the number of studies that have examined the involvement-outcome link among traumatized youth is limited. The results from a study by Kirsch et al. (2018) showed that therapists' evaluations of youths' degree of collaboration/involvement at mid-treatment did not predict youths' treatment response from TF-CBT. To bring this work further, we now examine whether independent raters' evaluations of youths' involvement behaviors during the initial trauma narration work can predict treatment outcomes and, if so, whether these behaviors may serve as useful markers for therapists to appraise treatment progress.

Although previous studies have mainly focused on the overall level of involvement, involvement can be defined by a range of different types of behaviors. Chu and Kendall (2004) argue that involvement behaviors can consist of positive behaviors, such as behavioral participation (e.g., initiating discussion, engaging in treatment material) and showing openness to therapy (e.g., level of self-disclosure, enthusiasm), or there can be behaviors that indicate negative involvement (e.g., avoidance, passivity, withdrawal). Building on this, Chiappini et al. (2020) examined anxious youths' negative and positive involvement behaviors during two components of CBT as outcome predictors. More positive and fewer negative involvement behaviors during the psychoeducation/skill-building components were related to treatment improvements, while only more positive involvement behaviors observed during the planning session prior to the exposure tasks were related to better outcomes. Thus, it might be that different types of involvement behaviors are more important during some treatment components

than others. In the current study, we wanted to examine whether positive and negative involvement behaviors during the initial trauma narration work could help predict traumatized youths' treatment response.

Since alliance is related to outcome, the second aim of our study is to examine how youths' in-session behaviors during trauma narration are related to how they experience their alliance. There are reasons to believe that desired involvement behaviors may be facilitated by a strong alliance since an agreement on the task and goals of treatment and an emotional bond to the therapist may contribute to increased participation in the potentially demanding exposure component (Kendall & Ollendick, 2004; Shirk et al., 2010). Supporting this notion, a positive link between alliance and involvement is found across samples of anxious and depressed youth (Karver et al., 2008; McLeod et al., 2014). Assuming that more positive and less negative in-session involvement behaviors are associated with better treatment improvements, it may be useful for therapists to know whether these behaviors may be boosted or hindered by the therapeutic alliance. However, to our knowledge, no studies have examined the link between involvement and alliance in youth trauma treatment. Furthermore, although our previous study indicated that a stronger youth-perceived alliance is associated with greater PTS reductions from TF-CBT (Ovenstad et al., 2021), its unique contribution to outcomes when assessed along with positive and negative involvement has yet to be evaluated.

The current study builds on secondary analyses from an RCT comparing the treatment effects of TF-CBT with therapy as usual (TAU) that indicate better treatment improvements for youth who received TF-CBT (Jensen et al., 2014). We examined two research questions and formed hypotheses based on the reviewed literature: (1) Do youths' involvement behaviors in trauma narration work predict their treatment response? We expected that youths' involvement

behaviors during trauma narrative work would be related to PTSS outcomes; more specifically, more of each positive involvement behavior and less of each negative involvement behavior would predict greater PTSS reductions posttreatment. (2) Is there a significant relationship between youths' alliance and their involvement behaviors in the trauma narrative? We hypothesized that youths' alliance and involvement behaviors would be associated; more specifically, that youth perceiving their alliance as stronger would show more of each positive involvement behavior and less of each negative involvement behavior. To our knowledge, this is the first study to examine the relationships of multiple and separate in-session involvement behaviors among traumatized youth and how these behaviors pertain to the therapeutic alliance and treatment response in a trauma-specific treatment.

Method

Sample

Clients

Participants were from the TF-CBT arm of a randomized clinical trial in Norway (Jensen et al., 2014). Inclusion criteria for this trial were referral to one of the eight participating community clinics, ages 10 to 18 years, exposure to at least one traumatic event and significant symptoms of PTS (i.e., a score of 15 or higher on the Child PTS Symptom scale; Foa et al., 2001). The exclusion criteria were acute psychosis, active suicidal behavior, intellectual disability, or nonproficiency in the Norwegian language. From an initial sample of 79 participants, 14 (17.7%) were excluded because they never started treatment (n = 4), did not receive the allocated intervention according to the *TF-CBT fidelity checklist* (Deblinger et al., 2008; n = 5), did not have any available audio-recorded sessions (n = 3), or there was an administrative error (n = 2). This left a sample of 65 youth (M age = 15.5, SD = 2.2, range 10 to

