

Does exposure quality predict treatment outcome?

*Evaluating the exposure component in the
FRIENDS for Life program*

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Abstract

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Title: Does exposure quality predict treatment outcome?

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Background: Cognitive behavioral therapy (CBT) is the recommended approach for anxiety disorders and successful exposure to feared stimuli is considered an essential part of treatment. Even though results from systematic reviews demonstrate recovery rates of approximately 60%, the number of non-responders is still high and we need to know more about what works. Recognition of the efficacious characteristics of the exposure component in CBT could be a step in the right direction. In this thesis, we investigated the quality of the exposure component in the FRIENDS program delivered in community clinics. The main objectives were to examine if the quality of the exposure component could be reliably assessed and to examine if the quality was related to diagnostic recovery in The Assessment and Treatment - Anxiety in Children and Adults Study (ATACA).

Method: Eighty FRIENDS-sessions were rated with the Quality of the Exposure Component Form (QECF). The sample comprised Norwegian youth (N = 45) randomly selected from the ATACA-study. Age ranged from 8-15 years and all youth met diagnostic criteria for social phobia, separation anxiety disorder or generalized anxiety disorder prior to treatment. Reliability analyses were conducted to assess the psychometric properties of the QECF. Independent samples t-tests (two-tailed) were conducted to investigate whether there were significant differences in the quality of the exposure component between responders and non-responders at post-treatment and at one-year follow-up. Differences in quality at item and subscale level were examined by conducting additional independent samples t-tests (two-tailed). Logistic regression analyses were done to test whether the quality of the exposure component could predict treatment outcome, while controlling for age and gender.

Results: Inter-rater and internal consistency reliability was good to excellent. There were no significant differences between responders and non-responders in the quality of the exposure component, neither in overall quality, nor at subscale or item level. Lastly, the quality of the exposure component could not predict diagnostic recovery.

Conclusion: Findings from the current study revealed that the exposure quality could be reliably assessed. Yet, the exposure quality was not related to treatment outcome. Little variability in the data, limited quality, and low frequency of exposure may be the main reasons behind the null-findings.

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1 Introduction

Epidemiologic studies suggest that anxiety disorders are among the most prevalent psychological problems in youth, with reported rates of 10-20% in the general population and in primary care settings (Arendt, Thastum, & Hougaard, 2016; Chavira, Stein, Bailey, & Stein, 2004; Costello, Mustillo, Keeler, & Angold, 2004; Merikangas & Avenevoli, 2002). Although fear is adaptive and can be developmentally appropriate, elevated levels of fear and anxiety can cause great distress for youth and their families, and interfere with academic achievement, social functioning, and future emotional health (Kendall, Furr, & Podell, 2010). Additionally, these negative effects of anxiety may place a significant economic burden on society, such as putting strain on health care services. Most anxiety disorders will not abate with time, and effective and efficacious treatment is therefore necessary (Seligman & Ollendick, 2011).

Through extensive research over the years, cognitive behavioral therapy (CBT) has been designated as a “well established” treatment for youth anxiety and is the recommended approach (Hollon & Beck, 2013; Peterman, Read, Wei, & Kendall, 2015). Further, successful exposure to feared stimuli or situations is considered an essential part of CBT for anxiety disorders (Bouchard, Mendlowitz, Coles, & Franklin, 2004; Deacon & Abramowitz, 2004; Kazdin & Weisz, 1998; Kendall, Robin, Suveg, Flannery-Schroeder, & Gosch, 2005). Results from systematic reviews demonstrate recovery rates of approximately 60% across studies (Hudson et al., 2015). This means that the number of non-responders is still high, as up to 40% of youth do not show significant symptom reduction or diagnostic recovery through the course of CBT (James, James, Cowdrey, Soler, & Choke, 2013). Given this, a greater understanding of the effectiveness of CBT (and each of the components) for anxiety treatment is needed. Future research needs to go beyond the basic question of whether CBT works in order to establish the mediators and moderators of treatment outcomes (Seligman & Ollendick, 2011). One way to address this goal is to acquire more knowledge of the exposure component of CBT (Tiwari, Kendall, Hoff, Harrison, & Fizur, 2013). The exposure component refers to the section of CBT that involves preparing for, performing, and processing exposure tasks. An exposure task is the actual confrontation with an anxiety-provoking situation or stimulus (Peterman et al., 2015; Seligman & Ollendick, 2011). Although research emphasizes the importance of exposure when treating anxiety disorders, few studies have attempted to investigate or explore what actually takes place in sessions, beyond adherence ratings (e.g., Bjaastad et al., 2015). Studies of adherence concern the

extent to which therapists have practiced interventions or procedures according to the treatment manual (Perepletchikova & Kazdin, 2005). The therapeutic field is in need of hard data of the efficacious characteristics of the exposure component, which is of great clinical importance, as the characteristics ought to guide clinicians when conducting exposure therapy with anxious youth (King, Heyne, & Ollendick, 2005).

