

The Therapeutic Alliance in the Treatment of Traumatized Youths
Relationship to Outcome and Dropout Across Rater Perspectives and
Therapeutic Interventions

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Summary

Traumatizing events such as domestic violence, severe accidents, and sexual abuse place youths at risk of developing mental health problems, and many will be in need of therapy. To date, a variety of treatment models have been developed, and although many of these models show promise in alleviating youths' posttraumatic symptoms and related psychological problems, little is known about the therapeutic change processes involved in these treatments. One process variable that has been found to significantly predict outcome across a variety of interventions and diagnostic disorders is the therapeutic alliance. Although a strong alliance is also assumed to be pivotal in the treatment of traumatized youth, this assumption has only been rarely tested empirically. The overarching aim of this thesis is to better understand the relationship between the therapeutic alliance and dropout and outcome in the treatment of traumatized youth. Data were derived from a Norwegian randomized effectiveness trial comparing Trauma-Focused Cognitive Behavioral Therapy (TF-CBT) to therapy as usual (TAU) in regular outpatient clinics. The sample consisted of 156 youth (M age = 15.1 years; range: 10–18 years) showing significant symptoms of posttraumatic stress (PTSS), 91 caregivers, and 71 therapists. All participants reported on their perspectives on the alliance (Jensen et al., 2014).

The first area of investigation involved the relationship between the therapeutic alliance and outcome (paper I). The results showed that youth-rated alliance assessed mid-treatment was a significant predictor of lower symptom levels post-treatment, and that this relationship was moderated by treatment condition. Specifically, a strong alliance was significantly related to better outcomes in the TF-CBT condition but not in TAU. This study is one of the first to provide a direct comparison of the alliance-outcome relationship across treatment models, and the findings indicate that there is an important interaction between the alliance and the therapeutic approach. It seems that a positive working relationship is especially important in the context of TF-CBT, which requires youth involvement in specific therapy tasks but may be less related to change in the more unspecific TAU condition.

In the second paper, the therapists' perspective on the alliance and its relationship to youths' evaluations and outcome was examined (paper II). In addition, the consequences of discrepant youth and therapist ratings were investigated. The results showed that youth ratings of the alliance were significantly related to outcome and treatment satisfaction. Therapist ratings predicted youths' treatment satisfaction, but were not related to post-treatment

symptom reduction. Furthermore, associations between youth and therapist ratings were only moderate, and analyses showed that the perspectives differed in their underlying factor structure. Youth seem to separate the alliance into a positive and negative dimension; therapists' ratings cluster into the theoretical dimensions task and bond. Level of alliance agreement was related to outcome, and dyads where the youth reported poorer alliances compared with the therapist were associated with higher residual PTSS and lower treatment satisfaction. These findings imply that youth and therapist perspectives are not interchangeable, and that therapists cannot assume that the youth share their views of the alliance. The results suggest that therapists should investigate directly how youth perceive the alliance, since the youth-rated alliance is an important predictor of outcome.

The last aim of this thesis was to learn more about the process variables involved in treatment attendance (paper III). Specifically, first session alliance ratings from youth, therapist and caregiver alliances were assessed as predictors of dropout, in addition to youth background variables and treatment-specific factors. Furthermore, a new scale was developed (the *Child- and Adolescent-Perceived Parental Approval of Therapy, CAPPATS*) to evaluate to what degree the youth perceived that their parents supported the treatment, and whether this perceived support was related to dropout. The results showed that dropout was predicted by therapist-rated alliance, youths' perceptions of caregiver approval of therapy and a lack of caregiver participation, but not by youth background characteristics or the treatment method. The findings indicate that more attention should be paid to the in-treatment process variables in order to gain a better understanding of which youth are at risk of dropping out. Specifically, further investigations of the role of caregivers' involvement in the treatment and youths' perceptions of parental support seem warranted.

Collectively, the findings in this thesis contribute to a better understanding of the role of the therapeutic alliance in the treatment of traumatized youth, how the alliance interacts with treatment method to enact change, and how different raters' perspectives are related to outcome and process.

List of Papers

- I. Ormhaug, S. M., Jensen, T. K., Wentzel-Larsen, T. & Shirk, S. R. (2014). The therapeutic alliance in treatment of traumatized youth: Relation to outcome in a randomized controlled trial. *Journal of Consulting and Clinical Psychology*, 82(1), 52-64. doi:10.1037/a0033884
- II. Ormhaug, S. M., Shirk, S. R., & Wentzel-Larsen, T. Therapist and Client Perspectives on The Alliance in the Treatment of Traumatized Adolescents (manuscript submitted for publication)¹
- III. Ormhaug, S. M., & Jensen, T. K. Understanding Dropout in the Treatment of Traumatized Youths: Background, Treatment, and First Session Process Variables (manuscript submitted for publication)

Tables and Figures

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¹ A slightly revised version of this paper has been published in *European Journal of Psychotraumatology*, 6: 27705 - <http://dx.doi.org/10.4302/ejpt.v6.27705>

List of Abbreviations

α	Chronbach's alpha
CAPPATS	<i>Child- and Adolescent-Perceived Parental Approval of Therapy Scale</i>
CAPS-CA	<i>Clinician-Administered PTSD Scale for Children and Adolescents</i>
CPSS	<i>Child PTSD Symptom Scale</i>
DSM-IV	Diagnostic and Statistical Manual of Mental Disorders, 4 th edition
DSM-5	Diagnostic and Statistical Manual of Mental Disorders, 5 th edition
DV	Dependent variable
EFA	Exploratory factor analyses
IV	Independent variable
NKVTS	Norwegian Centre for Violence and Traumatic Stress Studies
MFQ	<i>Mood and Feelings Questionnaire</i>
Mplus	Statistical software
PTSS	Posttraumatic stress symptoms
PTSD	Posttraumatic stress disorder
r	Pearson's correlation coefficient
R	Statistical software
SCARED	<i>Screen for Child Anxiety-Related Disorders</i>
SD	Standard deviation
SDQ	<i>Strength and Difficulties Questionnaire</i>
SPSS	Statistical Package for the Social Sciences (statistical software)
TASC-r	<i>Therapeutic Alliance Scale for Children- revised</i>
TAU	Treatment as usual
TF-CBT	Trauma-focused cognitive behavioral therapy
χ^2	Chi squared

1. Introduction

1.1 The Therapeutic Alliance in the Treatment of Traumatized Youth: How Central Is It?

It is commonly assumed that a strong alliance is essential for the successful treatment of traumatized youth (see e.g., J. A. Cohen, Mannarino, Kliethermes, & Murray, 2012; Kearney, Wechsler, Kaur, & Lemos-Miller, 2010; Lawson, 2009; Shirk & Eltz, 1998). However, prospective studies of this relationship variable are rare. Most studies investigating the benefits of treatments for traumatized youth have focused on therapeutic techniques and comparisons between different treatment approaches, instead of the therapeutic alliance and other relational aspects of these treatments. This fact is problematic because a better understanding of the relational context of the therapeutic interventions will help increase our understanding of how and why psychotherapy works (Kazdin, 2009; Norcross & Lambert, 2011; Orlinsky, Rønnestad, & Willutzki, 2004), and may improve the implementation of effective treatments into regular clinics (Kazdin & Nock, 2003).

One exception is an early study by Eltz and colleagues (Eltz, Shirk, & Sarlin, 1995); these authors found that a strong therapeutic alliance was significantly related to better progress in the treatment of maltreated adolescents. Furthermore, a growing body of studies on adult patients has found that the therapeutic alliance is a significant predictor of outcome in treatments of posttraumatic stress disorder (PTSD) (Cloitre, Koenen, Cohen, & Han, 2002; Cloitre, Stovall-McClough, Miranda, & Chemtob, 2004; Keller, Zoellner, & Feeny, 2010; McLaughlin, Keller, Feeny, Youngstrom, & Zoellner, 2013). Although these findings from adult studies are important and can help inform the field of youth trauma, developmental aspects are likely to influence the presentation and treatment of youths' post-traumatic reactions and results from adult studies cannot be directly transferred to the treatment of PTSD for youth. For example, youth may lack an understanding of how psychological problems develop and what it may take to solve them, and they may find it difficult to see the link between the tasks performed in treatment and the subsequent reduction of symptoms (Shirk & Saiz, 1992). These developmental aspects may again influence the relative importance of the therapeutic alliance as a mutual and collaborative phenomenon. Furthermore, since children and adolescents are dependent on their caregivers, caregivers are often involved in the therapies. This fact implies that there are several alliances to be negotiated, and that the child-therapist alliance, caregiver-therapist alliance and the

relationship between the child and caregiver alliances may substantially influence the treatment process (Zack, Castonguay, & Boswell, 2007). As a result, the therapeutic alliance has to be studied within a child and adolescent treatment context if we are to better understand the role it plays in the process and outcome of youth trauma treatments. The main aim of this thesis is to address current knowledge gaps in the youth trauma field and investigate the role of the therapeutic alliance and related relationship variables in youth trauma treatments. In particular, a primary goal of this study is to learn more about the predictive value of the therapeutic alliance in relation to symptom reduction (papers I and II), treatment satisfaction (paper II) and dropout (paper III).

Furthermore, it is an open question whether the alliance-outcome relationship is the same across different treatment conditions. Based on meta-analyses of adult studies, there are reasons to believe that the alliance is a consistent predictor of outcome across treatment models (Flückiger, Del Re, Wampold, Symonds, & Horvath, 2012). On the other hand, direct comparisons between different treatment conditions indicate that the alliance may play a different role in different treatment conditions, both in adult (Arnow et al., 2013; Ulvenes et al., 2012) and adolescent therapy (Cummings et al., 2013; Hogue, Dauber, Stambaugh, Cecero, & Liddle, 2006). This finding implies that there might be an interaction between the alliance and the type of treatment provided. This question was investigated in the first paper in this thesis, where the predictive value of youth-reported alliance was compared across two different treatment conditions.

Another question is related to the therapists' perspectives on the alliance, and how these are related to youths' alliance evaluations. Therapists' perspectives on the alliance are important because it is the therapist that is responsible for managing the therapeutic process (Safran, Muran, & Eubanks-Carter, 2011), and his or her evaluations of the alliance are likely to influence in-session decision-making about specific interventions. Additionally, since the alliance is an interpersonal construct, failure to recognize the youth's perspective on the alliance, as reflected in discrepant alliance ratings, could indicate a lack of therapist attunement to the youth's experience and predict poorer outcome. Thus far, at least one study has found that a failure to recognize and repair ruptures in the alliance predicted worse outcome in the treatment of adults with PTSD (McLaughlin et al., 2013). Better understanding the relationship between youth and therapist ratings and investigating potential sources of this divergence is the aim of the second paper in this thesis.

Several studies have shown that dropout is a common problem in youth trauma treatments (Gopalan et al., 2010; Lau & Weisz, 2003). So far, the majority of studies of

dropout in youth PTSD treatments have investigated youth background and demographic variables; less attention has been paid to the in-treatment process variables (Chasson, Vincent, & Harris, 2008; Eslinger, Sprang, & Otis, 2012; Sprang et al., 2013). In particular, both youth-therapist and caregiver-therapist alliances hold promise as important predictors of dropout. In addition, both theory and empirical studies suggest that there may be an important relationship between youths' and caregivers' perceptions of the treatment that significantly influences youths' treatment attendance (Jensen et al., 2010; Robbins, Turner, Alexander, & Perez, 2003). These aspects are explored as predictors of treatment dropout in the third paper of this thesis.

There is currently little knowledge of *how* the alliance is related to outcome, i.e., the mechanisms through which the alliance may instigate change. The final aim of this thesis is to integrate the findings from the three studies discussed above in order to see whether these findings can enhance our understanding of the pathways from the alliance to dropout and outcome in the treatment of traumatized youth.

Data were derived from a randomized clinical trial investigating the process and effect of trauma treatment in Norwegian community clinics. In this study, Trauma-Focused Cognitive Behavioral Therapy (TF-CBT) was implemented in eight child and adolescent clinics and the effectiveness of TF-CBT was compared to therapy as usual (TAU) (Jensen et al., 2014). The results showed that, on average, youth reported significant reductions in their PTSD symptoms from pre- to post-treatment in both conditions. However, youth in the TF-CBT condition reported significantly larger improvement on a variety of symptom measures compared with the youth in the TAU group (mean Cohen's $d = 0.47$). Furthermore, in both conditions, approximately 20% of the youth dropped out from the treatment and did not benefit from the therapy provided. Better understanding the role the therapeutic alliance plays in the treatment process and outcome will help inform therapists and contribute to better caring for trauma-exposed children and adolescents.

1.2 Background: Prevalence and Consequences of Childhood Trauma

Every year, a substantial number of youth are exposed to potentially traumatic events such as severe accidents, domestic violence, physical and sexual abuse, natural disasters, and war (Copeland, Keeler, Angold, & Costello, 2007; Finkelhor, Ormrod, & Turner, 2007). In Norway, there are currently no data on the prevalence of youth exposed to all types of traumatic events. However, three recent studies have found that the number of youth affected by violence, abuse, and sexual assault is high. In a sample of 7,033 high school seniors, 25%

of the students reported exposure to at least one episode of physical abuse from their caregivers, and 15% of the girls and 7% of the boys reported they had been exposed to sexual assault at some point in their life (Mossige & Stefansen, 2007). In another study of 15,930 10th graders, 23.6% of the boys and 11.8% of the girls reported exposure to peer violence during the last year (Schou, Dyb, & Graff-Iversen 2007). The most recent study, in which a representative sample of adults was asked about their lifetime exposure to violence and abuse, 33.6% of the women and 11.3% of the men reported they had experienced some kind of sexual assault before the age of 13 (Thoresen & Hjemdal, 2014). All of these events put children and adolescents at risk of developing severe mental health problems such as PTSD, anxiety, depression, conduct disorders, social problems, substance abuse and school-related problems (Dube, Felitti, Dong, Giles, & Anda, 2003; Gerson & Rappaport, 2013; Kilpatrick et al., 2003). According to a recently published meta-analysis, the average rate of PTSD among trauma-exposed children and adolescents is 15.9%. However, the study showed that the prevalence varied according to the type of trauma and gender; girls exposed to interpersonal trauma were at the highest risk (32.9%) (Alisic et al., 2014). Consequently, there are reasons to expect that the prevalence of traumatized youth is even higher in clinical settings. Although no national data exist, at least two studies conducted in Norwegian child and adolescent mental health clinics support this assumption. The first study was carried out as part of the Norwegian TF-CBT trial. Here, the referred youth were screened for trauma at intake and the results showed that 47% of the youth reported exposure to at least one traumatizing event (Ormhaug, Jensen, Hukkelberg, Holt, & Egeland, 2012). The other study found that 60% of the youth in treatment reported exposure to child abuse (Reigstad, Jørgensen, & Wichstrøm, 2006). These figures are in line with international studies (Lau & Weisz, 2003; McKay, Lynn, & Bannon, 2005). Of the trauma-exposed youth, between 42% and 90% have been found to report significant levels of posttraumatic stress symptoms (PTSS) (Kearney et al., 2010; Ormhaug et al., 2012). If these trauma reactions remain unresolved, they are likely to have a lifelong, negative impact on psychological and social well-being (Anda et al., 2006; Dube et al., 2003; McGloin & Widom, 2001). Consequently, it is important that therapists in regular clinics know how to provide the best help for these affected youth in order to alleviate their post-trauma reactions and regain a normal developmental path.

1.2.1 PTSD. The primary aim of the Norwegian TF-CBT trial was to learn more about effective therapy for youth suffering from PTSD and PTSS. PTSD was defined according to the Diagnostic and Statistical Manual of Mental Disorders, 4th edition text revision (DSM-IV-

TR) criteria (APA, 2000; Box 1). In 2013, a new diagnostic manual was released, the DSM-5, which included some changes to the PTSD diagnosis (APA, 2013; Box 1).

Box 1. PTSD

DSM-IV-TR criteria for PTSD (APA, 2000)

Criterion A: Exposure

The person has been exposed to a traumatic event in which both of the following have been present:

- (1) the person has experienced, witnessed, or been confronted with an event or events that involved actual or threatened death or serious injury, or a threat to the physical integrity of self or others
- (2) the person's response involved intense fear, helplessness, or horror. **Note:** In children, this may be expressed instead by disorganized or agitated behavior

Criterion B: Intrusion

The traumatic event is persistently re-experienced one (or more) of the following ways:

- (1) recurrent and intrusive distressing recollections of the event, including images, thoughts, or perceptions. **Note:** In young children, repetitive play may occur in which themes or aspects of the trauma are expressed
- (2) recurrent distressing dreams of the event. **Note:** In children, there may be frightening dreams without recognizable content.
- (3) acting or feeling as if the traumatic event were recurring (includes a sense of reliving the experience, illusions, hallucinations, and dissociative flashback episodes, including those that occur upon awakening or when intoxicated). **Note:** In young children, trauma-specific re-enactment may occur.
- (4) intense psychological distress at exposure to internal or external cues that symbolize or resemble an aspect of the traumatic event.
- (5) physiologic reactivity upon exposure to internal or external cues that symbolize or resemble an aspect of the traumatic event.