18, 77% girls). Participants' background was classified as Norwegian-born (n = 53; 1 ≤ one Norwegian-born parent) or non-Norwegian-born (n = 12; both parents non- Norwegian-born). The majority (76.9%) fulfilled the diagnostic criteria for PTSD as assessed with the Clinician Administered PTSD Scale for Children and Adolescents (CAPS-CA; Nader et al., 2004). In addition, 69.2% scored above the clinical cutoff for depression (Mood and Feelings Questionnaire [MFQ]; Angold et al., 1995), 52.4% over the clinical cutoff for anxiety (Screen for Child Anxiety Related Disorders [SCARED]; Birmaher et al., 1999), and 47.7% on other general mental health problems (Strengths and Difficulties Questionnaire [SDQ]; Goodman, 2001). Pretreatment traumatic experiences were assessed using an adapted version of the Traumatic Events Screening Inventory for Children (TESI-C; Ribbe, 1996), which includes 13 categories: (a) severe accident, (b) natural disaster, (c) sudden death or severe illness of a person close to the participant, (d) extremely painful or frightening medical procedures, (e) violence or threats of violence outside the family, (f) robbery or assault, (g) kidnapping, (h) witnessing violence outside the family, (i) witnessing violence within the family, (j) physical abuse within the family, (k) sexual abuse outside the family, (l) sexual abuse within the family, and (m) other frightening or overwhelming experiences. When asked to identify the worst traumatic experience (index trauma), the majority reported exposure to family violence (32.4%), followed by violence outside the family (18.4%), sudden death or severe illness of a person close to the participant (16.9%), sexual abuse inside the family (15.4%), sexual abuse outside the family (12.3%), or other frightening or overwhelming experiences (4.6%). On average, participants reported exposure to 3.7 different types of trauma (SD =1.6, range 1–8). Most participants lived primarily with one parent (55.4%), 32.3% spent equal time with both parents, 3.1% lived in foster care, and 7.7% lived in other arrangements (1.5% did not report their living situation). For the

majority (41.5%), the reported income level was > 83,300 USD, and 37% reported income ≤ 83,300 USD (21.6% did not report income; mean level income in Norway in 2012 = USD 79,800; https://www.ssb.no/).

Therapists

The therapists (n = 21, 90.5% female) consisted of 16 psychologists, 2 psychiatrists, 2 educational therapists and 1 clinical social worker. Years of clinical experience ranged from 3 to 28 (M = 9.7, SD = 5.8), and the mean therapist to client ratio was 1:2.4 (SD = 1.0, range 1 to 4). The theoretical background was either CBT (n = 14), psychodynamic (n = 4), or systemic/family therapy (n = 2; one therapist did not report a theoretical orientation). All therapists volunteered to receive TF-CBT training and participate in the study. The training consisted of 4 to 6 days of training by the TF-CBT developers and other approved TF-CBT trainers, reading the treatment manual (Cohen et al., 2006), and completing a web-based TF-CBT course (http://www.musc.edu/tfcbt). In addition, the therapists received weekly session-by-session supervision provided by trained TF-CBT therapists based on reviews of audio-recorded sessions (for further details, see Jensen et al., 2014).

Treatment

TF-CBT is a component-based manualized treatment including parenting skills, psychoeducation, relaxation, affect modulation, cognitive coping, trauma narration and cognitive processing, in vivo exposure if necessary and enhancing future safety and development. During the trauma narration and processing phase, the youth creates a trauma narrative orally or through the use of writing or pictures to activate trauma memories and facilitate emotional processing (Cohen et al., 2017). All included cases reached fidelity in accordance with the criterion in the TF-CBT fidelity checklist (Deblinger et al., 2008).

Measurements

Client Involvement

The Client Involvement Rating Scale (CIRS) was used to code involvement (Chu & Kendall, 1999, 2004, 2009), and items are presented in Table 1. Items 1-4 assess positive involvement behaviors, and items 5 and 6 assess negative involvement behaviors. All items are rated on a 6-point scale (0 = *not present* to 5 = *a great deal*), and both quantity and quality are emphasized according to the coding manual.