1.1 Objectives

In this thesis, we aim to contribute to the research field by investigating the quality of the exposure component in the evidence-based treatment program FRIENDS for Life (FRIENDS; Barrett, 2004, 2008). This thesis is based on the child part of the Assessment and Treatment - Anxiety in Children and Adults Study (ATACA-study; PIs Einar Heiervang and Odd E. Havik, see Wergeland et al., 2014), which was conducted between the years of 2008-2012. The ATACA-study aimed to evaluate the effectiveness of FRIENDS for anxiety disorders in youth referred to child- and adolescent mental health clinics in Western Norway. Increased knowledge of the aspects of the exposure component that contribute to a positive treatment outcome may optimize CBT treatment for youth with anxiety disorders.

The main objectives of this thesis are to:

- 1) Examine whether the content of the exposure component in CBT can be reliably assessed based on observations of CBT videotapes.
- 2) Examine whether the quality of the exposure component is related to diagnostic recovery in the ATACA-study.

1.2 Outline

In this thesis, we will first provide a description of anxiety disorders and present the core principles of CBT, in addition to some important factors to consider when treating youth. In the following text, both children and adolescents will be referred to as youth. Second, we will present the evidence of the efficacy and effectiveness of CBT and present different evidence-based treatment manuals aimed at anxiety disorders, with a focus on FRIENDS (Barrett, 2004). Third, a thorough description of the exposure component will be given, followed by a short presentation of previous research findings that also serve as background for the current thesis. The final part of this thesis includes the chosen method, results, a discussion of findings and some concluding remarks.

2 Anxiety disorders in youth

Anxiety comprises three different levels: cognition, emotion/physiology, and behavior. Youth with anxiety disorders usually experience recurring intrusive thoughts or concerns, experience physical agitation, elevated pulse, sweating or other physiological symptoms, and often show avoidant behavior (Kazdin, 2000). Avoidance is a key characteristic of anxiety disorders and it is common for youth to have avoided anxiety-provoking situations, or to have unsuccessfully attempted to face such situations, when they present for treatment (Tiwari et al., 2013).

According to the Diagnostic and Statistical Manual of Mental Disorders (DSM), Fourth Edition, Text Revision, which the clinical sample in this thesis was diagnosed with, youth can be diagnosed with twelve different anxiety disorders (APA, 1994). Three of these disorders, social phobia (SOP), separation anxiety disorder (SAD), and generalized anxiety disorder (GAD), are often referred to as childhood anxiety disorders (CADs; e.g., Cartwright-Hatton, Roberts, Chitsabesan, Fothergill, & Harrington, 2004; James et al. 2013; Kendall, 1994; Walkup et al., 2008). This thesis focuses primarily on these three diagnoses. The CADs have similar core features and high rates of co-occurrence (O'Neil, Brodman, Cohen, Edmunds, & Kendall, 2012). Epidemiologic and clinical studies show that in about 75% of cases, youth are diagnosed with multiple anxiety disorders and about 50-60% are diagnosed with another comorbid affective disorder in addition to their anxiety diagnosis (Brady & Kendall, 1992; Carr, 2006; Seligman & Ollendick, 1998).

2.1 Treatment of anxiety disorders

Guidelines have been developed to aid clinicians in providing the most optimal treatments for various mental health conditions. Both national guidelines in Norway and international guidelines, present CBT, including exposure, as a well-documented treatment option for anxiety disorders in youth (NICE, 2014; Norwegian Board of Health, 2000). For instance, guidelines from both the Norwegian Board of Health and the National Institute of Health Care and Excellence in the UK (NICE) propose that youth who are diagnosed with SOP should be offered individual CBT, consisting of psychoeducation and skills training, for both youth and their parents, as well as exposure to feared or avoided situations (NICE 2013; Norwegian Board of Health, 2000).