Criterion C: Avoidance

Persistent avoidance of stimuli associated with the trauma and numbing of general responsiveness (not present before the trauma), as indicated by three (or more) of the following:

- (1) efforts to avoid thoughts, feelings, or conversations associated with the trauma
- (2) efforts to avoid activities, places, or people that arouse recollections of the trauma
- (3) inability to recall an important aspect of the trauma
- (4) markedly diminished interest or participation in significant activities
- (5) feeling of detachment or estrangement from others
- (6) restricted range of affect (e.g., unable to have loving feelings)
- (7) sense of a foreshortened future (e.g., does not expect to have a career, marriage, children, or a normal life span)

Criterion D: Arousal

Persistent symptoms of increased arousal (not present before the trauma), as indicated by two (or more) of the following:

- (1) difficulty falling or staying asleep
- (2) irritability or outbursts of anger
- (3) difficulty concentrating
- (4) hypervigilance
- (5) exaggerated startle response

Criterion E: Duration

Duration of the disturbance (symptoms in Criteria B, C, and D) is more than 1 month.

Criterion F: Impaired functioning

The disturbance causes clinically significant distress or impairment in social, occupational, or other important areas of functioning.

Alterations to the PTSD diagnosis in DSM-5 (APA, 2013)

- The A2 criterion is removed
- Symptoms are clustered into four instead of three factors:
 - B. Re-experiencing
 - C. Avoidance
 - D. Altered and persistent negative mood and cognitions
 - E. Arousal

Thus far, there are reasons to assume that the alterations to the PTSD diagnosis will not have major effects on clinical fields, since studies have indicated that the DSM-5 criteria will lead to similar PTSD rates in both adolescents (Hafstad, Dyb, Jensen, Steinberg, & Pynoos, 2014) and adults (Elhai et al., 2012; Kilpatrick et al., 2013).

1.2.2 Theoretical models of PTSD. In order to help youth overcome their PTSS, understanding more of how the symptoms develop and are maintained is important. One central theory that has helped inform several treatment methods is the cognitive model proposed by Ehlers and Clark (2000). In this model, it is suggested that PTSS become persistent if the traumatic event is processed and stored in memory in a way that makes the person feel that the situation is a current ongoing threat rather than a time-limited event. This sensation is assumed to be the result of 1) excessively negative thoughts and appraisals of the trauma and/or its consequences, and 2) a lack of sufficient elaboration and contextualization of the event in the person's autobiographical memory, combined with strong perceptual and associative priming. Taken together, these cognitive processes will make affected individuals feel that they are still in danger and that the traumatic event has global and negative consequences for their future. It is furthermore suggested that these maladaptive assumptions are maintained by a series of problematic behavioral and cognitive strategies such as safety behaviors, avoidance and selective attention to threat cues. Studies of traumatized youth have supported this theory, and found that in particular maladaptive appraisals are involved in the development and maintenance PTSS over time (Meiser-Stedman, Dalgleish, Glucksman, Yule, & Smith, 2009; Stallard & Smith, 2007). In order to alleviate PTSS, this theory implies that it is important to help the child reprocess the trauma and develop a more coherent memory of the trauma. It is also important to promote behaviors that can help extinguish the link between trauma reminders and the sense of fear and ongoing threat so that the traumatic event is no longer perceived as a current danger. In therapy, the youths' fear reactions related to the traumatic event may make it challenging to complete the exposure tasks. One can thus expect that a strong therapeutic alliance is significantly related to youths' ability to remain in treatment and complete these tasks.

From a developmental perspective, there are a variety of factors influencing a child's post-trauma adjustment. One framework to understand these factors and how they influence each other is the developmental psychopathology model of childhood traumatic stress proposed by Pynoos, Steinberg, and Piacentini (1999). In this model, intrinsic child factors such as cognitive maturity and developmental level are important, in addition to contextual

factors such as caregiver functioning, social support, trauma reminders and secondary stressors following the trauma. Together, these factors influence the child's ability to contextualize and make sense of the traumatic event, to avoid the development of excessive negative appraisals and promote helpful behaviors. Similarly, a recent meta-analysis investigating risk factors for the development of PTSD found that in addition to the child's subjective experience of the traumatic event, post-trauma variables such as family functioning and social support were the strongest predictors of PTSD (Trickey, Siddaway, Meiser-Stedman, Serpell, & Field, 2012). This finding implies that in treatment, in addition to working with the individual child and his or her traumatic memories and post-trauma cognitions, therapist should involve the caregivers and focus on how the child's support system can contribute in the child's recovery.

1.2.3. Complex trauma. In the Norwegian TF-CBT study, a substantial fraction of the participating youth (59%) had been exposed to multiple and chronic traumas within the caregiving relationship. These events include domestic violence, child maltreatment and intra-familial sexual abuse; studies have found that such events are associated with an increased risk of developing a series of relational and behavioral problems that are often referred to as complex trauma (J. A. Cohen et al., 2012; Cook et al., 2005). In particular, interpersonal problems are often prominent. According to attachment theory (Bowlby, 1988), a child will develop expectations about interactions and relationships with other people based on his or her early experiences with his or her caretaker(s). These expectations form inner working models that will guide the child in his/her interactions with other people later in life, such as peers, teachers and romantic partners. If the attachment relationship has not been safe, engaging in a new relationship may be a trauma trigger for the youth and lead to increased levels of vigilance and mistrust. For instance, several studies have found that persons exposed to early trauma have relationship problems and automatic harm assumptions (Cloitre, Cohen, & Scarvalone, 2002; DePrince, Combs, & Shanahan, 2009; Furman, Simon, Shaffer, & Bouchery, 2002). Because the therapist-child relationship bears much resemblance to the caregiver-child relationship, establishing a strong therapeutic alliance with youth with complex trauma may be particularly challenging (J. A. Cohen et al., 2012; Eltz et al., 1995; Shirk & Eltz, 1998).

1.3 Therapeutic Interventions for Traumatized Youth

During the last decade, there have been an emerging number of trials investigating the effects of psychological treatments for children and adolescents suffering from PTSD and

PTSS (Carr, 2004; Silverman, Ortiz, & Viswesvaran, 2008). These studies include a variety of treatment types such as exposure-based cognitive behavioral treatments (CBTs), Eye Movement Desensitization and Reprocessing (EMDR) therapy, client-centered therapy, family therapy and different forms of group therapy. Although many of these models report widespread support in terms of clinical experience and client satisfaction, the empirical evidence for their efficacy is less clear. In a literature review by Silverman and colleagues (2008), 21 studies of different treatment models were classified along a continuum of methodological rigor. According to the authors, the majority of the treatment models were classified as *possibly efficacious* or *experimental*. One treatment model was classified as *probably efficacious* (School-Based Group CBT), and it was only TF-CBT that met the *well-established* criteria.

1.3.1 TF-CBT. TF-CBT is a short-term, component-based intervention developed by J. A. Cohen, Mannarino, and Deblinger (2006). The model builds on elements from cognitive, behavioral, interpersonal and family therapy, in addition to trauma theory. It involves work with the youth and their caregivers in both parallel and conjoint sessions. TF-CBT is normally provided over a course of 12–15 sessions. However, for youth exposed to more severe and complex trauma, the treatment is often expanded up to 25 sessions (J. A. Cohen et al., 2012). The components included in the treatment are psychoeducation, teaching relaxation and affective modulations skills, learning cognitive coping skills, working through the trauma narrative, cognitive processing, in vivo mastery of trauma reminders, and enhancing safety and future development. In addition, there is a focus on parenting skills throughout the treatment (J. A. Cohen et al., 2006). To date, 14 randomized, controlled trials have been published, all documenting lower levels of PTSS and other trauma-related symptoms in participants receiving TF-CBT compared with the control condition. The studies include children and adolescents exposed to a variety of traumatic events such as sexual abuse (J. A. Cohen, Deblinger, Mannarino, & Steer, 2004; J. A. Cohen & Mannarino, 1996, 1998; J. A. Cohen, Mannarino, & Kundsén, 2005; J. A. Cohen, Mannarino, Perel, & Staron, 2007; Deblinger, Lippman, & Steer, 1996; Deblinger, Mannarino, Cohen, Runyon, & Steer, 2011; Deblinger, Stauffer, & Steer, 2001; King et al., 2000), domestic violence (J. A. Cohen, Mannarino, & Iyengar, 2011), natural disasters (Jaycox et al., 2010), war exposure and sexual abuse (O’Callaghan, McMullen, Shannon, & Rafferty, 2013), and in mixed trauma samples (Jensen et al., 2014; Scheeringa, Weems, Cohen, Amaya-Jackson, & Guthrie, 2011). In the Norwegian TF-CBT study, the results showed that the model is effective also in regular

clinics with ordinary therapists who are not trained in advance to be experts in trauma (Jensen et al., 2014).

1.3.2 Understanding how treatment leads to change. Although the studies discussed above represent an important first step in order to provide better help to trauma-exposed youth, less is known about the change processes involved in the treatment. So far, only two studies have investigated the sources of symptom improvement in TF-CBT. The first study was a dismantling study that aimed to understand how treatment length and the trauma narrative component were related to outcome (Deblinger et al., 2011). The results showed that youth receiving eight sessions of TF-CBT including the trauma narrative reported significantly lower levels of abuse-related fear and general anxiety compared with youth receiving 16 sessions of TF-CBT but no narrative work. This finding supports the assumption that the trauma narrative is an important contributor of change. The other study investigated the relationship between a caregiver's emotional reactions and changes in his or her children's symptom levels (Holt, Jensen, & Wentzel-Larsen, 2014). The authors found that caregivers experienced reductions in their own levels of distress during their child's treatment. This reduction mediated changes in their child's depressive symptoms, but was not related to a reduction in the child's PTSS. Both of these studies focused on specific treatment components (i.e., the trauma narrative and parent work), and did not investigate the relational context in which these tasks were provided. Little is therefore known about the relational context of these components. For example, it could be that the effectiveness of the trauma narrative as a change mechanism depends on the degree to which youth and therapists collaborate on this task. It could also be that for a caregiver, a strong relational bond with a therapist may be beneficial in and of itself and reduce feelings of hopelessness and distress, which can in turn have a positive effect on the child's depressive feelings.

In studies of adults, there is a debate regarding the relative importance of the common relationship variables versus specific treatment components in the treatment of PTSD. The results from at least one meta-analysis showed that different treatment interventions were equally beneficial, lending support to the relative importance of common factors over specific techniques (Benish, Imel, & Wampold, 2008; Wampold et al., 2010). Other authors have argued that there is evidence to suggest that a component such as exposure is pivotal in the treatment of PTSD (Ehlers et al., 2010) and that at least for some types of disorders specific techniques may play an important role (Marcus, O'Connell, Norris, & Sawaqdeh, 2014). Although it is never a question of either-or, since all treatments include *both* common and specific factors (Safran & Muran, 2000; Wampold & Budge, 2012), it will be useful for

therapists to know whether some interventions are more helpful than others, or if it is the relational context of the therapeutic methods, such as the therapeutic alliance, that is more important.

1.4 The Therapeutic Alliance

Several meta-analyses have found that the therapeutic alliance is a significant predictor of outcome with average correlations ranging from $r = .22$ (Flückiger et al., 2012; Martin, Garske, & Davis, 2000) to $r = .28$ (Horvath, Del Re, Flückiger, & Symonds, 2011). To date, various terms have been used to describe this therapeutic relationship, such as the helping alliance, therapeutic bond, working alliance, and therapeutic alliance. Although the conceptualizations and measures are diverse (Elvins & Green, 2008; Martin et al., 2000), the most commonly used definition is the tripartite model of the working alliance proposed by Edward Bordin (1979). He suggested that the alliance is a trans-theoretical construct relevant to all types of therapy and that it consists of three different but related dimensions: 1) an *emotional bond* between the therapist and client; 2) agreement on the *goals* of the therapy; and 3) agreement on the *therapeutic tasks* to be conducted. Central to this definition is that the working alliance refers to the collaborative aspect of the therapeutic relationship. In this thesis, the term *therapeutic alliance* will be used to capture this collaborative aspect of the relationship.

1.4.1 The alliance-outcome relationship in youth therapies. In studies of children and adolescents, the relationship between the therapeutic alliance and outcome is less clear compared with in the adult field. Two recent meta-analyses report average correlations between alliance and outcome of $r = .14$ (McLeod, 2011) and $r = .22$ (Shirk, Karver, & Brown, 2011). These studies differ in scope since Shirk and his colleagues limited their sample to studies of individual therapy in order to make comparisons with the adult alliance literature whereas McLeod included a wider range of treatment modalities (e.g., group and family therapy). Although McLeod (2011) reports that the inclusion of a broader range of studies did not influence the overall result, there are reasons to assume that the discrepant results are, at least in part, related to methodological constraints in the youth psychotherapy research field (Elvins & Green, 2008; Shirk et al., 2011). For one, the number of prospective studies with explicit measures of the therapeutic alliance is small. Whereas the latest adult meta-analysis included 201 studies (Flückiger et al., 2012), only 16 studies met similar inclusion criteria in the Shirk et al. (2011) analysis, and only 38 studies were included in the McLeod (2011) study. This limited empirical base increases the risk of potential bias.

Furthermore, both meta-analyses found that variations between individual studies were large (r range: $-.38 - .53$), and that the relationship between alliance and outcome was significantly moderated by aspects such as youth age, type of disorder, treatment mode, source, and timing of the alliance assessments. In addition, there is still a lack of consensus on how to best conceptualize the therapeutic alliance in youth therapy (Green, 2006; Shirk et al., 2011; Zack et al., 2007). Developmental aspects such as children's implicit understanding of the alliance, the inclusion of caregivers in treatment and children's limited position to negotiate about the goals and tasks of the treatment make it unclear to what degree Bordin's model is suitable (Green, 2006; Jensen et al., 2010; Shirk & Saiz, 1992). This fact indicates that although there is a need for more studies investigating the link between alliance and outcome in the youth field, additional aspects of the alliance should also be explored. These include investigations of the relationship between alliance and treatment method, the content and dimensionality of the alliance, and the associations between various rater perspectives.

In this thesis, the associations between the alliance and outcome were investigated both from a youth perspective (paper I) and a therapist perspective (paper II). Comparisons across treatment methods were made in paper I.

1.4.2 The content and measurement of the youth alliance. The lack of consensus about the dimensions of the alliance in youth therapy is reflected in the wide variety of different alliance measures that are used. In the meta-analysis by Shirk et al. (2011), the authors found that the 16 studies had used 10 different scales. This diversity complicates the comparison of findings, since each scale measures a slightly different construct, and it has been argued that progress in the youth alliance research field hinges on the development of alliance scales with known underlying factors (Elvins & Green, 2008).

In this thesis, the alliance was measured with the *Therapeutic Alliance Scale for Children-Revised* (TASC-r, Shirk & Karver, 2010; Shirk & Saiz, 1992). The TASC-r was the first scale developed specifically for a younger client population (Elvins & Green, 2008) and is by now one of the most widely used child and adolescence alliance scales. Items in the scale were developed to correspond to the bond and task collaboration dimensions. The goal dimension was not included, partly because it was assumed that it would be difficult for a child to understand the links between the tasks in therapy and the subsequent goals. Similarly, community clinicians reported rarely discussing explicit goals with children (Shirk & Saiz, 1992). Over the years, several studies have confirmed that the TASC-r has sound psychometric properties (Creed & Kendall, 2005; Fjermestad et al., 2012; Kendall et al., 2009; Langer, McLeod, & Weisz, 2011), and it has been shown to significantly predict

treatment outcome in multiple studies (Accurso, Hawley, & Garland, 2013; Kazdin, Marciano, & Whitley, 2005; Kazdin, Whitley, & Marciano, 2006).

Although the TASC-r is based on a two-factor task bond model, this theorized model has yet to be confirmed empirically. So far, only one study has investigated the underlying factor structure of youth and caregiver ratings of the TASC-r (Accurso et al., 2013). The authors employed multilevel exploratory factor analyses (EFA) and the results showed that a one-factor between-informants and a two-factor within-informants solution showed the best fit. However, the two factors were divided by item valence (i.e., whether the items were positively or negatively worded), rather than by the theorized task and bond items. This result corresponds to findings from factor analyses of a variety of youth alliance scales: Although the majority of scales have been based on the three-dimensional model of Bordin (1979), all but one study (Johnson, Ketring, & Anderson, 2013) have failed to replicate this model with empirical data (see e.g., DiGiuseppe, Linscott, & Jilton, 1996; Faw, Hogue, Johnson, Diamond, & Liddle, 2005; Fjermestad et al., 2012; Hogue et al., 2006).