[Table 1 near here]

The first author and a graduate student in psychology conducted the CIRS coding. The coders carefully read the coding manual and discussed all items in detail with two clinical experts in child psychology before practicing coding CIRS from audiotaped TF-CBT cases from another study. When satisfactory rater agreement was obtained, the coders coded all included cases. Rater agreement was examined by double-coding a random selection of 15 cases (30%), each of which included 15 minutes X 3 segments. To check for coder drifting, cases were randomly selected at different stages of the coding process. A two-way random, single measure intraclass correlation coefficient (ICC) was calculated to assess reliability between the raters on session involvement scores (McGraw & Wong, 1996; Shrout & Fleiss, 1979; see Table 1). According to Cicchetti (1994), ICCs < 0.40 are considered poor, 0.40–0.59 fair, 0.60–0.74 good, and 0.75–1.00 excellent.

Therapeutic Alliance

The Therapeutic Alliance Scale for Children-revised (TASC-r; Shirk, 2003; Shirk & Saiz, 1992) was used to measure youth-perceived alliance. The TASC-r consists of 12 items; six items assess emotional aspects (e.g., "*I like my therapist*"), and six items assess task collaboration (e.g.,

"*I work with my therapist on solving my problems*"*)*. Each item is rated on a 4-point scale (0 = *not at all* to 4 = *very much*). The translated version of the TASC-r (approved by the scale's first author) indicated good internal consistency in the current sample (α =.92).

Youth-Rated PTSS

PTS symptoms were assessed using the self-completion questionnaire Child PTSD Symptom Scale (CPSS; Foa et al., 2001). The CPSS measures the 17 symptoms of PTSD as defined in the Diagnostic and Statistical Manual of Mental Disorders (4th ed.; DSM–IV; American Psychiatric Association, 1994), covering the three factors re-experiencing, avoidance, and hyperarousal. Symptom frequency is rated based on the last 2 weeks on a 4-point scale (0 = *never* to 3 = *almost every day*), yielding a total score ranging from 0 to 51. The measure is appropriate for children aged 8 to 18 years and has demonstrated excellent internal consistency, test-retest reliability, and convergent validity (Foa et al., 2001; Gillihan et al., 2013). The CPSS was translated and back translated, and the developers of the scale approved the Norwegian version. Principal component analyses of a comparable sample of 312 youths confirmed the factor structure in the original version (Hukkelberg & Jensen, 2011), and satisfactory internal consistencies were found for each of the three factors (re-experience α =.84, avoidance α =.80, and hyperarousal α =.76).

Procedure

The original study was approved by the Regional Committee for Medical and Health Research Ethics. Written consent to participate was provided by participants and their caregiver(s). For a full description of the source study, see (Jensen et al., 2014). CPSS was administered pre-, mid- (around session six) and posttreatment (after completion of the 15th session). TASC-r was administered at mid-treatment (around session six, *M* session number =

6.47, *SD* = 1.25, range 3 to 9), but scores were missing in 7 cases (10.77%). CIRS was coded from 3 x 15-minute segments based on audiotapes of the first 45 minutes of the trauma narration and processing phase, starting at session 5 (*n* = 6, 12.2%), 6 (*n* = 7, 14.3%), 7 (*n* = 18, 36.7%), 8 (*n* = 14, 28.6%), 9 (*n* = 2, 4.1%), 10 (*n* = 1, 2%) or 12 (*n* = 1, 2%). To meet the 45-minute requirement, segments came from one (*n* = 12, 25.8%), two (*n* = 37, 74%) or three (*n* = 1, 2%) subsequent sessions. In 16 cases (24.6%), CIRS was not coded due to drop-out before the narrative started (*n* = 15) or sampling error (*n* =1).

Data Analysis Plan

In the preliminary analyses, we first calculated a sum score for each item that came from the 3 x 15-minute segments coded with CIRS (Table 1), and these total item scores were used in further analyses. Then, we estimated and inspected skewness, kurtosis, means and standard deviations for the scores on CPSS (mid- and posttreatment), TASC-r and CIRS items (Table 2). Potential associations between these variables and youths' sex and background (Norwegian-born versus non-Norwegian-born parents) were examined using Mann–Whitney U tests due to unequal sample sizes. To examine whether age was associated with scores on the CPSS, TASC-r and CIRS, we used bivariate correlations. Finally, missing data analyses were computed to inspect differences for youth with a TASC-r score (*n* = 58) compared with those without a TASC-r score (*n* = 7) and for youth with CIRS scores (*n* = 49) compared those without CIRS scores (*n* = 16). For these analyses, potential group differences in continuous variables (age, CPSS pre- and mid-treatment scores, and number of types of trauma experiences) were assessed using Mann–Whitney *U* tests, and potential differences in categorical variables (sex and background) were assessed using chi-squared tests.