2.1.1 CBT for anxiety disorders in youth

Core principles

CBT interventions and methods are based on social learning theory and cognitive theory (Friedberg & McClure, 2002). Accordingly, the primary aim of CBT is to change maladaptive learning and thought patterns, and related behaviors (Seligman & Ollendick, 2011). The method was originally developed and found efficient in individual therapy with adults, but has since been found to be effective and efficacious with youth (Grova, 2007). CBT for youth is a generic term for a range of therapeutic methods based on some common principles such as those outlined below.

First, CBT models are unified by the guiding belief that an individual's thoughts, behaviors and emotions are inextricably linked, and that maladaptive cognitions and behavior can cause psychosocial dysfunction and impairment (Bearman & Weisz, 2012). Symptoms are believed to be caused by the activation of misappropriate schemas and consecutive maladaptive automatic thoughts, feelings and behaviors. Hence, in CBT, these schemas are challenged through *cognitive restructuring* and new experiences. This can be achieved through direct discussion and by teaching youth how to explore, monitor and further identify the thoughts that give rise to the symptoms. Together with a therapist, youth are encouraged to dispute maladaptive thoughts and replace them with more helpful ones (Kendall, 1994; Kendall et al., 1997; Shortt, Barrett, & Fox, 2001).

Second, *modeling* plays a central role in CBT with youth. An important assumption from social learning theory is that learning occurs through the observation of another individual mastering (or completing) a task, in addition to a person's own experiences (Bandura, 1978). Thus, both parent and therapist contribution is considered important in the treatment process (Grova, 2007). When parents are taught the same skills, they can function as coaches, and model adaptive reactions and management of the anxiety-related behaviors (Barmish & Kendall, 2005).

Third, CBT approaches focus on *maintaining factors* and less on understanding what has initiated the problems (Seligman & Ollendick, 2011). Understanding the cause of a presenting problem is perceived important to the degree that it helps the therapist intervene appropriately (Grova, 2007).

Fourth, CBT can be said to be a *skills building approach*. Through the course of treatment, youth usually learn how to recognize and differentiate between emotions, explore

different methods of problem solving, practice social skills, and relaxation techniques (Seligman & Ollendick, 2011).

Fifth, *homework* is considered a central tenet of treatment (Hughes & Kendall, 2007; Kazantzis, Deane, & Ronan, 2000). Sessions are perceived as an arena for introducing skills and providing initial practice, while a major part of the therapeutic change is believed to occur outside of the therapist's office. Youth are encouraged to use the skills learned in session to maintain treatment gains, both in-between sessions and after treatment termination (Bearman & Weisz, 2012).

Sixth, *rewarding* youth for their effort is also considered to be an important part of treatment. In line with learning theories, such as operant conditioning (Skinner, 1963), rewards are included in session to increase the frequency of the desired behavior (e.g., receiving stickers after facing anxiety-provoking situations). The selection of rewards is often a joint decision between the therapist and youth. This is done to make sure that the rewards actually feel rewarding and enhance motivation (Gosch, Flannery-Schroeder, Mauro, & Compton, 2006).

Finally, *exposure* is considered a central component of successful CBT for anxiety (Peterman et al., 2015). An extended description of the exposure component will be provided in section 2.3.

Important considerations when treating younger clients

There are some important issues to consider when engaging youth in CBT. First, youth might not understand the reason for referral if they have been brought to therapy by their parents. According to Shirk & Russell (1998), youth and their parents may not perceive the main problems similarly, and consequently, if youth do not acknowledge personal distress, it might be difficult to engage them in therapy. Motivational work is therefore particularly relevant when treating youth, as they might be less motivated for therapy than older clients who refer themselves (DiGiuseppe, Linscott, & Jilton, 1996; Kazdin, 2004; Kendall et al., 2009)

Second, there has been uncertainty concerning the extent to which youth age and youth developmental level interacts with treatment outcome (Grave & Blissett, 2004; Spence, 1994). Youths' ability to benefit from CBT has been questioned, as the therapeutic interventions (e.g., identify and challenge anxious feelings or thoughts) demand complex cognitive processes and abilities (Haugland, 2011). Youth differ with regard to their cognitive, social, and emotional development and are therefore in need of different

approaches to treatment (Grova, 2007; Haugland, 2011). It is important to make sure that the youth understands why the specific task has been assigned and the theoretical rationale behind it.