Another question relates to the *therapist's* perspective of the alliance and the factor structure of the therapist scale of the TASC-r has yet to be investigated. In the adult field, it has been found that clients' and therapists' conceptual understandings of the alliance only partially overlap (Bachelor, 2013), and there is evidence to suggest that the same may also be true in the youth field. In a study by DiGiuseppe et al. (1996), youth and therapist ratings of the *Adolescent Working Alliance Inventory* (AWAI) were analyzed. The results showed that while therapists viewed the alliance in accordance with Bordin's theoretical model, youths' responses clustered into one single dimension. Learning more about therapists' and youths' implicit views of the alliance by investigating the factor structure of the youth and therapist versions of the TASC-r was the second aim of paper II.

1.4.3 Youth and therapist perspectives on the alliance. Therapists' perspectives of the alliance have so far received little attention, although this perspective is also important. For one, therapist judgments about alliance strength are likely to influence their in-session decision-making about the use of specific interventions. For example, the introduction of a potentially challenging task such as exposure may depend on whether a therapist perceives the alliance to be fragile or strong. Secondly, since the alliance is an intersubjective construct, the degree of discrepancy between youth and therapist ratings may matter for outcome. Low levels of agreement may reflect a lack of attunement between therapist and youth. In particular, if therapists rate the alliance as being stronger than the youth do, this could indicate that therapists are unaware of youths' negative feelings toward them or the therapeutic task,

making it unlikely that they will adjust their treatment strategies to meet the youths' expectations and preferred tasks.

In the McLeod meta-analysis the author found that the associations between youth and therapist ratings and outcome were similar, indicating that the two individual perspectives may be equally important. On the other hand, several studies have shown that the level of youth and therapist agreement on the alliance is on average small to moderate with correlations ranging from $r .23 - .38$ (Creed & Kendall, 2005; Eltz et al., 1995; Fjermestad et al., 2012; Hawley & Garland, 2008; Kendall et al., 2009; Shirk, Gudmundsen, Kaplinski, & McMakin, 2008). This resembles findings in adult studies where the average agreement between therapist and client rated alliance has been reported to be .36 (Tryon, Blackwell, & Hammel, 2007). This fact means that although there is a certain degree of convergence between youth and therapist perspectives, there seems also to be important differences between youths' and therapists' perceptions of the alliance. These findings suggest that therapists can only partially assume that their own perspectives of the alliance are shared by the youth. Learning more about how youth and therapist ratings are related and whether the degree of discrepancy had implications for outcome is the third aim of paper II.

1.4.4 The role of caregivers. Caregivers can be involved in their child's treatment in different ways. At the minimum level, caregivers are often the ones initiating the referral, and they are commonly in charge of scheduling appointments, transportation and other practical issues related to the treatment process (Nock & Ferriter, 2005; Nock & Kazdin, 2001). As a result, the caregivers are the gatekeepers of treatment and important agents of the child's treatment attendance. Recently, there has been an increased awareness of the importance of including the caregiver-perspective on the alliance in studies. In the meta-analysis by McLeod (2011), the caregiver perspective was included in almost half of the studies (17 of the 38 studies); in the Shirk et al. (2011) analysis, in which only studies of individual treatment of youth were included, 6 of the 16 studies provided a measure of the caregiver alliance. Overall, findings so far support the assumption that both the caregiver and the child alliances are related to the treatment process but that the way they contribute may be somewhat different (Green, 2006; Hawley & Weisz, 2005; Zack et al., 2007). In particular, several studies have found that the strength of the caregiver alliance is predictive of dropout and treatment attendance (Garland, Haine-Schlagel, Accurso, & Baker-Ericzén, 2012; Hawley & Weisz, 2005; Shelef, Diamond, Diamond, & Liddle, 2005). However, no studies have investigated how the caregiver alliance is related to the process and outcome in treatment of traumatized youth, which is one of the aims of paper III.

1.4.5 Including the systemic context: interplay between youth and caregiver perspectives. Some authors have argued that to fully understand how therapeutic relationships influence the treatment process, the systemic context in which these alliances are formed should be considered (Jensen et al., 2010; Pinsof & Catherall, 1986; Robbins et al., 2006; Robbins et al., 2003), meaning that the interplay between the caregiver(s)' and the child's alliances should be investigated. Regardless if caregivers are directly involved in the treatment or not, they are important agents for the child's meaning making and understanding of the treatment process. This fact implies that caregivers will provide explicit or implicit feedback on how the treatment should be understood and utilized (Jensen et al., 2010; Zack et al., 2007). Most youth have little experience with therapy and may be unsure of what to expect and how to feel about entering therapy. In a study of children exposed to sexual abuse, it was found that the children made more or less explicit assessments of their parents' expressions of approval of the therapist and of the treatment, and this assessment influenced the youths' own thoughts about therapy. This process reflects what scholars call social referencing, a strategy that children use to interpret their caregivers' attitudes and emotions in making meaning of a new situation (Campos, 1984; Feinman, 1992; Morris, Silk, Steinberg, Myers, & Robinson, 2007). It can thus be expected that a weak parent-therapist alliance will have a negative influence on the youths' perception of the treatment and their own alliance to the therapists. Conversely, one could also expect that if the child expresses strong negative attitudes toward the therapist, these views will influence the caregiver's view of their therapeutic alliance.

This assumption resonates well with the Integrative Psychotherapy Alliance (IPA) model (Pinsof & Catherall, 1986). This model was developed in order to transfer the alliance construct into couples and family therapy, and there is an explicit focus on the mutual influence between the alliances of the different family members in treatment. This interplay between child and caregiver alliances may be particularly relevant to the treatment of traumatized youth. Exposure to trauma may alter a child's core beliefs about the outside world and other people, as well as influence their perceived ability to cope with future challenges (Janoff-Bulman, 1992; Meiser-Stedman et al., 2009; Pynoos et al., 1999). This perspective can make children more dependent on their caregivers' reassurances. A child who has been exposed to trauma within a family context may also be sensitive to his or her parents' feelings and whether he or she can discuss what has happened. Caregivers may also struggle with their own emotions, such as shame, guilt, and distress (Davies, 1995; Deblinger, Mannarino, Cohen, & Steer, 2006; Elliot & Carnes, 2001; Holt, Cohen, Mannarino, & Jensen,

2014; Kelley, 1990), and may therefore feel ambivalent about bringing their children to therapy. How children interpret this ambivalence may in turn influence their own decision to remain in treatment.

Studies based on the IPA model suggest that adults' treatment attendance in individual therapy was influenced by their perceptions of a non-attending partner's acceptance of the therapy (Pinsof, Zinbarg, & Knobloch-Fedders, 2008). Furthermore, at least one youth study has found that the degree of parent-youth agreement about their relationship to the therapist predicted dropout (Robbins et al., 2003). These findings point to the importance of learning more about how the interplay between youth and caregivers is related to the therapy process. In particular, youths' *perceptions* of caregivers' approval seem important. In order to investigate this subject, a new scale was developed (paper III). The *Child- and Adolescent-Perceived Parental Approval of Treatment Scale* (CAPPATS) included items that asked whether the youth perceived that their parents liked the therapist and thought the treatment was important and helpful, whether they thought that their parents wanted them to speak openly about what they have experienced, and whether they thought their parents agreed with them about the goals of the treatment (see the Appendix 1a and 1b).

1.5 Disentangling the Alliance-Outcome Relationship

Although the youth alliance field has made some progress during previous years and the number of studies investigating the alliance-outcome relationship has grown, there is still little knowledge of *how* the alliance may contribute to outcome (Crits-Cristoph, Gibbons, & Hearon, 2006; Green, 2006; Karver, Handelsman, Fields, & Bickman, 2005). As pointed out by Kazdin (2009), showing that alliance predicts later outcome by itself does not show that alliance plays a causal or mediational role in therapeutic change. The concept of the alliance is currently challenged by several methodological and conceptual problems that may question the validity of the alliance as an important agent of therapeutic change (see e.g., DeRubeis, Brotman, & Gibbons, 2005; Elvins & Green, 2008; Safran & Muran, 2006; Wampold & Imel, 2015). These are aspects that need to be addressed in order to better understand the alliance-outcome relationship and thus enable the research findings to help improve patient care (Crits-Cristoph et al., 2006).

1.5.1 Challenges to the role of the alliance as an agent of therapeutic change. The therapeutic alliance is often assumed to be either a mediator and/or a change mechanism in therapy. A mediator is defined as a variable that may account for the relationship between an IV and a DV, but it is not necessarily the cause of this relationship. In contrast, a change

mechanism is defined as the basis for the effect, i.e., the processes or events that are responsible for the change (Kazdin, 2009). In both cases, the alliance can be assumed to be an agent of therapeutic change.

One of the challenges to the role of the alliance as an agent of therapeutic change regards client characteristics that may influence both the therapeutic alliance ratings and the treatment process. As described earlier, it may be that the ability to form a relationship and establish a good therapeutic alliance is influenced by the youth's early attachment security and prior relational experiences (Bowlby, 1988). Other relevant youth characteristics could be initial symptom level, motivation for change, pretreatment expectancies, etc. (Elvins & Green, 2008). So far, these assumptions have been partially supported by studies reporting that client variables such as pre-treatment social functioning, interpersonal style and symptom severity influence the alliance formation in therapy with youth (Kazdin & Whitley, 2006; Levin, Henderson, & Ehrenreich-May, 2012) and adults (see e.g., Crits-Cristoph et al., 2006; Hersoug, Høglend, Havik, von der Lippe, & Monsen, 2009; Muran, Segal, Samstag, & Crawford, 1994). Some of these client characteristics have also demonstrated a direct relation to therapy outcome (Crits-Cristoph et al., 2006). However, a study analyzing therapist effects on the alliance-outcome relationship found therapists' contributions to the alliance to be a stronger predictor of outcome compared to client characteristics (Del Re, Flückiger, Horvath, Symonds, & Wampold, 2012).

Another aspect that may influence the alliance-outcome relationship is reverse causation. Although it is commonly assumed that the alliance predicts symptom reduction, it could also be that the alliance is the result of early treatment gains. To date, most studies of the alliance in youth therapy have measured the alliance either late in treatment or at the same time point as the outcome, making it difficult to rule out whether the alliance ratings are influenced by early symptom relieves (Shirk et al., 2011). Although there is an increase in studies reporting that the alliance predicts outcome even after controlling for early treatment gains (Crits-Cristoph, Gibbons, Hamilton, Ring-Kurtz, & Gallop, 2011; Marker, Comer, Abramova, & Kendall, 2013), establishing a causal relationship between alliance and outcome in the future necessitates careful control of the contribution of symptom change to the alliance (Elvins & Green, 2008).

In addition, there are methodological issues that can potentially threaten the validity of the alliance-outcome association. One of these is related to the tendency to use the same rater for both alliance and outcome, increasing the risk of a "halo-effect", or shared method variance. For example, in the McLeod (2011) analyses it was found that the alliance-outcome

relationship was significantly stronger when the same person was used to report both the alliance and the outcome compared with studies where the alliance and outcome were reported by different persons. In order to minimize this problem, studies should include perspectives from different raters and assess the relationship between, for example, youth-rated alliance and clinician-rated outcomes.

1.5.2. Potential pathways from the alliance to outcome. In spite of the methodological and conceptual problems identified above, several authors argue that the alliance is still an important concept worth retaining (Safran & Muran, 2006). However, in order to strengthen this assumption, the field has to move forward to investigate the pathways through which the alliance is responsible for change (Crits-Cristoph et al., 2006; Green, 2006; Norcross & Lambert, 2011). To date, two theoretical frameworks of how the alliance is related to outcome in youth therapy have been proposed. One is the “model of the mechanisms of the alliance” outlined by Green (2006). This model is based on Hougaard (1994) and his synthesis of the therapeutic alliance literature of adults dividing the alliance into a *personal alliance* and a *task-related alliance*. According to Green (2006), the mechanism of the personal alliance can be understood in light of Bowlby’s (1988) attachment theory. It is suggested that the establishment of a positive emotional bond will mobilize the youths’ own coping resources, which will in turn alleviate illness-related anxieties and distress. The second aspect of the model concerns the contractual nature of treatment and the task-related alliance. Here, it is assumed that the process of negotiation and agreement on the goals and tasks of the treatment will be beneficial in and of itself since it enables youth to feel more empowered, motivated and involved in the treatment tasks. This model is useful since it offers some plausible theories of how the youth alliance can contribute to change. However, although specifically developed for youth therapy, it does not address to what degree the caretaker or therapist alliances are related to the different pathways.

The second framework is the “theoretical model of common process factors in youth and family therapy” developed by Karver and colleagues (2005). The aim of this model is to link the various relationship variables present in youth treatment to outcome, and it is based on an extensive review of theoretical and empirical studies. The model emphasizes how child, caregiver and therapist characteristics and behaviors contribute to the child and family’s affect toward the therapist, their willingness to participate in the treatment, and their actual involvement in the treatment tasks. It is then assumed that the bond, agreement and involvement may contribute to the outcome of treatment in several different ways: 1) either as a necessary relational change mechanism, 2) as a catalyst for other treatment processes that

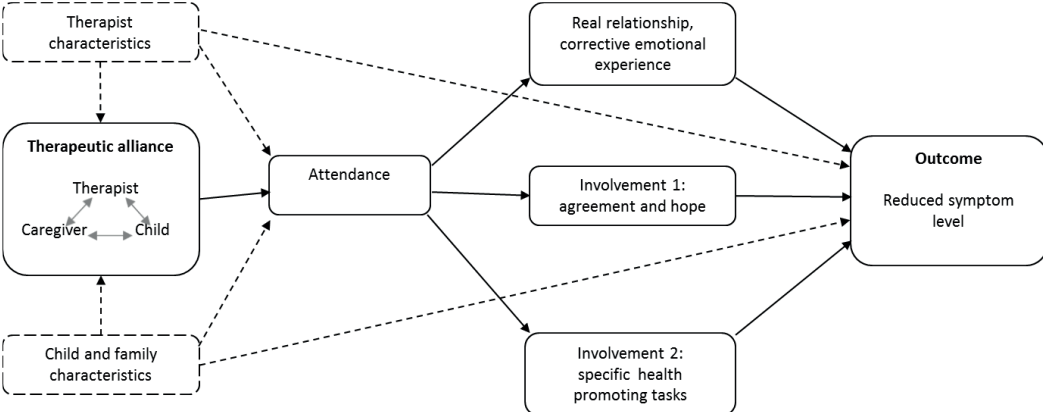
lead to positive outcomes, or 3) as a moderator of therapist-offered interventions. This model offers a more detailed framework of what influences the formations of the youth and caregiver alliances, however there is little focus on the pathways from alliance to outcome. There is, for instance, no mention of *how* the alliance can be a relational change mechanism or in what way it can moderate the therapist-offered interventions.

A third relevant model has been developed in the adult field and this is the “tripartite model of relationships in psychotherapy” by Wampold and Budge (2012). In this model, there is first an initial relationship formation, followed by three relationship pathways. The initial therapeutic bond refers to the early connection between therapist and client that has to be established before the therapeutic work can be started. The subsequent relationship pathways are assumed to involve different mechanisms of change, with the first referring to the real relationship between therapist and client. This relationship is defined according to Gelso’s description of a relationship between a therapist and a client that is realistic (i.e., it is free from transference) and genuine (i.e., it is authentic, open and honest) (Gelso, 2009). In their model, Wampold and Budge show how this real relationship may offer belongingness and a social connection that can help increase the patients’ quality of life. In the second pathway, symptom reduction is achieved as a result of positive expectations that have been created through explanation and some form of treatment. In particular, hopes and expectations that the client will be able to cope with the difficulties that brought them to therapy are evoked, and these expectations are assumed to be beneficial in and of themselves. It is of less importance what kind of explanations and interventions are offered, as long as the client accepts these explanations and participate in the therapeutic tasks assumed to be helpful. In the third pathway, the relationship promotes the client’s involvement in specific health-promoting therapeutic tasks, which will again lead to symptom reduction. Here it is the tasks performed (i.e., replacing maladaptive appraisals with more realistic and healthy ones, engaging in social activities, or reducing perceived stress through relaxation exercises) that are assumed to be health promoting, above and beyond the expectations created in the second pathway. According to the authors it remains undetermined whether the benefit of these tasks is because of specific factors, i.e., specific tasks or procedures that act as change mechanisms in and of themselves for specific disorders, or whether there are rather a myriad of healthy actions for numerous mental disorders.