[Table 2 near here]

To examine our first research question, we conducted two hierarchical regression models (Models 1 and 2) predicting CPSS posttreatment scores. In the first step of both models, we entered CPSS mid-treatment scores, TASC-r scores and potential variables found related to CPSS posttreatment scores from the preliminary analyses as independent variables (IVs). In the second step of Model 1, each of the positive CIRS item scores was entered as an IV. In the second step of Model 2, each of the negative CIRS item scores was entered as an IV. To test if the data met the assumption of collinearity, we determined that the levels of tolerance were below < 0.1 (Field, 2013), and the variance inflation factors (VIFs) were below 10 (Myers, 1990). To test if the data met the assumption of independent errors, we examined whether the Durbin-Watson value of the IV values were ≥ 1 and ≤ 3 (Durbin & Watson, 1951).

In an attempt to control for potential therapist effects, we recomputed Models 1 and 2 through two approaches. First, we computed linear mixed-effects (LME) models with the client level nested within therapists. The results showed that the models were unstable, as indicated by very wide confidence intervals, probably due to the small number of youths treated by some therapists (mean therapist-to-client ratio 1:2.7, *SD* 1.31, range 1–5). Therefore, we followed the advice of Pinheiro and Bates (2000) and performed single-level analyses. Second, we recomputed Models 1 and 2 with the entrance of a single multicategory categorical level for therapists as an additional IV. The results showed that the therapist variable was not a significant outcome predictor in Model 1 (p =.787) or in Model 2 (p =.640). Additionally, the recomputed models provided poorer fit than the primary models according to AIC for Model 1 (AIC change from 329.90 to 345.82) and Model 2 (AIC change from 339.07 to 352.13). Based on these results, we chose to present the results from Models 1 and 2 without controlling for therapist effects.

To examine our second research question, we assessed the relationships between scores on TASC-r score and CIRS items using bivariate correlations. Pearson *r* was calculated to examine the effect sizes for these analyses, with *r* interpreted as 0.1 = small effect, 0.3 = medium effect, or 0.5 = large effect (Cohen, 1988).

The level of statistical significance was set at $p < .05$. Preliminary analyses were conducted using IBM SPSS, version 22 (IBM Corp., 2017), and primary analyses were conducted using R version 3.6.1 (The R Foundation for Statistical Computation, Vienna, Austria). For the mixed-effects models, we used the R package nlme (Pinheiro & Bates, 2000)

Results

Preliminary Analyses

The CIRS total item scores are presented in Table 1. The means and standard deviations of the scores on the CPSS mid- and posttreatment, TASC-r and CIRS showed substantial variability (see Table 2) and a normal distribution of scores. Inspection of the correlations between CIRS items showed that *initiates discussions* (C1) and *demonstrates enthusiasm* (C2) were highly correlated (r =.85). Thus, to address multicollinearity concerns and given that the items conceptually overlap, these items' scores were summed and relabeled *initiates discussions and demonstrates enthusiasm* (C1+2).

Second, the results showed that CPSS mid-treatment scores were significantly higher among females (M = 20.11) than among males (M = 15.50; U = 364, z = 2.00, p =.046, r = -0.27). Additionally, CPSS posttreatment scores were significantly higher among females (M = 13.11) than among males (M = 7.82; U = 312, z = - 2.46, p =.014, r = -.35). Youths' background and age were not significantly associated with CPSS scores (Table 2). TASC-r scores were not significantly associated with sex, background or age (Table 2). The only sex difference in

youths' involvement behaviors was significantly more *elaborates or demonstrates understanding* (C4) by females (M = 3.43) than by males (M =1.83; U = 136, z = -2.01, p =.044, r = -.29). Youths' involvement behaviors were not associated with background. Older age was significantly associated with more *elaborates or demonstrates understanding* (C4; r =.33, p =.023).