Further, the therapeutic alliance (Bordin, 1979) is considered to be of special importance when working with anxious youth (Chu et al., 2004; Kazdin, Whitley & Marciano, 2006; Shirk & Karver, 2003; Sommers-Flanagan & Sommers-Flanagan, 1995). In CBT, the therapist must be active and focus on procedures in addition to developing a positive therapeutic relationship during the course of treatment (Beck, 1976). The therapeutic relationship is not considered as sufficient for change to occur, but rather as a necessary prerequisite for treatment to be efficacious (Friedberg & Gorman, 2007). Fjermestad (2012) found that anxious youths' increased motivation, belief in treatment, cooperation, and trust in the therapist was related to a positive therapeutic alliance. Moreover, Wergeland and colleagues (2016) found that the degree of motivation in youth was related to treatment outcome, more specifically that lower motivation predicted poorer effect at one-year follow-up. Thus, a focus on both the therapeutic alliance and youth motivation is important to keep in mind throughout the course of therapy.

In sum, treating youth is in many ways different from treating adults. It is important to be aware of the possible challenges while treating younger clients, and to develop ways to recognize and overcome these challenges to be able to provide effective treatment.

2.2 Evidence of efficacy and effectiveness of CBT for anxiety disorders

There is a substantial amount of evidence in support of CBT as an evidence-based treatment for anxiety in youth (Hofmann, Asnaani, Vonk, Sawyer, & Fang, 2012; Ollendick & King, 1998; Ollendick, King, & Chorpita, 2006). In their review, Seligman and Ollendick (2011) presented a list of 40 studies conducted to examine CBT for anxiety disorders and anxiety symptoms in youth. Taken together, these studies provide the empirical support necessary to identify CBT as an evidence-based treatment (Seligman & Ollendick, 2011). The majority of youth with anxiety disorders treated with CBT will achieve substantial improvement in well-being, and studies suggest that changes are both statistically and clinically significant (Seligman & Ollendick, 2011). The effect sizes from the randomized control trials (RCTs) are generally large and post treatment assessments suggest that approximately two out of three youth treated with CBT can expect to be free of their primary

diagnosis with a treatment course that lasts between 12 and 16 weeks (Seligman & Ollendick, 2011). Treatment gains have been maintained for up to 19 years post treatment (Benjamin, Harrison, Settapani, Brodman, & Kendall, 2013; Kendall, Safford, Flannery-Schroeder, & Webb, 2004; Saavedra, Silverman, Morgan-Lopez, & Kurtines, 2010). CBT for anxiety disorders in youth also appear efficacious in the presence of comorbid conditions, and across different ethnic and cultural groups (Ginsburg & Drake, 2002; Kendall, 1994; Ollendick, Jarrett, Grills-Taquechel, Hovey, & Wolff, 2008; Ollendick, Ost, Reuterskiöld, & Costa, 2010; Toren et al., 1999).

Researchers have not only been interested in establishing the efficacy and effectiveness of CBT, but also in identifying predictors of treatment outcome. Existing research suggests that individual differences in pretreatment anxiety and depression (Berman, Weems, Silverman, & Kurtines, 2000), school refusal (Layne, Bernstein, Egan, & Kushner, 2003), use of SSRIs (Walkup et al., 2008), externalizing symptoms, treatment attrition, coping styles (Chu, Skriner, & Zandberg, 2013), and coping behavior (Hedtke, Kendall, & Tiwari, 2009) are all factors related to treatment outcome in CBT. However, comorbidity does not seem to predict treatment outcomes (Ollendick et al., 2008). As for age, research results have been mixed. An early meta-analysis suggested that older adolescents benefitted more from treatment than pre-adolescents (Durlak, Fuhrman, & Lampman, 1991). Yet, later research suggested an opposite pattern with more positive results for younger youth (Southam-Gerow, Kendall & Weersing, 2001). Thus, age seems to be an inconsistent predictor with regard to treatment outcome (O'Connor & Creswell, 2005). Continued research on identifying predictors is important to enhance therapists' knowledge regarding which clients are likely to benefit from treatment.