In an attempt to better understand how the alliance may contribute to change in the treatment of traumatized youths, a new model is proposed (Figure 1). This “pathways from the therapeutic alliance to outcome model” integrates some of the features of the models

presented above, but has been adapted to fit in a youth treatment setting. Some of these adaptations are including the caregiver alliance in the model, and assuming that the three rater perspectives (youths', therapists' and caregivers') may be differently related to the treatment process and outcome. In line with the model of Karver et al., it is expected that youth, caregiver and therapist pretreatment characteristics will influence the alliance formation. In addition, ecological and contextual factors such as cultural believes, psychotherapeutic treatment delivery systems and practical barriers are assumed to influence the treatment process (see e.g., Orlinsky et al., 2004), but these factors not further elaborated in the model. Based on the arguments by Shirk and Saiz (1992), the alliance is defined as an emotional bond and agreement on treatment tasks. However, as a study by Accurso et al. (2013) indicate that youths and caregivers do not divide the alliance into one task and one bond dimension, but rather perceive the alliance more as a valence based construct with a positive and negative dimension, the pathways model does not distinguish between how the emotional bond may relate to outcome compared to the collaboration on the treatment tasks. The three suggested pathways are assumed to be complementary and involve different, but not mutually exclusive, mechanisms of change. Furthermore, the three pathways may be differently emphasized in different treatment models, meaning that not all pathways need to be present in all types of treatments.

Figure 1. Pathways from the therapeutic alliance to outcome



Similar to the model of Wampold and Budge (2012) it is assumed that an initial therapeutic alliance is a prerequisite for the child and family to remain in treatment and be involved in the therapeutic work. In this first step of the model, the alliance is therefore expected to influence treatment attendance and dropout. The alliance may be particularly important for treatment attendance in the treatment of traumatized youth, where attachments may have been insecure and aspects of the therapy such as exposure may be perceived as very challenging. One can thus expect the youth-therapist alliance to predict dropout. Furthermore, the caregiver alliance may be important, since a strong relationship with the therapist can help motivate caregivers who are potentially burdened by many life stressors to attend the treatment sessions despite daily struggles and practical barriers. However, these barriers are also assumed to have direct influence on treatment attendance, together with youth, caregiver, and therapist pretreatment characteristics (as marked by the dotted lines in the model). The importance of this first step has been partially supported by the studies discussed above that find a link between caregiver alliance and dropout in treatment of other disorders (Garland et al., 2012; Hawley & Weisz, 2005; Shelef et al., 2005), but less is known about the relationship between the youth-therapist alliance and dropout.

Once the family is involved in the treatment, the therapeutic alliance may contribute to change as a healing factor in and of itself. This is pathway 1 in the model and is similar to what Green describes as the personal alliance and Wampold and Budge call the real relationship. Although Gelso (2009) emphasize that the real relationship is not the same as a working alliance, the two types of relationships are assumed to be highly overlapping and may in practice be indistinguishable. Furthermore, since studies have shown that clients do to a lesser degree differentiate the alliance from the real relationship compared with therapists (ibid.), and youth and caregivers do not seem to differentiate the emotional bond from the therapeutic tasks (Accurso et al., 2013), the therapeutic alliance is assumed to reflect the real relationship in the current pathways model. The healing effect of the alliance as a real relationship can be understood in light of Bowlby's attachment theory, where a personal connection to another human being that is invested in ones' well being is assumed to be health promoting in and of itself (see Wampold & Budge, 2012). Furthermore, in a relationship where the therapist is genuinely attuned to the client, the therapist may also be able to identify and repair potential ruptures in the alliance that may occur during the treatment. The reparation of such alliance ruptures is suggested to represent a corrective emotional experience for the patient (Safran, Crocker, McMMain, & Murray, 1990; Safran & Muran, 2000), and a link has been established between such corrective emotional experiences and the

ability to resolve early relationship traumas (Hartman & Zimberoff, 2004). More specifically, it has been claimed that a therapeutic relationship can enhance the neural integration and cortical circuitry of brain structures potentially damaged by early traumatization, which in turn enhances emotional regulation and the ability to relate to a coherent trauma story (Siegel, 2003). In the pathways model, it is assumed that in particular the clients' perspective on the alliance may reflect the extent to which the youth or the caregiver feels connected to the therapist. Furthermore, it can be expected that agreement between the client and therapist on the alliance may reflect the level of attunement and the degree to which the two participants have developed a real relationship.

The second pathway is similar to Green's task-related alliance and Wampold and Budge's creation of expectations pathway. In this pathway it is assumed that the alliance contributes to change because the emotional bond and agreement on the task will facilitate the clients' involvement in the therapeutic procedures provided by the therapist. This involvement will then increase the clients' experience of being able to cope with their problematic thoughts and feelings, creating hope and a sense of increased competency that contribute to change. In this pathway, it is assumed that it is not important what type of task is performed as long as the client and the therapist perceives the task as meaningful and relevant (Wampold & Budge, 2012). The relevance of this pathway has been supported by meta-analytic findings showing that the alliance is a consistent predictor of outcome across a variety of treatment interventions and tasks (Flückiger et al., 2012; McLeod, 2011; Shirk et al., 2011). In the treatment of youths it may be important for the therapist to focus on the alliance both with the youth and the caregiver(s) as the participants may hold different views of what types of tasks may be helpful and contribute to an increased feeling of hope and competency.

The third pathway bears resemblance to pathway 2 where the alliance facilitates the involvement in therapeutic tasks. However, in pathway 3 it is assumed that the tasks performed are the actual contributors of change, above and beyond the hopes and expectations created in the second pathway. Here it has to be considered that although some therapeutic tasks can seem very different they may in fact involve the same underlying change mechanisms. For example, both psychodynamic therapy and cognitive behavioral therapy will emphasize the importance of confronting, instead of avoiding, anxiety laden material, although they may have different strategies for this confrontation (Weinberger, 2014). This does not mean, however, that *any* therapeutic tasks will be helpful (Asnaani & Foa, 2014). In the treatment of PTSS one such specific task could be the creation of a trauma narrative. This task includes several aspects that are assumed to reduce pathological processes that have been

linked to the development and maintenance of PTSS. For one, the creation of a coherent narrative will contribute to an increased elaboration and contextualization of the traumatic event in the clients' autobiographical (see Ehlers & Clark, 2000). In addition, when the youth is involved in talking and thinking about the traumatic event in great detail and over a period of several sessions, this will represent a form for exposure that can help reduce the fear-related associations connected to the traumatic memory. And last, working through a trauma narrative can help identify and challenge potential negative attributions that the youth may have related to the trauma. This may be beneficial as these appraisals have been found to predict the development and maintenance of PTSS (Meiser-Steadman et al., 2009). Although there is, as already mentioned, some controversy regarding the importance of specific factors in treatment of adult PTSD (see Asnaani & Foa, 2014; Benish et al., 2008; Ehlers et al., 2010), several studies have found that the inclusion of a trauma-specific component such as a trauma narrative and/or exposure is associated with lower levels of post-treatment PTSS both in the treatment of youth (Deblinger et al., 2011) and adults (Ehring et al., 2014; Powers, Halpern, Ferenschak, Gillihan, & Foa, 2010). In this third pathway it can be assumed that the youth alliance may be more important compared with the caregiver alliance, because the tasks are specifically aimed at changing the youths' thoughts and feelings.

In summary, it can be expected that both the first step and all of the three subsequent pathways will be important in the treatment of traumatized youth, but that the relative strength of the pathways may differ across treatment models (DeRubeis et al., 2005). For instance, in more structured therapies where there is explicit emphasis on specific treatment tasks, it can be assumed that the alliance is important as a facilitator for involvement in these activities. On the other hand, in therapies where the focus is more on the therapeutic relationship, one can expect that the alliance to be a healing factor in and of itself. In terms of the different participants' perspectives on the alliance, it can be assumed that youth, caregiver, and therapist ratings of the alliance may predict outcome in the treatment of youth PTSS, but that they may be related to different pathways. For instance, the caregiver alliance can be assumed to be important for treatment attendance, but to a lesser degree related to the relationship pathway (1) or the involvement in specific tasks pathway (3).

In this thesis, different aspects of the pathways model will be investigated in the three papers. Collectively, the results may potentially contribute to an increased understanding of the role the therapeutic alliance plays in the treatment of traumatized youths.

2. The Present Study

2.1. Aims and Research Questions

The primary aim of this thesis is to better understand the role the therapeutic alliance plays in treatment of traumatized youth. More specifically, this work 1) investigates the relationship between alliance and post-treatment symptom reduction in youth trauma treatments; 2) elucidates the therapists' perspectives of the alliance, and how these perspectives were related to adolescents' ratings, process and outcome; 3) looks at the relational processes involved in premature treatment termination. More specifically, the following research questions were pursued in this thesis:

- 1) What is the relationship between the therapeutic alliance and outcome in treatment of youth suffering from PTSS? Is this relationship the same in TF-CBT and TAU? (paper I)
- 2) How are therapist ratings of the alliance related to process and outcome, and to what degree do youth and therapist perspectives on the alliance overlap? Are there any differences in the underlying factor structure of youth and therapist alliance ratings? Does the lack of agreement across raters influence outcome? (paper II)
- 3) How are youth characteristics such as demographic variables and trauma history related to dropout? Do treatment method and caregiver participation influence dropout? How do youth, therapist and caregiver first session alliance ratings and youth-perceived parental approval of treatment relate to dropout? (paper III)

3. Materials and Methods

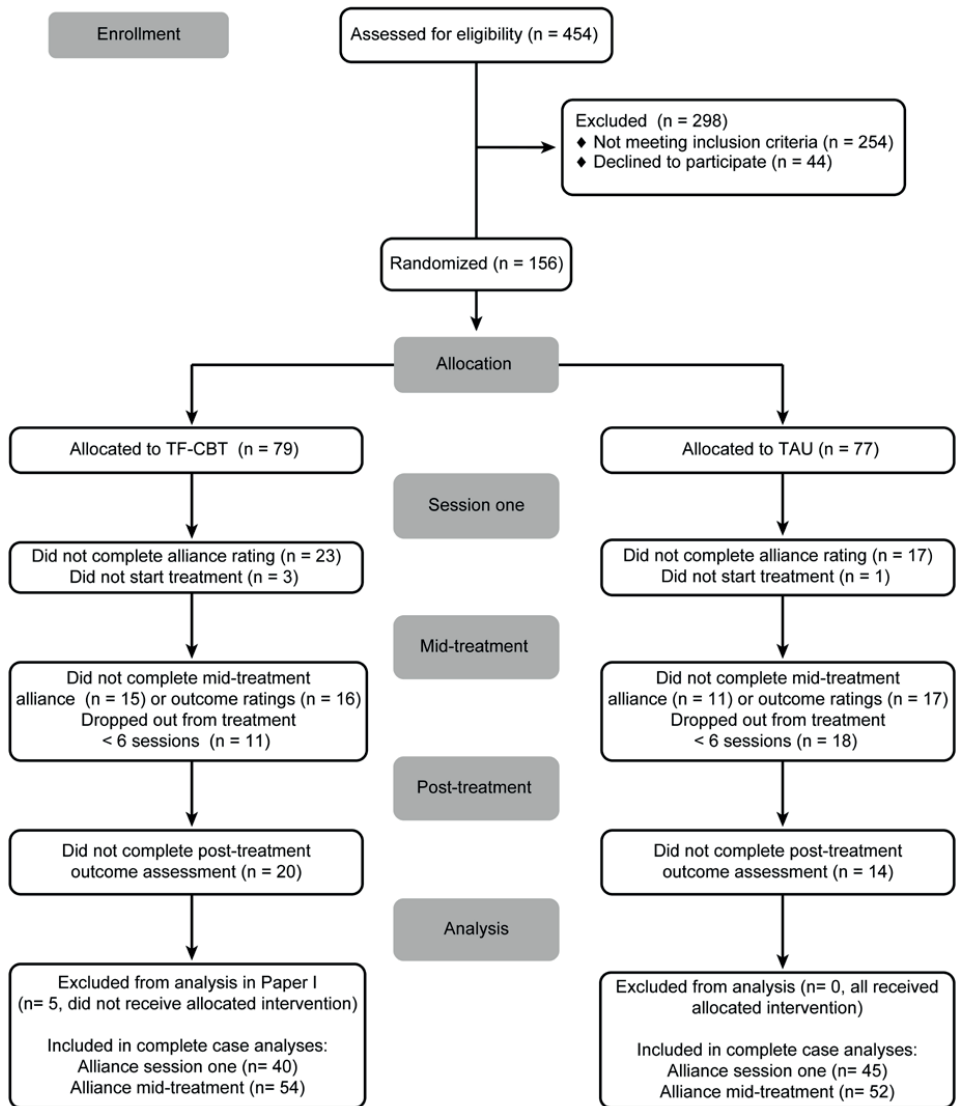
3.1 Procedure: The Norwegian TF-CBT Study

The data in this thesis were derived from The Norwegian TF-CBT Study, a randomized effectiveness study investigating effect and process variables in the treatment of traumatized youth in community clinics. All participants were referred through standard referral procedures (i.e., by the primary physician or child protective services) to one of the eight participating child and adolescent mental health clinics. These clinics are situated in different parts of Norway; four of the clinics are located in small cities, two are in large cities, and two are in suburban areas. Youth between 10 and 18 years old, reporting exposure to at least one traumatizing event at least four weeks prior to intake, and presenting PTSS above a pre-established cutoff (≥ 15 on the *Child PTSD Symptom Scale* (CPSS; Foa, Johnson, Feeny, & Treadwell, 2001) were invited to participate. Exclusion criteria were acute suicidal

behavior, psychosis, intellectual disability or need for an interpreter. Recruitment took place from April 2008 until February 2011 and a total of 454 youth were screened for eligibility. Of these, 200 met the inclusion criteria, and 156 agreed to participate (Figure 2). Information about the study was given both verbally and in written form, and written consent was obtained from both the caretaker and the adolescent. Procedures were reviewed and approved by the Regional Committee for Medical and Health Research (REC). After consent was given, participants were randomized to receive either TF-CBT ($n = 79$) or the therapy normally provided at the clinic (TAU, $n = 77$). Computer-generated randomized block procedures were used, one for each clinic, and participants were not stratified on any specific features.

Symptom levels were assessed pre-treatment (T1a), after six sessions (T2), and post-treatment (T3). In addition, follow-up data were collected 1 year after the pre-treatment assessment (T4) and 18 months after the post-session assessment (T5). In this thesis, data from the three first time points are included. Since TF-CBT, normally delivered over a course of 12–15 sessions, was the experimental condition, it was decided that all post-treatment assessments should be conducted after the 15th session, even though some participants in the TAU and TF-CBT condition were still in treatment at this time point. Alliance ratings were collected after sessions one (T1b) and six (T2), and youths' perceptions of their parents' approval of the therapy was collected after session one (T1b). In order to reduce social desirability, youth and caregivers were informed that their therapist would not be able to see their ratings. Two licensed psychologists from the research group administered all of the assessments, and they were blind to the youths' treatment conditions. All assessments, except the diagnostic interview, were conducted by computer-assisted self-report, but the psychologists were available and could answer any questions if necessary. The caregiver ratings were completed by the same caregiver each time. Participating adolescents received a small gift card (e.g., a movie pass) after completing the post-treatment assessment (T3), but no other economic compensation was provided.

Figure 2. Flowchart participants.



3.2 Sample

Table 1: Short overview of the main focus and different subsamples in each paper

Paper	Main focus	Sample	Analytical method
I	Youth-rated alliance and relationship to outcome across treatment conditions	156 youth	Hierarchical linear regression analyses
II	Youth and therapist perspectives of the alliance: relationships to outcome, process and underlying dimension	156 youth 71 therapists	Linear regression analyses, exploratory factor analyses
III	Predictors of dropout. Youth, therapist and caregiver perspectives; background variables, treatment method, and first session process variables	156 youth 96 caregivers 71 therapists	Binominal logistic regressions

3.2.1. Youth sample. The total youth sample consisted of 156 adolescents (79.5% girls), with a mean age of 15.1 years (SD : 2.20 years; range: 10–18 years). The majority of participants had at least one European-born parent (81.4%) and lived in one-parent households (63.6%). Adolescents reported being exposed to an average of 3.6 different types of traumatizing events (SD : 1.8; range: 1–10). The most frequently reported traumas were violence or threats of violence outside the family context (75.0%), traumatic loss (i.e., sudden death of a caregiver or a close person (60.9%), physical abuse by a caregiver (45.5%), witnessing violence within the family (42.9%), and sexual abuse by someone outside the family (30.8%). When asked to specify which event they perceived as the most disturbing or severe (“the worst event”), at intake, 32.1% of youth reported exposure to domestic violence and physical abuse, 28.8% reported sexual abuse, 17.9% reported traumatic loss, 17.3% reported violent attacks outside the family context, and the remaining 4.0% reported accidents or other forms of non-interpersonal traumas (Table 2). All participants reported clinically elevated symptoms of PTSD; mean-level CPSS scores at pre-treatment were 27.2 (SD : 7.7). Based on clinical interviews with the *Clinician-Administered PTSD Scale – Child and Adolescent* (Nader et al., 2004), the majority of the sample (66.9%) satisfied the diagnostic criteria for PTSD at intake. In addition, 72.8% of the youth scored above the clinical cutoff for depression on the *Mood and Feelings Questionnaire* (Angold, Costello, Messer, & Pickles, 1995), 66.4% scored above the cutoff for anxiety on the *Screen for Anxiety-Related Disorders* (Birmaher et al., 1999), and 59.1% had other behavioral and attention problems, as rated by the *Strengths and Difficulties Questionnaire* (SDQ) (Goodman, 2001).