Last, missing data analysis showed that there was no significant difference between the groups of participants with a TASC-r score compared to those missing TASC-r scores or between participants with CIRS scores compared with those missing CIRS scores on sex, background, age, pre- and mid-treatment symptoms, or number of types of trauma experiences.

Primary Analyses

Our first research question was examined by two models that predicted youths' posttreatment PTSS by CPSS from youths' positive or negative in-session involvement behaviors assessed by CIRS, controlling for sex, PTSS at mid-treatment assessed from CPSS, and alliance assessed by TASC-r (Table 3). The results from Model 1 showed, in line with our hypothesis, that lower levels of PTSS at posttreatment were predicted by more *self-disclosure* (C3; Est. = -1.33, 95% CI [2.35, -0.30], p =.012) and *elaborates or demonstrates understanding* (C4; Est. = -1.13, CI [-2.25, -0.02], p =.047). However, contrary to what we expected, more of the positive involvement behavior *initiates discussions and demonstrates enthusiasm* (C1+2) was a significant predictor of more PTSS at posttreatment (Est. = 1.17, CI [0.66, 1.69], p <.001). The results from Model 2 did not support our hypothesis; posttreatment outcomes on CPSS were not significantly associated with youths' appearance as *passive/withdrawn* (C5; Est. = -0.49, CI [-1.27, 0.29], p <.214) or *inhibited/avoidant* (C6; Est. = -0.70, CI [-1.47, 0.07], p =.072). Data for Model 1 and Model 2 met the assumption of collinearity and independent errors.

[Table 3 near here]

Our second research question was assessed by examining the relationships between the alliance and involvement behaviors (Table 2). In line with our expectations, a significantly positive correlation with medium effect size was found between youths' alliance scores and the merged positive involvement item *initiates discussions and demonstrates enthusiasm* (C1+2; r =.33, p =.022). Contrary to what we predicted, youths' alliance scores were not significantly associated with the positive involvement items *self-disclosure* (C3; r =.20, p =.162) or *elaborates or demonstrates understanding* (C4; r = -.08, p =.602). As expected, higher alliance scores were associated with less *passivity/withdrawal* (C5; r = -.31, p =.032) and less *avoidance* (C6; r = -.32, p =.027) with medium effect sizes.

Discussion

The overall aim of this study was to better understand the relationship between traumatized youths' involvement behaviors, alliance, and treatment outcomes. The findings that youth who expressed a greater understanding of the treatment rationale and elaborated more about their traumatic experiences had better outcomes than those who did not do this to the same extent were in line with our expectations. It is reasonable to assume that youths who understand why emotionally challenging exposure work may be helpful will also be able to tolerate the heightened emotional distress that the telling and elaborating of their trauma experiences entails. In support of this notion, we found a significantly positive association between a demonstrated understanding of narrative work and self-disclosure. The finding that more elaboration on the trauma narrative predicts better outcomes is in line with the theoretical foundations of TF-CBT (Cohen et al., 2017). For one, based on the pioneer study of emotional processing theory (EPT) by Foa and Kozak (1986), the activation of fear responses during treatment is important in

processing emotions and optimizing outcomes. Thus, for youth to be actively and emotionally engaged in trauma narration may be a prerequisite for the effect of the exposure work. Second, a more extensive elaboration of the trauma experience allows therapists to identify any problematic beliefs or attributions the youth may have developed as a consequence of the traumatic event (Cohen et al., 2017; Deblinger et al., 2011; Ehlers et al., 2010) and subsequently tailor the work to alter these. Last, for the child, the trauma narrative work provides an opportunity to make a coherent and integrated narrative around the traumatic event that is associated with positive development and recovery (Alvarez-Conrad et al., 2001; Deblinger et al., 2011).

In addition to increasing motivation and acceptance for doing the narrative work, a better understanding of the treatment process may help the youth experience the therapist as transparent and restore a sense of control. Not surprisingly, we found that older youth expressed a greater understanding of the purpose behind the trauma narrative work's form and content compared with younger youth. Perhaps younger children are less able to fully understand the treatment rationale, or they may be less able to verbally express their understanding. Thus, we cannot know whether younger youth actually had a poorer understanding of the trauma narration work or if they simply were not able to express their understanding. In sum, our findings suggest that therapists should provide information about the treatments' framework, content and purpose in an age-appropriate manner, check in with the youth about their understanding of the treatment rationale and sufficiently elucidate and resolve what might be unclear.