2.2.1 Evidence for the importance of exposure

Exposure to feared stimuli is considered by some to be the most important component in CBT for anxiety disorders (Beidel, Turner, & Morris, 2000; Kazdin & Weisz, 1998; Kendal et al., 2005). Multiple treatment outcome studies and meta-analyses indicate the efficacy of exposure-based therapy, both on its own and in combination with other psychological or pharmacological interventions, for youth anxiety and fear (Abramowitz, Deacon, & Whiteside, 2011; Olatunji, Cisler, & Deacon, 2010). In a study by Chorpita and colleagues (2002) exposure-based treatments were found to be associated with the largest effect sizes when treating anxiety disorders in youth. For some anxiety disorders, exposure alone can be as efficacious as exposure plus other procedures typically included in the treatment plan to

reduce anxiety (Deacon & Abramowitz, 2004). A study by Voort, Svecova, Jacobsen and Whiteside (2010) showed that improvement in functioning in youth with anxiety disorders was negatively predicted by the use of anxiety management strategies (i.e., strategies for handling anxiety other than exposure and relaxation, such as cognitive restructuring and psychoeducation). In contrast, the use of exposure during treatment positively predicted functioning. A later study by Glenn and colleagues (2013) explored whether treatment dose and patient engagement could predict treatment outcome in CBT for anxiety disorders. The results indicated that completing exposures, having high attendance and being more adherent to completing homework, predicted better outcomes (Glenn et al., 2013).

Other researchers have attempted to answer questions with regard to the length and amount of exposure tasks necessary to obtain change in youth with anxiety disorders. According to Kendall and colleagues (2005), for most exposure tasks, youth should remain in contact with their feared stimuli (or stay in the anxiety-provoking situations) until anxiety is reduced by at least 50%. Other researchers have suggested that the duration of the exposure task should be even longer, thus requiring even greater reductions in anxiety before terminating the task (Kendall et al., 2005). As for the amount of exposure tasks necessary, Voort and colleagues (2010) found that number of exposures correlated positively with improvements in functioning, and that the more time spent on cognitive techniques in session, the less time was spent on exposure. Further, these researchers found that if exposures were introduced already in the third session, compared to session nine which was outlined in the treatment manual, the larger were the effect sizes. Thus, Voort and colleagues suggested that treatments can be shorter, and that exposure tasks may be introduced earlier in the treatment course than described in manuals. Moreover, results from another study showed that youth who were given an intervention that emphasized early parent-coached exposure showed improvements that were superior to those receiving anxiety management strategies, while also needing fewer appointments (Whiteside et al., 2015).

In sum, there is a considerable amount of evidence suggesting that the use of exposure in anxiety treatment is related to better outcomes. However, straightforward standards with regard to the amount and/or length of exposure tasks necessary or sufficient when treating anxiety have not yet been established. This might be due to the fact that both amount and length is dependent on the specific fear that youth are presenting with in treatment. While some youth are in need of frequent and short exposures, a single, longer-lasting exposure might be sufficient for others. There continues to be room for improvement in treatment and several questions have yet to be answered, such as how exposure tasks should be designed,

and the amount and/or length of exposure tasks. Despite inconclusive research, there are common procedures for exposure-based CBT. These will be described in the following section.

2.3 The process of exposure

2.3.1 Common procedures when delivering the exposure component in CBT

Across several different CBT manuals, four basic phases have been found to comprise the exposure component in CBT when treating anxious youth: (i) preparation/psychoeducation, (ii) hierarchy development, (iii) repeated exposure, and (iv) generalization and maintenance (Ollendick & Hovey, 2009; Seligman & Ollendick, 2011; Woody & Ollendick, 2006).

The first phase involves preparation or psychoeducation, in which the exposure rationale is presented. The therapist explains how fear can be learned through early experiences with fearful stimuli and further negatively reinforced by the reduction of anxiety through avoidance. This first phase often includes a presentation of typical fear responses and the youth is taught how to recognize bodily reactions to fear (e.g., elevated pulse, sweaty palms). The therapist emphasizes that anxiety is a normal part of everyday life, and that the youth will most likely feel anxious again, but that (s)he will be able to cope with anxious thoughts and feelings more efficiently in the future. A thorough introductory phase may help the youth understand that the exposures will not be dangerous.

The second phase involves developing a graded hierarchy of feared situations, from the least to the most anxiety-provoking situation. The hierarchy should contain enough steps so that each step represents a gradual progression and thus captures all the aspects necessary to elicit the fear response in the youth (Seligmann & Ollendick, 2011).