Table 2: Participant characteristics

	%	<i>n</i>
Youth-reported traumatic events, total exposure		
Violence outside family	75.0	117
Traumatic loss	60.9	95
Physical abuse	45.5	71
Witnessing domestic violence	42.9	67
Sexual abuse outside the family	30.8	48
Witnessing violence outside the family	27.6	43
Severe accidents	20.5	32
Hospitalization	16.7	26
Sexual abuse inside the family	7.7	12
Other traumatic event	36.6	57
Source trauma		
Physical abuse and domestic violence	32.1	50
Sexual abuse	28.8	45
Traumatic loss	17.9	28
Violence outside the family	17.3	27
Accidents/ hospitalization	2.6	4
War/ refuge	1.3	2
Ethnic background		
Both parents Norwegian	73.1	114
One parent Norwegian	9.6	15
Asian	10.3	16
Other European	3.8	6
African	1.9	3
Latin American	1.3	2
Housing situation		
With both parents	21.8	34
With one parent	61.6	96
Foster care	7.7	12
Alone/ other arrangements	6.4	10
Missing	2.6	4
Parent education		
Elementary school	12.2	19
High school	31.4	49
Vocational training	10.3	16
College (1–4 years after high school)	28.2	44
University (> 5 years)	5.1	8
Missing	12.8	20

Total household income¹		
< USD \$35,000	13.5	21
USD \$35,000–88,000	30.8	48
USD \$88,000–174,000	24.4	38
> USD \$174,000	5.8	9
Did not know/ did not want to state	25.6	40

¹ Mean income in Norway in 2012 = USD \$79,800 (www.ssb.no)

3.2.2 Caregiver sample. A total of 135 caregivers participated in the main study. Of these, 96 caregivers participated in the first session either alone or together with their child, and these were included in paper III. This sample consisted of 64 biological mothers (66.7%), 17 biological fathers (17.7%), 12 foster parents (12.5%), and three (3.1%) caregivers that did not report their relationship to the child. The majority of caregivers had no education after high school (55.6%) and two-thirds of caregivers were working full- or part-time (64.4%). Comparisons between the two samples that had participating and non-participating caregivers showed that the youth in the latter group were significantly older (M age = 16.4 years vs. 14.2 years, $t[1, 153.8] = 7.5, p < 0.001$) and reported exposure to significantly more traumatic events ($M = 4.1$ vs. 3.4, $t[1, 102.5] = 2.4, p = .019$), but there were no significant differences in the pre-treatment CPSS levels or ethnic minority status of the groups.

3.2.3 Therapist sample. The participating youth were treated by 71 therapists. All volunteered to participate in the trial and were not randomized to treatment conditions. In the *TF-CBT condition*, 26 therapists were recruited and received training. Most therapists were psychologists (80.8%, $n = 21$), 7.7% ($n = 2$) were psychiatrists, 7.7% ($n = 2$) were educational therapists (Masters of education and additional clinical training), and 3.8% ($n = 1$) were clinical social workers (a Bachelor-level degree with additional clinical training). On average, therapists had 10.2 years of experience (SD : 6.4 years; range: 3–28 years), and in this study the therapists treated on average 3.1 (Mdn : 3; SD : 1.5; range: 1–6) participants each. In regard to the alliance ratings, 24 therapists reported their alliance after session six with an average of 2.6 youth (Mdn : 3; SD : 1.4; range: 1–5). When asked about theoretical orientation, 61.5% ($n = 16$) of the therapists characterized their background as cognitive-behavioral, 23.1% ($n = 6$) characterized their background as psychodynamic and 7.7% ($n = 2$) characterized their background as family/systemic. All therapists received between four and six days of initial training, and were encouraged to read the treatment manual (Cohen et al., 2006) and complete a web-based learning course for TF-CBT (www.musc.edu/tfcbt). Treatment adherence was supported through initial session-by-session supervision provided by trained TF-CBT

therapists based on reviews of audio-recorded sessions. As the therapist became more familiar with the model, supervision was reduced to bi-weekly sessions.

In the *TAU condition*, 45 therapists participated. The sample consisted of 51.1% ($n = 23$) psychologists, 26.7% ($n = 12$) clinical social workers, 17.8% ($n = 8$) educational therapists, and 4.4% ($n = 2$) psychiatrists. Based on self-reporting, 37.8% ($n = 17$) of the therapists described their theoretical orientation as psychodynamic, 24.4% ($n = 11$) described their theoretical orientation as cognitive-behavioral and 20.0% ($n = 9$) described their theoretical orientation as family or systemic. The remaining eight therapists did not report their theoretical orientation. The mean work experience in this group was 12.5 years (SD : 10.3 years; range: 1–40 years), and they treated on average 1.7 (Mdn : 1; SD : 1.2; range: 1–8) participants each. Thirty-eight therapists reported their alliance after session six with an average of 1.7 youth (Mdn : 1; SD : 1.1; range: 1–6). Therapists in the TAU condition reported receiving on average 1.4 hours of supervision (SD : 5.3; range: 0–40) on their therapies with study participants in total.

3.3 Treatment Conditions

3.3.1 TF-CBT. As described in the Introduction (page 8), TF-CBT is a short-term, component-based, manual-guided treatment developed by Cohen, Mannarino, & Deblinger (2006). In this study, participants in the TF-CBT conditions had completed on average 13.0 (SD : 3.1; Mdn : 14; range: 4–17) sessions before the T3 assessment, and on average 18.8 (SD : 8.4; Mdn : 16.0; range: 8–49) sessions before the case was discharged from the clinic. The therapy sessions were audio-recorded, and each session was coded for fidelity by trained TF-CBT therapists, using a treatment adherence checklist provided by the treatment developers. In cases where there were questions about fidelity, these were discussed, and fidelity was determined by consensus. In five cases, the core TF-CBT components (i.e., psycho-education, relaxation, emotion regulation, trauma narrative and cognitive restructuring) were not provided. Since an explicit aim of paper I was to investigate the interaction between treatment condition and alliance, these cases were excluded from the analyses.

3.3.2 TAU. In the TAU condition, therapists were not given any specific instructions but were asked to provide the treatment they believed to be effective for each particular case. Treatment was for the most part provided individually, but in 55.3% ($n = 42$) of the cases parents were also involved in the therapy process. All TAU sessions were recorded, and at least five sessions for each case were checked (1st, 2nd, 3rd, 6th and 9th, mean: 5.7 sessions; SD : 3.5; range: 1–19) with the TF-CBT fidelity checklist. In those cases where treatments had

features resembling TF-CBT, additional sessions were checked, adding up to a total of 392 fidelity-checked sessions. In addition, two or three sessions were drawn randomly from each therapist ($n = 81$ sessions) and coded according to the *Therapy Process Observational Coding System – Strategies Scale* (TPOCS-S; McLeod & Weisz, 2010). Based on the fidelity checklist, the following TF-CBT components were provided in the TAU condition: 15.6% ($n = 12$) psycho-education, 11.6% ($n = 8$) affective expression and modulation, 8.7% ($n = 6$) relaxation skills and 7.2% ($n = 5$) cognitive restructuring. In 5.8% ($n = 4$) of the cases, there was some therapeutic work addressing the traumatic event but none of the cases included the parents in the trauma work. None of the cases satisfied the adherence criteria for TF-CBT. Codings with the TPOCS-S showed that the main strategies used in the TAU condition were client-centered (present in 92.6% of the sessions) and psychodynamic strategies (present in 47.5% of the sessions). Family therapeutic interventions were observed in 35.8% of the sessions, cognitive strategies were observed in 30.9% of the sessions, and behavioral strategies were observed in 19.8% of the sessions. On average, participants in the TAU condition had 12.9 ($SD: 4.8$; $Mdn: 15$; range: 1–21) sessions before the T3 assessment, and an average of 23.8 ($SD: 21.4$; $Mdn: 19$; range: 1–114) sessions before the case was discharged from the clinic.

3.4 Measures

3.4.1 Youth alliance. The TASC-r (Shirk & Saiz 1992; Shirk & Karver, 2010) consists of 12 items that measure both the emotional aspects (bond, items 1, 3, 5, 6, 8 and 10) and degree of youth-therapist collaboration (task, items 2, 4, 7, 9, 11 and 12). The items are worded as statements regarding the youths’ feelings toward the therapist (e.g., “I like my therapist”) and their self-perceived involvement in tasks (e.g., “I work with my therapist to solve problems in my life”), and all items are answered on a 4-point Likert scale (*Not at all to Very much*). The TASC-R was translated and back translated, and the first author of the TASC-R approved the Norwegian version. The internal reliability of the scale was good in this sample both at T1 (total scale $\alpha = .88$, bond $\alpha = .82$, task = .73) and T2 (total scale $\alpha = .91$, bond = .88, task = .81).

3.4.2 Caregiver alliance. A parallel caregiver-therapist alliance form was developed in collaboration with the first author of the TASC-r. This scale was to a large degree similar to the caregiver version developed by Hawley & Weisz (2005). Items correspond to the child scale, but “my therapist” was changed to “the therapist I see at the clinic.” This change ensured that the form could include both those parents that met with their child’s therapist,

and those who had parallel sessions with another therapist. In line with the youth and therapist versions, all items were answered on a 4-point scale. In this sample, the internal consistency of the total scale ($\alpha = .74$) and the bond subscale ($\alpha = .72$) were adequate, but the task subscale ($\alpha = .46$) had an alpha value below the recommended level (Tavakol & Dennick, 2011).

3.4.3 Therapist alliance. The therapist versions of the TASC-R consist of the same 12 items as the youth and caregivers scales, only phrased so that the therapists rate their impression of the youth's or caregiver's engagement (e.g., "The child expresses positive emotions toward you, the therapist"; "The child finds it hard to work with you on solving problems in his/her life"; "The child's caregiver works with me to solve problems in his/her life"). It thus involves ratings of the *client's* bond and task involvement rather than the therapist's own. In this sample, the two scales' internal consistencies were good (T1 therapist-youth total scale: $\alpha = .88$, bond $\alpha = .86$, task = .80; T2 therapist-youth total scale $\alpha = .91$, bond $\alpha = .87$, task $\alpha = .90$; and T1 therapist-caregiver total scale: $\alpha = .83$, bond = .75, task = .75).

3.4.4 Youths' perceptions of parental approval of treatment. Based on earlier studies (Brookman-Frazer, Haine, Gabayan, & Garland, 2008; Jensen et al., 2010; Pinosof et al., 2008), a new scale was developed as part of this thesis. The aim of this scale, the Child- and Adolescent-Perceived Parental Approval of Treatment Scale (CAPPATS), was to investigate whether the youth participants believed that their parents approved of the treatment. The CAPPATS consisted of five items that were worded so that the child could rate his or her *impression* of his or her parents' approval (1: "I think my caregivers (e.g., mother/ father/ foster parent) like my therapist", 2: "I think my caregivers think it is important that I attend the sessions at the clinic", 3: "I think my caregivers want me to speak openly about my experiences to my therapist", 4: "I think my caregivers and I agree on what problems to work on", and 5: "I think my caregivers think that the things the therapist and I do are helpful"). All items were rated on a 4-point scale (*Not at all* to *Very much*). To investigate the performance of the new scale CAPPATS, we performed several analyses. First, the internal consistency ($\alpha = .74$) was adequate. Furthermore, analyses of the response distributions of the individual items showed that there was adequate variance in this sample (mean scores: 2.90–3.67; skewness: -1.93–0.57), and that the average interitem correlation (.38) was within the recommended level (Clark & Watson, 1995). Last, principal-axis analysis showed that all items had loadings of .55 or higher, and that the one five-item factor explained 50.1% of the variance. Taken together, these results showed that the CAPPATS scale performed well according to the recommended criteria.

3.4.5 Trauma exposure. To assess trauma exposure, the research group developed a checklist based on the items described in The Traumatic Events Screening Inventory for Children (TESI-C; Ribbe, 1996), 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 child reported that he or she had felt scared, terrified, or helpless during or immediately after the event.

3.4.6 Self-reported PTSS. Adolescents' PTSS were first measured by means of the self-completion Child PTSD Symptom Scale (CPSS)(CPSS; Foa et al., 2001). The CPSS consists of two parts. The first part measures the 17 symptoms of PTSD defined in the DSM-IV, covering the three factors *Re-experiencing*, *Avoidance* and *Hyper arousal*. Symptom frequency is rated based on the last two weeks, with a 4-point scale ranging from *Never or once* to *Almost every day*. The second part measures how the symptoms impact daily functioning, covering friendships, family, school work, hobbies and activities, house chores and general life satisfaction. Principal component analyses of a comparable sample of 312 youth confirm the factor structure in the original version (Hukkelberg & Jensen, 2011), and satisfactory internal consistencies were found for each of the three factors (Re-experience $\alpha = .84$, Avoidance $\alpha = .80$, Hyper arousal $\alpha = .76$), and the functional impairment scale ($\alpha = .90$). The scale was translated and back translated, and the developers of the scale approved the Norwegian version.

3.4.7 Clinician-rated PTSS. In addition to the self-report measure, a clinician-administered PTSD interview was conducted (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, and it is adapted from the adult version to be suitable both for younger children and adolescents up to age 18. Items are scored on 5-point frequency scales (i.e., from 0 = *None of the time* to 4 = *Most of the time*) and 5-point intensity rating scales (i.e., from 0 = *Not a problem* to 4 = *A big problem, I have to stop what I am doing*), assessing the symptom frequency and intensity during the past month. Items are scored based on both the youths' answers and clinical judgment. The interview was translated and back translated, and the first author of the CAPS-CA approved the Norwegian version. The entire scale showed

satisfactory internal consistency ($\alpha = .90$), as did the DSM-IV-defined tripartite model (Re-experiencing: $\alpha = .87$, Avoidance: $\alpha = .77$, Hyper arousal: $\alpha = .79$). Inter-rater reliability for total sum score was excellent (ICC = .99; 95% CI: .95–1.00) and the kappa value of the diagnostic status was .80.

3.4.8 Caregiver-rated PTSS. Caregiver's perspective of the youths' PTSS was assessed using *The UCLA PTSD Index for DSM-IV Parent Report Version* (The UCLA Index; Steinberg, Brymer, Decker, & Pynoos, 2004). The symptom checklist includes 21 items, 17 of which are defined by the DSM-IV and are used to compute the sum score. Items 14 and 20 are not included in the scoring, and only the highest scores on either items 3 or 20 and the highest scores of items 10 or 11 are used. Caregivers are asked to report the frequency of their child's symptoms during the last month. Items are rated on a scale ranging from 0 (*None of the time*) to 4 (*Most of the time*). In addition, a fifth option is given (5 = *Don't know*). In this study, all ratings of "5" were coded as missing, and total scores were calculated for those caregivers who had reported 0–4 on at least 9 of the 17 items (mean scores \times 17). The internal consistency for the scale was good in this sample ($\alpha = .87$).

3.4.9 Depressive symptoms. The *Mood and Feelings Questionnaire* (MFQ; Angold et al., 1995) was used to assess depressive symptoms. This self-report questionnaire was designed to assess depressive symptoms in children and adolescents between 8 and 18 years old. The questionnaire consists of 34 questions measuring both the full range of DSM-IV diagnostic criteria for depressive disorders, as well as additional items reflecting common affective, cognitive and somatic features of childhood depression. Items are scored on a 3-point scale ranging from 0 (*Not true*) to 2 (*True*). In this sample, the MFQ showed good internal consistency ($\alpha = .91$). The scale has been translated and back translated, and the Norwegian version was approved by the developers (Sund, Larsson, & Wichstrøm, 2001).

3.4.10 Anxiety symptoms. The Screen for Child Anxiety-Related Disorders (SCARED) is a self-report questionnaire developed by Birmaher et al. (1999). It measures anxiety symptoms in children and adolescents aged 8–18 years. The instrument consists of 41 items that cover five specific anxiety disorders: 1) Panic Disorder or Significant Somatic Symptoms; 2) Generalized Anxiety Disorder; 3) Separation Anxiety Disorder; 4) Social Anxiety Disorder; and 5) Significant School Avoidance. Items are scored on a 3-point scale ranging from 0 (*Not true*) to 2 (*True*). In this sample, the SCARED showed satisfactory internal consistency on the total scale ($\alpha = .93$). The scale was translated and back translated, and the developers approved the Norwegian version.