We did expect that youth who reported a stronger emotional bond and a greater agreement on the tasks (i.e., scored higher on alliance) would also express a greater understanding of the treatment rationale and talk more about their trauma experiences than those

with lower alliance scores. However, the relationships between the strength of the alliance and the extensiveness of these particular involvement behaviors were nonsignificant. The lack of a significant relationship may indicate that the concepts are not related, although firm conclusions cannot be drawn since absence of evidence does not equal evidence of absence (Altman & Bland, 1995). However, it may be that the youth's ability to or wish to talk about their traumatic experiences is more related to factors other than the strength of the alliance, such as social support, whether they have talked about their experiences before, type of trauma history, and how successful the therapist has been in introducing the trauma-related tasks in advance of the narrative work. Although assessing predictors of youths' in-session involvement behaviors was outside the scope of the current paper, these may be important aspects to examine in future studies aiming to understand what predicts desired in-session involvement behaviors during youth treatment. In sum, a beneficial strategy for therapists to use to help optimize traumatized youths' treatment response seems to be focusing on youths' understanding of the underlying reasons for entering the trauma narrative work and facilitating more exposure to the trauma content combined with focusing on building and maintaining a strong alliance.

The two remaining positive involvement behaviors were highly positively correlated and therefore merged into a common concept of discussion coupled with expressed enthusiasm. The relationship between this merged positive involvement behavior and outcomes was in the opposite direction than we expected; *more* discussion along with enthusiasm predicted *poorer* treatment response. In retrospect, it may not have been reasonable to expect that these items, initially developed for investigating involvement among anxious youth, would be equally relevant for traumatized youth. We can only speculate whether showing enthusiasm and initiative (i.e., expressing energy and excitement for therapy tasks, e.g., through the verbal

expression "*I like writing this down*") could mean that trauma-related emotions and content are not being sufficiently activated at a deeper level but rather approached on a surface level. Furthermore, as the enthusiasm item was coded both as the presence of energy and excitement, we cannot know if these facets are differently related to outcomes, but this possibility may be examined in future studies. We found that a youth who experienced the alliance as stronger appeared to be initiating more discussions during the initial trauma narrative work coupled with energy or enthusiasm; however, the correlation between these involvement behaviors and the alliance was medium, and the variables predicted outcomes in opposite directions. Thus, the link between the alliance and involvement in the challenging narrative work does not seem to be straightforward. Perhaps only facets of involvement behaviors relate to the alliance or the interrelationship between involvement and alliance may depend on the timing of the assessments. Future studies are encouraged to replicate our findings, dismantle the relationship between traumatized youths' alliance and in-session involvement behaviors across multiple stages of the therapy process, and examine the potential reciprocal relationship among the variables (McLeod et al., 2014). Thus far, our results suggest that youth who seem to have a greater understanding of why it is important to talk about their traumatic experiences also seem to disclose more about these experiences. This, along with having a strong alliance with their therapist, is important for youths' outcomes. Furthermore, our results suggest that therapists should be cautious in interpreting more initiative and enthusiasm from youth during initial trauma narratives as positive indicators for outcomes.

Last, negative involvement behaviors were unexpectedly not significantly related to outcomes. Notably, a trending effect appeared but in the opposite direction than we expected; *more* avoidance was associated with *less* PTS at posttreatment (Est. = -0.70, p =.072). This is

good news considering that common reactions in the aftermath of trauma are avoidance of trauma reminders and because traumatized youth tend to underreport traumatic experiences and trauma-related problems (Cohen et al., 2012). Research suggests that youth clients are likely to resist exposure when they find discussing these experiences and problems as challenging and emotionally demanding (Kendall & Ollendick, 2004). Perhaps signs of negative involvement behaviors during the initial trauma narration work might be a natural trauma-related response and not necessarily a sign of not processing the trauma. Furthermore, we cannot know whether youth who appear negatively involved actually have high inner activation. Thus, a relevant next step could be to examine youths' observable in-session behaviors combined with directly asking youth about their subjective experience related to the trauma narrative work and/or use physiological measures (e.g., heart rate and salivation) to capture inner activation during the trauma narrative work. Future studies should also examine the developmental path and curve of youths' negative and positive involvement behaviors as the trauma narrative work progresses. One explanation for our results may be that youth who appeared more avoidant during the initial phase of the trauma narration work would experience a decline in avoidance as the trauma narration work progressed, which could have resulted in fewer PTSS at posttreatment. Since more avoidant youth may also report fewer PTS symptoms, future studies should include PTS symptom scores from multiple sources. A last finding was that youth reporting a weaker alliance showed more negative involvement behaviors; however, from our results, this did not seem to impede their healing process. In sum, given that many therapists fear the trauma narration work (Ascienxo et al., 2020), a reassuring finding from our study is that neither signs of avoidance nor signs of passivity and withdrawal seem to be related to poorer outcomes from TF-CBT.

Strengths and Limitations

This study included some important strengths. First, it is the first study to examine the predictive role of multiple types of in-session behaviors among traumatized youth on treatment outcomes. Second, our findings regarding observable in-session involvement behaviors may be used by therapists in their clinical work and could easily be transferred to a supervision context. Third, as involvement behaviors were coded by independent observers while the alliance was assessed using self-report, we avoided rater bias when assessing the relationship between these factors. Finally, data were collected from a mental health clinic reflecting a naturalistic sample that increased the ecological validity of our study. However, there are also some study limitations that must be mentioned. First, the relatively low *n* is a limitation; the risk of incurring a Type II error would arguably have been reduced if the sample size were larger. Second, our attempt to control for therapist effects by using hierarchical analyses resulted in unstable models, so we only used single-level analyses. We cannot rule out that potential therapist effects may have biased our results. However, entering a single multicategory categorical variable into the primary models showed that this variable did not predict outcomes, indicating that the potential effect of therapists was not substantial. Third, youths' in-session involvement behaviors were only investigated at one time point, which prevented us from assessing the potential effect of increases and/or decreases in the behaviors on outcomes. Furthermore, we cannot rule out that some involvement behaviors might be more important during some components than others. Thus, future studies are encouraged to assess involvement behaviors at different time points and across treatment components. Fourth, the inconsistency in regard to the assessment of the alliance before, at the same or after the session involvement behaviors were coded, in addition to both measures assessed at one time point only, prevented us from assessing potential interactive changes in the relationships between alliance and involvement, their potential reciprocal

relationship, and testing mediation models on whether their relationship with outcome would be moderated by the other. Thus, future studies are encouraged to dismantle how youths' involvement behaviors and alliance are woven together through the treatment process. Fifth, we only used audiotapes, but future studies should try to include video recorded sessions to make it possible to capture other signs of involvement behavior, such as body postures and facial expressions. Last, the study included traumatized youth receiving TF-CBT in a mental health outpatient clinic, and the results may not generalize to other conditions, interventions, or treatment settings.

Conclusion

In sum, our study suggests that the more youth are able to disclose traumatic experiences, understand the treatment rationale and elaborate on points made by the therapist, and develop a strong alliance, the greater the treatment improvements they report. These results underscore that therapists should spend sufficient time properly explaining the treatment rationale, ensure the youths are well informed and comprehend the purpose of the narrative task, facilitate self-disclosure during the initial trauma narrative work and focus on building a robust alliance. From our previous study, evidence suggests that the use of rapport-building behaviors in the initial phase of treatment is beneficial for solidifying the alliance, and that focusing on trauma aspects does not seem to impede an alliance-building process (Ovenstad et al., 2020). As a next step, future studies are encouraged to detangle therapist behaviors that facilitate beneficial involvement behaviors from youth and maintain a good working relationship. Furthermore, our results indicate that therapists do not need to be too preoccupied by signs of negative involvement during the initial trauma narrative work. With hope, our findings may help guide clinicians regarding beneficial aspects of tailoring recovery processes for traumatized youth.