3.4.11 General mental health. The Strengths and Difficulties Questionnaire (SDQ)(SDQ; Goodman, 2001) is a self-report questionnaire measuring general mental health problems in children and adolescents. The SDQ contains 25 items, covering five areas of clinical interest: hyperactivity/inattention, emotional symptoms, conduct problems, peer relation problems and pro-social behavior. Symptoms are reported based on the last six months and the items are scored on a 3-point scale ranging from 0 (*Not true*) to 2 (*True*) for the positively worded items, and 0 (*True*) to 2 (*Not true*) for the negatively worded items. The total score of general difficulties is based on the four problem-oriented sub scores. The authorized translated version of the SDQ was used (www.sdqinfo.com) and the scale showed satisfactory internal consistencies of $\alpha = .73$.

3.4.12 Youth-rated treatment satisfaction. To rate youth satisfaction with the therapy, a three-item self-report measure was developed. Items included “I liked going to the clinic”, “Going to the clinic helped me with my problems”, and “If I were ever having problems again, I would want to come back to this clinic”. All items were rated on a 4-point scale form ranging from 1 (*Not at all*) to 4 (*All of the time*), and the scale was administered at the post-treatment assessment. The internal consistency of the scale was good ($\alpha = .85$).

3.5 Statistical Analyses

3.5.1 Initial analyses (papers I, II & III). Comparisons between groups (i.e., differences between the non-randomized therapists in the two conditions, youth with and without data from specific assessment points, cases with and without caregivers involved, differences between youth and therapist ratings of the alliance, etc.) were computed using independent sample *t*-tests, chi squared tests, analyses of variance (ANOVA), and paired samples *t*-tests. Relationships between relevant variables were investigated with Pearson correlations (*r*). Following Cohen (1992), *r* is a “small” effect when at least .10; a “medium” effect when at least .30; and a “large” effect when at least .50. To test differences in relationships between two conditions, bootstrap BC_a intervals were used with 10,000 bootstrap replications. In addition, independent samples effect sizes (ES) were calculated (Cohens’s *d*: mean difference/ pooled *SD*).

3.5.2 Hierarchical regression analyses (papers I & II). Regression analyses are a set of statistical analyses that allow one to assess the relationship between one dependent variable (DV) and one or more independent variables (IVs). These analyses were used to investigate the relationship between the therapeutic alliance (IV) and outcome (DV) in papers I and II. Because of the nested nature of the data (youth nested within therapists and clinics),

using multi-level analyses is recommended to account for the non-independence in the data (see e.g., West, 2009). To evaluate level of dependency in our data, the within-subjects intra-class correlations (ICC) were investigated. The results showed that the variance by clinic was ignorable, with ICC variables ranging from 0.01–0.05 (Dyer, Hanges, & Hall, 2005). The between-therapists ICCs ranged from 0.10–0.24, with an average ICC of 0.17. These values were in the borderline range, implying that a two-level model including the therapist level should be tested. However, with ICC levels in this low range there may be problems with model stability (ibid.). Analyses were first run with linear mixed effects models (LME) with youths nested within therapists. This resulted in reasonable estimates and mostly interpretable loadings, but the confidence intervals were extremely large. The size of the confidence intervals showed that models were essentially too unstable, and as a consequence single-level regression analyses were used.

In paper I, another aim involved investigating any potential interaction effects between treatment condition and the alliance-outcome relationship, and the predictors were entered hierarchically in two steps. In the first step, pre-treatment scores, group condition and alliance scores were entered, and in the second step an interaction between alliance scores and group condition was included. For each step, the R^2 was calculated, indicating the amount of variance explained by the predictors in the model. This technique means that one can calculate the additional information that is gained by adding new IVs to the model (Field, 2009).

3.5.3 Exploratory Factor Analyses (paper II). The factor structure of the youth and therapist ratings of the TASC-r was investigated using EFA. Although an established theoretical model of how the dimensions of the alliance would cluster (i.e., into a bond and task dimension) exists, the aim of this study was to recover an empirical description of the relationship between the items. EFA is the best method for this purpose (Tabachnick & Fidell, 2007). Geomin factor loadings were used with oblique rotation (Muthén & Muthén, 1998-2012). Since it was expected that two dimensions would emerge extractions were specified to one or two factors. In order to determine the best model fit, both likelihood-ratio chi squared (χ^2) and descriptive fit indices were utilized. The descriptive fit indices included the comparative fit index (CFI), the root-mean-square error of approximation (RMSEA) and the standardized root-mean-square residual (SRMR). These fit indices have most frequently been studied as indicators of structural equation modeling and confirmatory factor analyses (see e.g., Schreiber, Stage, King, Nora, & Barlow, 2006) and there are currently no established cut-off values for the use of the fit indices in EFA (Barendse, Oort, & Timmerman, 2015). In

our study, we chose to follow Accurso et al. (2013), where models that fit very well (or adequately) were indicated by CFIs ≥ 0.95 (0.90–0.94), RMSEAs < 0.05 (to 0.08) and SRMR < 0.05 (to 0.08). A model was assumed to be well fit if two of the three descriptive indices indicated a good fit.

Multi-level analyses were also conducted in an attempt to account for the nested nature of the data. However, similar to the LMM analyses the use of multi-level EFA resulted in unstable models, and all analyses were run using single-level EFA.

3.5.4 Logistic regressions (paper III). To investigate the predictors of dropout in paper III, logistic regression analyses were performed. These analyses allow for the prediction of a dichotomous outcome such as group membership (e.g., dropout yes/no) when predictors are continuous, discrete, or a combination of the two (Tabachnick & Fidell, 2007). Regression models make no assumptions about the distribution of predictor variables, meaning that they do not have to be normally distributed or of equal variance within each group. The estimation results are expressed in terms of odds ratios (OR), which indicate the change in odds resulting from a unit change in the predictor, or the change in group membership (Field, 2009). ORs greater than 1 reflect an increase in odds of e.g., a certain group membership; ORs less than 1 reflect a decrease in odds. Due to data being missing, the logistic regressions were run with and without multiply imputed data (see Section 3.5.5).

3.5.5 Handling missing data (papers I, II and III). In all three papers, there were missing data on several of the IVs. Missing rates were not significantly different in the two treatment conditions, but the non-completers differed from the completing participants in terms of several demographic and process variables (age, number of traumatic events and alliance scores mid-treatment). This indicated that the data could not be assumed to be missing completely at random (MCAR), and discarding data using list-wise deletion could have increased the risk of obtaining a biased result (Schafer & Graham, 2002). In addition, the high proportion of missing data pattern represented a substantial loss of power, since some of the models had missing on more than 2/3 of the IV's. In order to investigate the potential bias caused by the non-random missing data and reduced power, several steps were taken. First, in all papers, the analyses were repeated using multiple imputation (200 completed data sets). These analyses were then compared with analyses run with only the complete cases. In addition, in paper I, the analyses were also run with weighted regression analyses. The weighting model was based on a logistic regression for valid endpoint, with age, total number of traumas reported, and either session one or mid-treatment alliance scores as covariates, respectively. The results showed that the outcomes were comparable to the complete-case

analyses, strengthening the assumption that the missing data did not substantially bias our results.

3.5.6 Statistical software. All initial analyses were conducted with PASW Statistics 19.0 (IBM SPSS Statistics, 2011), and CFA analyses were ran in Mplus 7.0 (Muthén & Muthén, 1998–2012). The hierarchical regression analyses and logistic regressions with imputed data were performed in R (The R Foundation for Statistical Computation, Vienna, Austria), as well as the LME analyses. The multiple imputations were calculated using the R package “mice”, bootstrapping with the R package “boot”, and LME with the R package “nlme”.

3.6 Ethical Considerations

Sometimes there can be a conflict between what a researcher thinks is beneficial in terms of knowledge acquisition and what can feel upsetting or offensive for a single participant. Therefore, it is always important to consider whether participation in research can be potentially harmful to a subject. In research projects that include children and adolescents, this concern is particularly crucial, since these individuals may be less able to address their needs compared with adults. In this study, all of the children and adolescents had been exposed to at least one traumatizing event and presented high levels of psychological distress upon intake. It was therefore important to carefully consider whether the assessments of potentially traumatizing events and their consequences would represent an additional burden on the affected youth. It has commonly been assumed that youth find it distressing to talk about traumatic events, and historically research projects including traumatized youth have had difficulties obtaining approval from institutional review boards because the work has been considered to be too demanding (Dyb, 2007). However, studies so far have shown that, when adequately organized, both traumatized youth and their caregivers report that they do not feel overwhelmed or negatively affected by participation in trauma research, and that they on the contrary find the interviews to be both useful and interesting (Griffin, Resick, Waldrop, & Mechanic, 2003; Kassam-Adams & Newman, 2005).

To minimize the stress on the participants in this study, several precautions were taken. First, in order to ensure that participation was voluntary and that the youth were aware that they could withdraw from the interview or research project at any time point, information was given both written and orally, and informed consent was obtained from both caretakers and the youth. It was furthermore stressed that if any of the participants chose to withdraw from the research project, doing so would not influence the quality or amount of therapy

provided. Secondly, clinical psychologists who were experienced in talking to children and adolescents in difficult life situations conducted all of the interviews and assessments. Third, all of the collected data were handled carefully so that the youth could feel safe that sensitive information about them would remain confidential, unless issues of considerable concern (i.e., severe suicide ideation) were raised during the interview. Furthermore, the youth were allowed to take breaks if needed and the assessment setting was adjusted in order to meet individual needs, if required. Lastly, we also included questions about the assessment procedures in the post-treatment measurement. The reason for this process was two-fold. First, these questions provided the participants with an opportunity to give us direct feedback about the assessment procedures to help us address potential weaknesses during the data-collection period. Secondly, reports from participants provided us with important information about the potential strains experienced by youth and caregivers when they participated in the research, which will help us guide future studies.

4. Results

4.1 Paper I: The Therapeutic Alliance in Treatment of Traumatized Youth: Relation to Outcome in a Randomized Clinical Trial

In the first paper, the relationship between the youth-rated therapeutic alliance and outcome was investigated. The alliance was assessed after sessions one (T1b) and six (T2) and its predictive value was investigated in relation to a variety of outcome measures. These relationships were evaluated both in the total sample and across the two treatment conditions (TF-CBT and TAU).

The results showed that the alliance scores were comparable across treatment conditions. However, youth receiving TF-CBT reported significantly fewer symptoms compared with TAU after 15 sessions (T3). The analyses furthermore showed that the alliance assessed at T2 was a significant predictor across different symptoms measures (PTS self-reported symptoms, PTSD diagnostic interview, depression, anxiety and general mental health) in the TF-CBT condition, but these relationships were not present in TAU. Furthermore, it was found that the T2 alliance ratings were not influenced by early symptom change, but rather that the alliance at mid-treatment predicted subsequent change in symptoms at T3.

This study is the first to investigate the contribution of alliance to outcome among adolescents with post-traumatic symptoms, treated with TF-CBT or TAU. Our findings indicate that there is an important interaction between alliance and therapeutic approach; alliance predicted outcome in TF-CBT, but not in the non-specific treatment condition. A positive working relationship appeared to be particularly important in the context of this evidence-based treatment, which requires youth involvement in specific therapy tasks. Furthermore, the findings showed that the use of a manual did not compromise alliance formation.

4.2 Paper II: Therapist and Client Perspectives on the Alliance in the Treatment of Traumatized Adolescents

In the second paper, adolescents' and therapists' ratings of the alliance were investigated as predictors of outcome were investigated. In addition, the association between client and therapist perspectives was explored, as well as the underlying dimensions of these two perspectives. Finally, the level of discrepancy in youth and therapist ratings was investigated as a predictor of outcome.

The results showed that both adolescent and therapist ratings of the alliance predicted adolescents' treatment satisfaction, but only the adolescent perspective was significantly related to post-treatment symptoms. The level of adolescent-therapist agreement on the alliance was moderate ($ICC = .54, p < .001$), with youth reporting on average a higher alliance compared with therapists ($t[99] = 6.5, p < .001$). Factor analyses revealed differences in factor structure with therapist ratings organized around bond and task dimensions and youth ratings organized by item valence (i.e., whether the items were positively or negatively worded). The discrepancy in youth and therapist ratings were significantly related to outcome. Higher therapist ratings compared with youth ratings predicted higher residual PTSS and lower treatment satisfaction.

Although adolescent and therapist alliance ratings are moderately associated, the results suggest that the ratings are differentially associated with outcomes. These findings, along with results indicating important differences in factor structure, imply that youth and therapist ratings are not interchangeable. Future studies should investigate how therapists can improve their judgments of youths' perceptions of the alliance, since an overestimation of the quality of the relationship seems to be negatively related to outcome.

4.3 Paper III: Understanding Dropout in the Treatment of Traumatized Youths: Background, Treatment, and First Session Process Variables

Dropout is a common problem in community clinics and in the treatment of traumatized youth in particular. In paper III, the aim was to better understand who is most vulnerable to dropping out and why these clients quit. The work focused on examining background variables, treatment method and first session process variables as potential predictors of dropout. Perspectives from youth, caregivers and their therapists were investigated, and dropout was defined based on therapist judgments.

The results showed that 43 (27.6%) participants dropped out, and that there were no differences in dropout rates across the treatment conditions. Both youth and caregivers reported alliance scores at the high end of the scale. Dropout was predicted by a lack of caregiver participation, lower rates of youth-perceived parental treatment approval, and weaker therapist-rated alliance ratings, but not by treatment condition, trauma exposure or pre-treatment youth characteristics. Furthermore, neither youth nor parent ratings of the alliance predicted dropout. Youth-perceived parental approval remained a significant predictor, even after controlling for youth age, but this variable was not related to caregivers' own reports of their alliance to the therapist.

The findings from this study indicate that relationship variables are more important predictors of dropout than treatment mode and youth background characteristics. Furthermore, youth seem to place more weight on their caregivers' approval of the treatment compared with their own initial alliance to the therapist. This finding opens up pathways for a new perspective on how the therapeutic alliance should be conceptualized. The results also shed light on relational aspects beyond the youth-therapist dyad that may influence the treatment process. The result that there were no differences in dropout rates across treatment conditions is consistent with findings from adult studies, indicating that youth are able to tolerate a trauma-focused and exposure-based treatment.

5. Discussion

The number of studies investigating the effect of therapeutic interventions for traumatized youth is growing, providing important knowledge about treatments that can help alleviate youths' posttraumatic symptoms and distress. There are, however, still many unanswered questions regarding *how* these interventions work and the processes contributing to change. Although a strong therapeutic alliance is often described as an important success

factor in youth trauma treatment (Eltz et al., 1995; Lawson, 2009; Shirk & Eltz, 1998), alliance has so far received only minimal empirical attention. Learning more about what role the alliance plays in the process and outcome of therapy is an important step along the way to further improve the treatment provided to trauma-affected youth and their families. In this thesis, the therapeutic alliance was studied in the context of a randomized controlled trial, a design that made it possible to explore several aspects of the alliance such as its relationship to outcome and dropout, and make comparisons across two different treatment conditions. In addition, the role of the alliance was investigated across different perspectives since therapist, youth and caregiver ratings were included. The following discussion focuses on how the findings from the three studies jointly contribute to increasing our understanding of the role of the therapeutic alliance in youth trauma treatments.

5.1 Discussion of Main Findings

5.1.1 The alliance is a significant predictor of treatment process and outcome.

Taken together, our findings indicate that the therapeutic alliance *is* a central construct in the treatment of traumatized youth, since it is significantly related to both outcome and treatment process. The results from papers I and II show that a strong alliance was significantly related to lower symptom levels post-treatment. This finding was in line with expectations and corresponds with an early treatment study of maltreated youth (Eltz et al., 1995) and studies of traumatized adults (Cloitre, Koenen, et al., 2002; Cloitre et al., 2004; McLaughlin et al., 2013). Second, a strong alliance was significantly related to higher levels of treatment satisfaction (paper II), a result that is similar to findings of studies of other clinical youth populations (Hawley & Weisz, 2005; Kazdin et al., 2005). Although some authors have argued that treatment satisfaction is not a good indicator of clinical improvement (Garland, Aarons, Hawley, & Hough, 2003), it may still represent a relevant aspect of youths' experience with the therapy. Third, our findings suggest that a strong initial alliance may reduce the risk of dropout (paper III), a finding that is consistent with the results of other clinical child (Garland et al., 2012) and adult populations (Roos & Werbart, 2013). Lastly, we found that the level of discrepancy in youth and therapist ratings predicted outcome (paper II). Specifically, the findings revealed that when the therapist rated the alliance higher compared with the youth, poorer outcomes ensued. This result resonates well with clinical literature (Safran & Muran, 2000) and at least one study (McLaughlin et al., 2013) that emphasize the importance of therapists' ability to detect and repair ruptures in the alliance.