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Table 1

Item Description, Means, Standard Deviations, and ICCs for the Client Involvement Rating Scale

CIRS Item	Description	Segment 1 *M (SD)*	Segment 2 *M (SD)*	Segment 3 *M (SD)*	Segment Total* *M* (*SD*)	ICC
(C1)	**Does the child *initiate discussion* or introduce new topics?**	2.22 (1.73)	2.51 (1.34)	1.80 (1.65)	6.53 (3.55)	.95
(C2)	**Does the child demonstrate *enthusiasm* in therapy-related tasks?**	2.53 (1.24)	2.67 (1.23)	2.41 (1.21)	7.61 (3.19)	.94
(C3)	**Does the child offer information about self (*self-disclosure*)?**	2.20 (1.27)	2.35 (1.25)	2.31 (1.19)	6.86 (3.16)	.95
(C4)	**Does the child *elaborate on points* made by the therapist or *demonstrate understanding*?**	1.29 (1.22)	0.76 (1.01)	1.00 (1.40)	3.04 (2.44)	.77
(C5)	**Is the child *withdrawn* or *passive* (e.g., not responding to therapist)?**	1.06 (1.36)	1.04 (1.34)	1.08 (1.38)	3.18 (3.71)	.91
(C6)	**Is the child *inhibited* or *avoidant* in participation (e.g., not fully participating)?**	1.88 (1.48)	1.94 (1.55)	2.18 (1.44)	6.00 (3.88)	.94

Note. Segment Total = Sum score Segment 1 + Segment 2 + Segment 3. * The CIRS scores used in the further analyses.

Table 2

Means, Standard Deviations, and Correlations for PTSS, Age, Therapeutic Alliance and Involvement Behaviors

Variables	*n*	*M*	*SD*	PTSS Mid	PTSS Post	Age	TA	C1	C2	C1+2	C3	C4	C5
PTSS Mid	56	19.1	10.9	-									
PTSS Post	53	11.8	10.8	.52***	-								
Age	65	15.5	2.2	.22	.13	-							
(TA) Therapeutic alliance	58	37.83	7.83	-.09	-.37**	-.07	-						
(C1) Initiate	49	6.53	3.55	-.12	.10	-.02	.31*	-					
(C2) Enthusiasm	49	7.61	3.19	.02	.17	.13	.32*	.85***	-				
(C1+2) Initiate/enthusiasm	49	14.14	6.48	-.06	.14	.05	.33*	.97***	.96***	-			
(C3) Self-disclosure	49	6.86	3.16	.10	-.03	.16	.20	.66***	.68***	.70***	-		
(C4) Elaborate on points	49	3.04	2.44	.25†	.07	.32*	-.08	.36*	.41**	.40**	.40**	-	
(C5) Withdrawn/passive	49	3.18	3.71	-.02	-.14	-.08	-.31*	-.68***	-.65***	-.69***	-.52***	-.35*	-
(C6) Inhibited/avoidant	49	6.00	3.88	.16	-.10	.14	-.32*	-.78***	-.80***	-.82***	-.49***	-.19	.48***

Note: C = CIRS item. Mid = Mid-treatment. Post = Posttreatment. *n* = number of participants. Age = participant age.

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

Table 3

Two Hierarchical Regression Analyses Predicting PTSS Posttreatment Scores from PTSS Midtreatment Scores, Sex, Alliance (Models 1 and 2; Step 1); and Positive Involvement Behaviors (Model 1; Step 2) or Negative Involvement Behaviors (Model 2; Step 2)

Variable	R^2	ΔR^2	*df*	Est.	95% CI	*p*
Models 1 and 2: Step 1	.402		3, 46			
PTSS Mid-treatment				0.49	[0.25, 0.72]	<.001
Sex				1.42	[-5.04, 7.89]	.659
Alliance				-0.44	[-0.77, -0.11]	.011
Model 1: Step 2	.613	.211	6, 46			
PTSS Mid-treatment				0.60	[0.39, 0.81]	<.001
Sex				1.69	[-3.86, 7.23]	.542
Alliance				-0.65	[-0.96, -0.35]	<.001
Initiate/enthusiasm				1.17	[0.66, 1.69]	<.001
Self-disclosure				-1.33	[-2.35, -0.30]	.012
Elaborate on points				-1.13	[-2.25, -0.02]	.047
Model 2: Step 2						
PTSS Mid-treatment	.504	.102	5, 46	0.51	[0.29, 0.74]	<.001
Sex				-0.03	[-6.15, 6.09]	.992
Alliance				-0.63	[-0.96, -0.29]	<.001
Withdrawn/passive				-0.49	[-1.27, 0.29]	.214
Inhibited/avoidant				-0.70	[-1.47, 0.07]	.072

Note. *df* = degrees of freedom. Est. = estimate. CI = confidence interval.