However, the results also indicate that several aspects influence the role of the alliance. For one, it seems like treatment method moderate the relationship between alliance and outcome, since the alliance predicted outcomes only in TF-CBT and not in TAU. Since the results showed there were no differences in variance or overall level of alliance scores between the two conditions, this finding indicates that there is an interaction between the alliance and treatment method that is responsible for change. Such a synergistic effect has been described in the adult literature (DeRubeis, 2005; Norcross & Lambert, 2011), and differences across treatment conditions have been reported in other youth clinical populations (Cummings et al., 2013; Hogue et al., 2006). However, this study was the first to investigate this relationship in a youth trauma setting. Second, the findings suggest that different rater perspectives predict different aspects of the outcome and process of treatment. In this thesis, it was only the youth-rated alliance that predicted outcome; therapist ratings were not significant. Conversely, therapist-rated alliance predicted dropout, but youth or caregiver ratings were not significant predictors of dropout. This corresponds to the meta-analysis by McLeod where rater perspective significantly moderated the alliance-outcome relationship (McLeod, 2011). Given that the treatment participants differ in their degree of maturation, power and treatment experience, it seems reasonable that they also play different roles in the treatment process. The results suggest that youth, therapist and caregiver ratings of the alliances are not interchangeable, but that they may instead provide information that is related to different aspects of the treatment process.

Some of our expectations were not confirmed, however. In particular, given the important role that caregivers play in youth treatments (Kazdin, Holland, & Crowley, 1997; Nock & Ferriter, 2005), it was expected that the caregiver alliance would be a significant predictor of dropout. However, this expectation was not confirmed (paper III). Since one cannot draw firm conclusions from non-significant results, potentially confounding factors should be evaluated. Other studies that showed that a weak caretaker-therapist relationship was related to dropout assessed the alliance either late in treatment (Accurso et al., 2013; Garland et al., 2012) or post-treatment (Garcia & Weisz, 2002; Hawley & Weisz, 2005; Kazdin et al., 1997). It is possible that the first session was too early for the caregiver to reliably report their alliance with the therapist. Alternatively, it might not be the first impression but rather the change in alliance over time that is related to dropout. Therefore, based on this thesis, it is still an open question whether and how the caregiver alliance is related to the treatment process of youth experiencing trauma treatment.

5.1.2 Youths' and therapists' views of the alliance are not interchangeable.

Another aim of this thesis is to understand more of the relationship between youth and therapist ratings, and to explore to what degree there is overlap in youths' and therapists' implicit views of the alliance (paper II). The findings showed that associations between youth and therapist perspectives were moderate, but investigations of the underlying factor structure indicated that the two raters may perceive the alliance as having somewhat different constructs. Analyses of the youth scale showed that a two-factor solution yielded the best model fit, but that items clustered mainly based on valence – i.e., whether the item was positively or negatively worded – and not by conceptual meaning – i.e., whether the items pertained to the task or bond dimension. This result was similar to the findings of Accurso et al. (2013) and suggests that youth primarily distinguish between positive and negative aspects of the alliance. In contrast, but consistent with the findings of Giuseppe et al. (1996), a factor solution based on item content (i.e., task and bond) characterized the therapist ratings.

There may be several reasons why youth and therapists perceive the alliance differently. For instance, the difference may be related to developmental level, as one might expect increasing differentiation in concepts with maturation, including the alliance construct (Shirk & Saiz, 1992). However, in a study by Accurso et al. (2013), caregiver ratings clustered by valence and not by content. Furthermore, several studies have shown that adult clients seem to perceive the alliance differently from their therapists (Andrusyna, Tang, DeRubeis, & Luborsky, 2001; Bachelor, 2013; Horvath & Bedi, 2002), undermining the assumption that the ability to distinguish the different conceptually-based dimensions is related to maturity level alone. An alternative way of understanding this discrepancy is that the perception of the alliance is related to degree of therapy experience and training. Therapists have often met a variety of different families, making it easier to compare and make more nuanced judgments of a particular child. In addition, many therapists may be aware of the theoretical model of the therapeutic alliance and may thus be primed to view the alliance along these dimensions. Since a mismatch in youth and therapist alliance ratings was found to predict poorer outcome, it is important to further explore the implications that these divergent conceptualizations may have for research and clinical practice.

5.1.3 Youths' perceptions of caregiver approval of therapy predict dropout. A

novel finding in this thesis is that dropout was influenced by the youths' perceptions of their parents' approval of the treatment (paper III). This finding is in line with our expectations and corresponds with the theory of social referencing (see e.g., Morris et al., 2007). This theory describes how children use their caregivers' expressed emotions to guide their own

interpretations of a new and ambiguous situation as being safe or not. Since all of the youth in our sample had experienced being unprotected and vulnerable during one or more traumatic events, the youth would likely be more sensitive to and dependent on emotional support from their caregivers. Because this study is the first to investigate treatment dropout in relation to perceived parental support, we do not know whether such support is particularly important for traumatized youth or whether the same findings pertain to other groups of children as well. Another aspect of our findings was that age did not significantly moderate the effect of youths' perceived parental approval on dropout; adolescents as old as 18 still look to their caregivers for emotional support. These results correspond with those of a study by Pinsof et al. (2008), where adults' treatment participation was influenced by whether they perceived that their partner approved of the therapy. In sum, these results indicate that the need for emotional support has no age limit, even if the need for practical support may decrease as one grows older. Our results furthermore imply that the concept measured using the CAPPATS scale may be useful and may help broaden our understanding of the relational processes that contribute to treatment dropout, not only in traumatized populations but also in other populations.

The finding that caregiver participation in the first session reduced the risk of dropout was consistent with the results of another study investigating dropout among sexually abused children (McPherson, Scribano, & Stevens, 2012). This aspect was significant even when controlling for youths' perceived parental support, indicating that caregivers' practical support is also important. This fact may imply that clinicians should encourage caregivers to attend at least the first session in an attempt to reduce the risk of dropout. However, since the caregivers were not randomized in their study participation, there may have been a selection bias in which caregivers attended the first session. Consequently, we do not know whether it was the actual participation itself that predicted dropout or whether participation was a reflection of stronger family functioning. More information is required to reveal the role of caregivers in the treatment process as providers of both practical and emotional support for therapy attendance.

5.1.4 Linking the alliance to outcome: evaluating results in light of the pathways model. A final aim of this thesis is to look at the main findings in light of the suggested pathways model outlined in the introduction (Figure 1, p. 19) in order to see whether this can help increase our understanding of *how* the alliance may be related to outcome. In this model, the alliance is assumed to influence change in several ways. First, the establishment of an initial alliance is assumed to be essential in order for youth and families to remain in

treatment and not drop out (Step 1). Subsequently, the alliance is hypothesized to produce change through three different, but complementary, pathways. In the first pathway, a strong alliance is assumed to be a healing factor in and of itself by providing a real relationship and a corrective emotional experience. In the second pathway, the acts of agreeing on, and being involving in, a set of therapeutic tasks is assumed to be beneficial by creating hope for change. In this pathway, the expectations are themselves assumed to be the curative element, and not the type of tasks per se. In contrast, in the third pathway, the alliance is assumed to produce change by enhancing the involvement in specific health-promoting tasks, and it is these tasks and assignments that are expected to be the real mechanisms of change.

Several findings in this thesis could be interpreted to be in line with the pathways model. First, the link between an early alliance and treatment attendance was partially supported, since at least therapist ratings of their relationship with the youth predicted dropout. It was additionally expected that youth- and caregiver-rated alliances would predict dropout, but this relationship might have been masked by methodological issues in our study (see chapter 5.2.3).

Our findings furthermore suggest that the alliance was related to outcome through the third pathway, i.e., involvement in specific and health-promoting tasks. For one, results showed that the alliance scores were comparable across the two conditions, but it was only in TF-CBT that the alliance predicted outcome. If the most important role of the alliance was to promote hope through the agreement and involvement in any type of tasks (pathway 2), we would have expected the alliance to predict outcome in both the treatment conditions. Secondly, based on the similar levels of alliance ratings, it would be expected that the two conditions would be equally beneficial. Instead, results from the TF-CBT study showed that participants in the TF-CBT condition reported significantly lower symptom levels post-treatment (Jensen et al., 2014). Although the level of youths' actual *involvement* in the therapeutic tasks was not directly assessed in this thesis, the wording of the TASC-r asks the youth to rate their active collaboration (e.g., "I work with the therapist to make changes in my life"), indicating that the ratings may be close to actual involvement. However, it is a weakness of this study that our findings cannot say what or which component(s) of TF-CBT are active and beneficial. Based on the cognitive model of Ehlers & Clark (2000), it can be assumed that the trauma narrative is an essential component. This finding is also in line with results from Deblinger et al. (2011), but this question clearly warrants additional investigation. It is important to note, however, that our finding does not show that the creation of hope and expectations (pathway 2) is *not* important in the treatment of traumatized youth.

It was, for instance, found that the alliance predicted treatment satisfaction across both treatment conditions, indicating that agreement and involvement, regardless of type of tasks, may in some part be beneficial in and of itself.

Based on theory and the clinical literature, there is reason to assume that the first pathway, where the alliance provides a real relationship and has the potential to act as a corrective emotional experience, is important. For youth who have been traumatized within a caretaking context, meeting a therapist who is able to understand their feelings and thoughts and who is genuinely interested in their well being may be a new experience. This situation may in turn help youth see themselves as people that deserve to be loved and be taken care of. Furthermore, youth may be prompted to see other persons as benign and trustworthy. These are core assumptions that may in turn be related to the reduction of PTSS and increased well being. In this thesis it was not asked directly whether the youth perceived that their relationship with the therapist provided such a corrective emotional experience, so the relevance of this pathway cannot be directly evaluated. However, one can speculate as to whether discrepancies in youth and therapist ratings of the alliance may have reflected a lack of connectedness or a failure to attune to the youths' experience, thereby resulting in poorer outcomes.

Finally it should be considered to what degree the alliance-outcome relationships were influenced by confounding factors. It has, for instance, been claimed that the alliance ratings are merely a reflection of pretreatment characteristics such as attachment style or interpersonal skills, and that these characteristics are the real predictors of outcome. Furthermore, the ratings may be influenced by early symptom reduction, and the alliance-outcome relationship may be the result of the same rater halo effects (Crits-Cristoph et al., 2006; DeRubeis et al., 2005). There are, however, several findings in this thesis that strengthen the assumption that the alliance is at least in part a valid agent of therapeutic change per se. First, if the alliance-outcome relationship was mostly a reflection of youths' background characteristics, we would have expected this relationship to manifest itself also in the TAU condition since this trial was randomized. Second, in paper I we found that even after controlling for early change, the alliance ratings at session 6 predicted *subsequent* change in symptom level. Third, the youth-rated alliance was significantly related to clinician-rated outcome in paper I and marginally related to caregiver-rated outcome in paper II, reducing the risk of same-rater halo effect. In sum, these findings strengthen the case of the contribution of the therapeutic alliance.

5.1.5 The good news: the conditions for the alliance may be better than assumed.

The challenges facing therapists in forming a trusting and helpful relationship with patients exposed to childhood trauma have been thoroughly described (J. A. Cohen et al., 2012; Paivio & Patterson, 1999; Shirk & Eltz, 1998). Such challenges are particularly relevant in the treatment of youth who have been exposed to interpersonal trauma in the caregiver relationship, since these individuals may enter treatment with negative relationship expectations. However, a general finding of this thesis was that the youth seemed to be positively attuned to their therapist, even at the first session. Their initial alliance scores were at the high end of the scale, significantly higher than those of the therapist. Moreover, the youth ratings were consistent with the TASC-r scores reported in other clinical youth populations (Accurso & Garland, 2014; Creed & Kendall, 2005; Kazdin et al., 2005). This situation was the case even though the sample was multi-traumatized (experiencing, on average, 3.6 different traumatic events) and the majority of the youth (59%) were exposed to at least one traumatic event that occurred within the family context.

Another challenge is that therapists may fear that asking the youth about their traumatic experiences will be upsetting and may undermine the therapeutic relationship (Becker-Blease & Freyd, 2007; Hultmann, Möller, Ormhaug, & Broberg, 2014). However, this assumption was not supported in this thesis. Audio recordings of the sessions showed that there was substantially less focus on trauma talk or addressing trauma-related cognitions in the TAU condition compared with the TF-CBT condition. Due to the youths' impairing levels of PTSS, thinking and talking about their traumatic events could be potentially painful and trigger a significant amount of avoidance. As a result, working on the trauma narrative could be a particularly challenging task. Even so, the mean alliance scores were comparable across the two treatment conditions. Furthermore, even at session six, in most cases the time when the exposure work had started, the therapeutic alliance ratings remained high in the TF-CBT condition. This fact shows that most youth were not only able to tolerate the narrative work, they also seemed to agree on this way of working and did not stop liking their therapist although the tasks they were asked to perform were potentially difficult and anxiety provoking.

In addition, although the TF-CBT therapists provided a treatment plan guided by a manual, the therapeutic alliance was not undermined. This finding contrasts a commonly held belief among many therapists (Addis & Krasnow, 2000; Nelson, Steele, & Mize, 2006), but is consistent with previously reported results (Langer et al., 2011).

In sum, the findings of this thesis indicate that traumatized youth do not report lower alliance rates compared with other diagnostic populations, and that neither work with a trauma-focused, exposure-based treatment nor with a manual seem to threaten the building of the alliance. Taken together, these findings are good news since studies have found that the inclusion of an exposure-based component is important to reduce PTSS (Deblinger et al., 2011; Ehlers et al., 2010), and the results from this thesis indicate that a strong alliance is an important prerequisite for a good outcome using TF-CBT (paper I).

5.2 Methodological Considerations

5.2.1 The criterion validity of the therapeutic alliance scale. In order to yield valid results, it is critical that the assessment procedures are able to capture the phenomenon that is being studied. This refers to the criterion validity of a scale (Field, 2009). One critical caveat in the youth literature is the lack of a common definition of the therapeutic alliance (Shirk et al., 2011; Zack et al., 2007). This shortcoming influences fundamentally the alliance research, since it raises the question of how the alliance can best be measured. In this thesis, the alliance was defined as a two-dimensional construct consisting of emotional bond and agreement on tasks (Shirk & Saiz, 1992). Little is known about whether agreement on goals should be included as part of the youth alliance concept as well, or whether other dimensions such as youths' perceptions of parental treatment approval could substantially strengthen the alliance concept in youth therapy. It is thus important to continue to assess the underlying factor structure of the alliance scales in order to better understand how the alliance scales should be constructed and interpreted.

5.2.2 The internal reliability of the questionnaires. Internal reliability refers to the degree to which scores from tests or instruments are free from measurement errors (Pedhazur & Schmelkin, 1991). This is commonly estimated by a scale's internal consistency, often reported in terms of the Cronbach's alpha index (α). This term describes the relatedness between items in one scale and, as such, indicates whether the items in a scale measure the same construct. However, the term "internal consistency" may be somewhat misleading since the alpha index is a measure not only of the magnitude of interrelatedness among items but also the number of items included in the scale (Streiner, 2003). Although one cannot rely solely on the alpha score alone when investigating the internal reliability of a scale, it is commonly recommended that a scale have an alpha within the range of .70–.90 (Tavakol & Dennick, 2011). In our study, the majority of our scales had alpha values within the recommended range of values. The only exception was the caregiver alliance scale, where the

internal reliability of the task subscale was inadequate ($\alpha = .46$). Although only the total score was used in this study, and the full scale had an adequate alpha level ($\alpha = .74$), this adequate value could possibly be related to the increase in the number of items in the full scale (i.e., 6 vs. 12 items) (ibid.). It is therefore unclear to what degree the low reliability of one subscale may have biased our findings. In this thesis, we failed to find the expected relationship between caregiver alliance ratings and dropout, and it cannot be ruled out that this finding was influenced by the potentially unfavorable psychometric properties of the scale.

5.2.3 Timing and source of ratings. In this thesis, the alliance was assessed after sessions one and six, and all assessments were based on self-reports. There might, however, have been better ways to capture the phenomenon of the alliance in youth therapy. For one, with regard to timing of the assessment, it might be that session one was too early for youth and caregivers to form a valid impression of their alliance with the therapist. In particular, the degree to which youths and caregivers agreed on the therapeutic tasks may have been difficult to evaluate. This fact could potentially explain why the internal reliability of the caregiver task subscale was substantially lower than recommended. In contrast, since therapists have often met a wide variety of youth during their careers it might be easier for therapists to form more precise presumptions about their own abilities to form an alliance with a particular youth or caregiver. Furthermore, the alliance was only assessed at two time points. Measuring alliance trajectories is likely to provide a more nuanced way of evaluating associations between therapy process and outcomes, and it has been suggested that at least four time points should be included in order to fully understand the magnitude of the alliance-outcome relationship (Crits-Cristoph et al., 2011).

Second, the use of self-reporting has its weaknesses. In particular, there is a risk that the ratings may be biased by the respondents' social desirability or self-desirability, which refers to "the tendency to present oneself in a good light to the researcher or interviewer" (Pedhazur & Schmelkin, 1991, p. 141). This aspect is particularly relevant to the alliance ratings where youth and caregivers may have underreported potentially negative feelings toward the therapist and the treatment in order not to hurt or upset the therapist. Although care was taken to explain that the therapists would not be able to see their ratings, we still do not know to what degree the alliance ratings may have been influenced. As an alternative, observer ratings could have been used. These ratings have the advantage of being less influenced by social desirability, and they reduce the burden of assessment on the treatment participants (McLeod & Weisz, 2005). However, observed alliance have some disadvantages too. For one, it does not capture the attitudinal and motivational aspects of the alliance (Elvins

& Green, 2008). Secondly, since the findings in this thesis indicate that youth may conceptualize the alliance differently from therapists, it might be difficult for an outsider observer to capture a youth's personal experience of the alliance.

5.2.4 Attrition and missing data. Attrition is defined as the loss of participants after randomization. Attrition can arise either because some participants decided to withdraw from the study (treatment attrition) or because participants missed from one or more of the scheduled assessments (measurement attrition). Although several measures were taken in our study in order to follow up on the participants and reduce the number individuals who dropped out from being included in the assessments, there were substantial levels of missing data in all three studies. These missing data represent a potential threat to the validity of the results for several reasons. For one reason, a loss of participants and assessments results in a loss of power, which refers to “the probability of correctly rejecting a false null hypothesis, (...) usually interpreted as the probability of finding an effect when an effect exists.” (Shadish, Cook, & Campbell, 2002, p. 510). The second reason that missing data may be problematic refers to the pattern of randomness in the missing data. Inspired by Rubin's article (1976), it is now common to classify missingness into three different patterns or mechanisms: missing completely at random (MCAR), missing at random (MAR), or missing not at random (MNAR). When there are no underlying variables related to the missingness data are defined as MCAR. With such a pattern the missing data are ignorable and are not assumed to bias the results. In the social sciences in general, and in clinical studies in particular, missing data are seldom MCAR. Data are considered to be MAR if there is a correlation between the missing data and other measured variables, but the fact that the data are missing is not due to unobserved variables. Also, this pattern of missingness could be ignored when correct analysis procedures are used. In contrast, we could not ignore missing data if the missing mechanism is assumed to be MNAR. Such would be the case in our sample if we have reason to expect that item non-responses or assessment attrition are related to the symptoms measured.

Several steps were taken in order to evaluate the impact of these missing data and to minimize how they bias our results. For instance, we ran the analyses with and without multiply imputed data, and with and without weights. These methods are recommended because they lead to less biased results compared with other simpler strategies, such as only using complete case analyses with list-wise deletion (Graham, 2009; Schafer & Graham, 2002). In this thesis, we found that the results were similar, irrespective of which analytical approaches were applied, including complete case analyses. This fact strengthens the validity

of our findings and implies that the missing data did not substantially skew our results. However, no matter how sophisticated the missing data methods are, they can never replace the value of a complete data set. As a result, future studies should continue to focus on how to best obtain follow-up data on as many participants as possible.

5.2.5 The nested nature of the data. The data in our study had a hierarchical design with youth nested within therapists and clinics. This arrangement introduces a certain degree of dependence in our data, indicating that certain characteristics of individual therapists or clinics might influence our findings. Consequently, we used statistical models that can accommodate this dependency (West, 2009). One way to evaluate the degree of dependency is to calculate the within-subjects intra-class correlations (ICC). The ICCs range in value from 0 to 1, with higher values indicating greater proportions of between-level variance and an increased risk of possible bias if the nested nature of the data is not taken into account. If the ICC values are small, multilevel models may be difficult or impossible to estimate, and in practice they provide few benefits when the ICCs are below .05 (Dyer et al., 2005). Investigations of the ICC levels in this thesis indicated that the effect of clinic was ignorable, but that there was a small therapist effect (average ICC = .17). These results indicate that multi-level analyses would be warranted, however efforts to take this nesting into account by using multi-level factor analyses or linear mixed effects models produced unstable estimates. This result could be due to the distribution of youth-therapist pairs in this sample, since 43.5% of the therapists rated their alliance with one youth only, and only 30.7% of the therapists rated their alliance with three or more youth. On average, therapists rated their alliance with two youth (range: 1–6). Nevertheless, the use of single-level analyses in this thesis means that a certain amount of bias in our findings cannot be ruled out.

5.2.6 The external validity of the findings. External validity refers to the degree to which findings from one study can be applied to other samples that were not included in the original study. Since we wanted to learn more about the treatment of traumatized youth under regular conditions and therefore increase the generalizability of our findings, this study was conducted in ordinary community clinics with referred patients and regular therapists with normal caseloads. In addition, we purposefully adopted only a few exclusion criteria in order to ensure that the recruited sample represented a wide range of children and caregivers. However, there are still aspects of our study that could potentially challenge the external validity of our results. For one, our sample was predominantly female (79.5%). Although it is commonly found that girls report more PTSS and other related trauma reactions compared with boys (Alisic et al., 2014; Tolin & Foa, 2008), and we would thus expect there to be more

girls than boys in a clinical sample of youth with PTSS, the fraction of females was still higher compared with the general clinical population. According to national data, girls comprise two thirds of the clinical population above 12 years old (<http://www.fhi.no/artikler/?id=84062>). This fact means that we cannot rule out that there might be some aspects of our findings that are less relevant to boys.

Another issue is that our sample was mostly composed of teenagers, which implies that our results and conclusions might be less relevant to younger children. Although we screened youth as young as 10, we found that only a few of the youngest individuals reported PTSS above the designated cutoff (CPSS scores ≥ 15).

Furthermore, the decision to exclude families where there was a need for an interpreter was made on the basis of reducing the potential confounds in our study. However, this choice may have weakened the representativeness of our sample, since we know that several of the traumatized youth in child and adolescent mental health clinics are refugees that have not yet learned to speak Norwegian. It is thus less clear to what degree our findings are relevant to individuals in this group.

Lastly, it is necessary to consider whether there are any systematic differences between individuals who agreed to participate in the study and those who did not. Since participation required that the caregivers and youth spend extra time to complete the assessments and agree to have their sessions audiotaped, it might be that people who agreed to be included in the study were more motivated for treatment and were less burdened by other life stressors compared with people who declined to participate. This hypothesis could partially explain why the alliance scores reported were higher than what were expected, and why the dropout rates were lower than what has been reported in other studies (e.g., McPherson et al., 2012; Saxe, Ellis, Fogler, & Navalta, 2012). It would have been useful to learn more about the individuals who did not wish to participate in terms of e.g., their levels of trauma exposure and trauma symptoms. This information would shed light on the degree of selection in our participating sample. Furthermore, there could also be a bias in the group of therapists. Therapists who volunteered to participate in this study may have been more motivated and engaged in their jobs than the general pool of therapists. This situation is particularly relevant to TF-CBT therapists, since they volunteered to receive extra training and may have been more motivated to learn and use new treatment methods. They also received more supervision compared with the TAU therapists, an aspect that may have influenced the quality of the treatment they provided and potentially biased our results. It is unknown, however, to what degree this extra supervision may have influenced the alliance-

building since both youth and therapists reported similar alliance levels across the treatment conditions. It can thus be assumed that although the supervision may have influenced the comparison between the treatment procedures, this process may have had less of an impact on the process and analyses of the alliance.

5.2.7 Interpretation of non-findings. It can be difficult to know how to interpret the lack of a statistical relationship between two or more measured variables because “absence of evidence is not evidence of absence” (Altmann & Bland, 1995, p. 485). If a relationship is not statistically significant, it could be because of methodological aspects (such as low sample size and lack of power), measurement issues, or other confounding factors that are masking an existing relationship. It is therefore important to be cautious when drawing conclusions from a non-finding. In this thesis, we failed to find several of the hypothesized relationships. We expected, for instance, based on the youth alliance literature, to find a relationship between the alliance and outcome in the TAU condition. This lack of a significant relationship could be related to the timing of the outcome measurement, since maybe 15 sessions were not enough time to capture the potential alliance effect. Another way of explaining our findings involves the heterogeneity of methods used in the TAU condition. If the alliance works in different ways in different treatment types, the aggregation of a variety of interventions could mask potential associations. Finally, the lack of a significant relationship between caregiver alliance and dropout must be considered. One way to understand this lack of relationship is that there are other aspects besides the therapeutic relationship that weigh more heavily on caregivers’ decisions about whether to continue or quit treatment, such as practical obstacles or a feeling that the therapy is not relevant or is too demanding (Kazdin et al., 1997). Alternatively, it might be that the therapeutic alliance is of importance from a caregiver perspective, but that we attempted to measure its influence too early in our study. Another methodological concern of ours was that the majority of caregivers reported scores at the high end of the alliance scale, with low variance. It could be that this limited distribution made it difficult for us to find a statistically significant association.

5.3 Clinical Implications

Several clinical implications can be drawn from the findings of this thesis. For one, establishing a strong therapeutic alliance is important in order to help youth overcome their PTSS. However, this alliance does not seem to be sufficient in and of itself, so therapists should also include treatment strategies that are based on a theoretical rationale of how the symptoms develop and are maintained. Conversely, introducing potentially active treatment

procedures may have little effect if these procedures are not presented in the context of a warm and collaborative relationship.

The finding that youth and therapists seem to differ in their implicit views of the alliance may have implications for therapists' alliance-building strategies. Since our results indicate that youth do not differentiate between the task and procedures in the therapy and their emotional connection to the therapist, it may be that youth judge the relevance and acceptance of a suggested task based on their liking or dislike of the therapist as a person. However, it might also be that a lack of therapeutic tasks that make sense and seem relevant to the youth may have a negative influence on the youths' perceptions of his or her relationship to the therapist. In practice, this viewpoint indicates that therapists should incorporate therapeutic tasks as part of their alliance-building strategies since a solitary focus on the emotional bond (building rapport) may not be sufficient in order to establish a strong alliance.

Another implication of our work relates to the importance of including the youths' perspectives of their caregivers' approval of the therapy. Investigating to what degree the youth feel that they receive support from their parents for attending therapy, and potentially addressing this issue with their caregivers, may be crucial in order to help youth remain in therapy. Since the results of paper II showed that youths' perceptions of parental approval were not related to the caregivers' own reports of their alliance to the therapist, youth may not be very good at evaluating their caregivers' actual attitudes toward the therapy; a clarification of this aspect may in many cases be fruitful.

Furthermore, our results suggest that the therapeutic alliance and level of dropout were not negatively affected in the TF-CBT condition compared with the TAU condition. These results are encouraging since trauma-focused and exposure-based therapies are recommended interventions for youth suffering from PTSS (AACAP, 2010; NICE, 2005). Clinically, this finding implies that therapists might not need to fear that addressing youths' traumatic experiences will impede the formation of an alliance. At the same time, there was further no evidence to suggest that youth will drop out more often from an exposure-based treatment compared with an intervention with low levels of trauma focus.

5.4. Recommendations for Future Research

This thesis provides new and interesting results that open up possibilities for future research. First, in order to better understand the pathways from the alliance to outcome, the hypothesized link among the therapeutic alliance, involvement in treatment tasks, and

outcome (pathway 3) should be investigated. In particular, it will be interesting to investigate whether the alliance can predict the youths' level of involvement in the trauma narrative work in TF-CBT and whether this involvement will again be related to outcome.

Another important aspect relates to how therapists proceed in establishing a strong therapeutic alliance. This process is particularly important to youth for whom a close relationship may be a trauma reminder and youth who are poorly motivated to receive treatment. Furthermore, the finding that a low alliance agreement between therapists' and youths' perspectives on the alliance seems to negatively influence the treatment process implies that future studies should investigate how youth express their emotional liking and agreement about therapeutic tasks. Such work could help therapists improve their clinical judgments of the alliance. Additionally, learning more about which therapist behaviors promote a strong alliance would improve therapist practices and provide effective therapy for trauma-exposed youth.

In this thesis, we found that the alliance measured at one time point (session 6) predicted post-treatment symptom reduction, but that alliance rated after session one were unrelated to outcome (paper I). To date, little is known about how the alliance develops over the course of treatment, and how this development relates to outcome. Future studies should therefore aim to measure the alliance at additional time points. In the adult field, it has been found that unrepaired ruptures of the alliance are related to poorer outcomes in PTSD treatment (McLaughlin et al., 2013), underscoring the importance of learning more about how therapists can establish and maintain a strong alliance in trauma treatment.

Furthermore, in order to more fully understand the concept of the alliance in youth therapy, several aspects should be investigated. One of these aspects relates to the dimensionality of the alliance. An ideal study would include several different alliance measures so that the factor structure of these measures could be investigated with the same sample. It would also be interesting to learn more about the potential role of the goal dimension, since this subject has been rarely empirically studied in youth therapy. Another issue relates to the systemic view of the alliance where the caregivers' perspectives are included in the alliance measures. In particular, *youths'* perceptions of their caregivers' views hold promise as an important aspect, but additional studies are needed to more fully understand how this interplay relates to the treatment process and outcome. It would also be valuable to learn more about the caregivers' actual impression of the therapy and to what degree their approval is related to treatment engagement. Follow-up studies of the caregiver alliance also seem warranted. Similarly, since the conceptualization of the alliance seems to

vary according to the source, therapist perspectives should also be included in future studies. These perspectives may be related to different, but important, aspects of the therapy.

6. Conclusions

Overall, the results of this thesis show that the therapeutic alliance plays an important role in the treatment of traumatized youth. Specifically, a strong alliance was found to predict symptom reduction (papers I and II), treatment satisfaction (paper II), and dropout (paper III). However, the alliance-outcome relationship varied across treatment method and rater perspective, and our findings suggest that there is also an interplay between the alliance perspectives of different treatment participants. The results showed that the alliance-outcome relationship was moderated by treatment method in that a positive working relationship appeared to be particularly important in the TF-CBT intervention but not in TAU. Furthermore, youth and therapist ratings of the alliance were differentially related to outcome, and additional information was gained when therapist ratings were seen in relation to the youths' perspectives. Last, aspects of the youth-caregiver relationship were found to influence the treatment process, indicating that a systemic perspective on the alliance is warranted in order to more fully understand how this relationship variable interacts with the treatment process. Taken together, these findings indicate that although the therapeutic alliance is present in all types of treatments, in the sense that no treatments are carried out without a relational context (Safran & Muran, 2000), the way the therapeutic alliance is related to outcome and how it is conceptualized may depend on the treatment type and source of rating. This contextualization of the alliance could help explain the wide range of alliance-outcome correlations reported in different studies (McLeod, 2011; Shirk et al., 2011), and the range of methodological moderators influencing this relationship (McLeod, 2011). The results imply that direct comparisons of the alliance-outcome relationship across different studies may be less fruitful and focus should remain on understanding more how the alliance is embedded in the treatment context. Additionally, our findings suggest that investigations of specific methods should be viewed within the relational context the components are provided.

Finally, although the results in this thesis may help elucidate the pathways from alliance to outcome, further investigations should be conducted to strengthen our understanding of this relationship and improve the treatments provided to traumatized youths and their caregivers.

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Appendices

Appendices

1a: CAPPATS, English version

CAPPATS

Patient's Name

Date

1. I think my caregivers (e.g., mother/ father/ foster parent) like my therapist

1	2	3	4
Not at all	A Little	Most of the time	Very Much

2. I think my caregivers think it is important that I attend the sessions at the clinic

1	2	3	4
Not at all	A Little	Most of the time	Very Much

3. I think my caregivers want me to speak openly about my experiences to my therapist

1	2	3	4
Not at all	A Little	Most of the time	Very Much

4. I think my caregivers and I agree on what problems to work on

1	2	3	4
Not at all	A Little	Most of the time	Very Much

5. In think my caregivers think that the things the therapist and I do are helpful

1	2	3	4
Not at all	A Little	Most of the time	Very Much

1b: CAPPATS, Norwegian version

CAPPATS

Navn

Dato

1. Jeg tror at mine foreldre (eks. mamma/ pappa/ fostermor/ fosterfar) liker terapeuten min.

1	2	3	4
Stemmer ikke i det hele tatt	Stemmer litt	Stemmer for det meste	Stemmer hele tiden

2. Jeg tror at foreldrene mine synes det er viktig at jeg kommer til timene her på BUP.

1	2	3	4
Stemmer ikke i det hele tatt	Stemmer litt	Stemmer for det meste	Stemmer hele tiden

3. Jeg tror at foreldrene mine vil at jeg skal fortelle åpent om det jeg har opplevd til terapeuten min.

1	2	3	4
Stemmer ikke i det hele tatt	Stemmer litt	Stemmer for det meste	Stemmer hele tiden

4. Jeg tror at foreldrene mine og jeg er enige i hvilke problemer som jeg skal jobbe med terapeuten min for å løse.

1	2	3	4
Stemmer ikke i det hele tatt	Stemmer litt	Stemmer for det meste	Stemmer hele tiden

5. Jeg tror at foreldrene mine synes at det som terapeuten min og jeg gjør er hjelpsomt for meg.

1	2	3	4
Stemmer ikke i det hele tatt	Stemmer litt	Stemmer for det meste	Stemmer hele tiden