In the third phase, the youth is exposed to each of the situations in his/her hierarchy. Exposure tasks are usually carried out in two different ways: through imagination (where the youth imagine him- or herself in a fearful situation) or in vivo (where the youth is exposed to the fearful situation in real life; Emmelkamp, 2013). The therapist is advised to model the anxiety provoking tasks before the youth proceeds and supervise the level of anxiety during exposure tasks, e.g., by the use of an “anxiety thermometer” (Seligman & Ollendick, 2011). Avoidance or escape behaviors, such as thinking about something else when facing an anxiety provoking stimuli, should be eliminated to make sure that the youth experiences an anxious response and further, experiences that the response abates with time (Hedtke et al.,

2009). Thus, the therapist should encourage the youth to remain in the fearful situation even though it might feel uncomfortable (Ollendick & Hovey, 2009). To increase motivation and engagement, exposure tasks can be made both personally relevant and fun for the youth, and they do not need to be dry and tedious exercises (Chu et al., 2004; Kendall et al., 2005). Even though play and games can be a useful tool to engage exposure, the central element is to still provoke anxiety and to allow the youth to experience it and learn to cope in the process (Peterman et al., 2015).

In the fourth phase, youth are encouraged to continue to do exposure tasks in between treatment appointments to promote maintenance of what was accomplished in session, to generalize it across situations and to make sure that mastery is not dependent on the presence of the therapist.

Researchers have also emphasized the importance of having youth evaluate or post-process the confrontation of the feared stimuli (e.g., having youth verbalize the fear and the negative expectations they had prior to engaging in exposure, as well as examine and evaluate their own ability to cope with the anxiety-provoking situations; Kendall et al., 2005). An evaluation of the exposure task might help to clarify what was learnt or experienced during the exposure, amplify what might be done differently in the next trial, and/or identify whether another task or aim would be more appropriate for future use.

Throughout the entire exposure process, the therapist should strive to maintain a positive and collaborative relationship with the youth (Kendall et al., 2009). As exposure tasks may be distressing, a strong relationship should be present to ensure compliance to the exposure tasks.

2.3.2 Theoretical perspectives on how exposure reduces anxiety

The aim of exposure is to facilitate extinction, i.e., a reduction in the anxiety response associated with the feared stimulus (Abramowitz, 2013). How exposure works to reduce anxiety has been explained differently by two empirically derived theoretical models: the emotional processing theory (EPT; e.g., Foa & Kozac, 1986) and the inhibitory learning model (ILM; e.g., Craske et al., 2008).

The earliest model, EPT, was initiated by Rachman (1980), expanded by Foa and Kozac (1986), and further revised by Foa and McNally (1996). According to EPT, exposure to a feared stimulus will activate a fear structure stored in memory (Lang, 1971). A fear structure is a set of propositions about a feared stimulus (e.g., classroom), connected responses (e.g.,

pounding heart, aching stomach), and their meaning (e.g., thinking *I will make a fool of myself*). At first, exposure will result in an activation of the fear structure. Further, exposure to a feared stimulus presents the possibility to experience and integrate conflicting/incompatible information (e.g., by giving a presentation in class and not being ridiculed). Consequently, exposure is thought to result in the development of new, non-fear structures that replace or compete with the original one, as a form of corrective learning (Abramowitz, 2013; Foa & Kozak, 1986; Foa & McNally, 1996). The basis for this corrective learning is the habituation of fear, which is a natural decline in anxious response over time, both during and between the exposures (Abramowitz, 2013). Habituation occurs in the absence of any safety and/or compensatory behaviors; forms of avoidance, that is either active or passive, performed by youth to reduce anxiety and bring a sense of security (Abramowitz, 2013). Thus, according to EPT, the reduction of anxiety through exposure to a feared stimuli is explained through initial fear activation, followed by both within-session and between-session habituation in the absence of safety behaviors, resulting in corrective learning. However, the main tenets of EPT have not been consistently supported by research. Neither fear activation nor habituation can reliably predict therapeutic outcome in treatment (Abramowitz, 2013).

A more recent model, the inhibitory learning model (ILM) focuses on inhibitory mechanisms when accounting for the effects of exposure (e.g., Craske et al., 2008). Inhibitory learning refers to the notion that fear associations are not replaced during exposure, but rather remain intact as new learning about the feared stimulus occurs (Bouton & King, 1983). Instead of replacing the original fear structure (e.g., all spiders are venomous), exposure tasks are believed to establish two meanings belonging to the feared stimulus, both the original excitatory meaning (e.g., all spiders are venomous) and a new inhibitory meaning (e.g., some spiders are venomous, but most spiders will not poison me). Accordingly, the feared stimulus may possess two meanings after performing an exposure task. As follows, the original excitatory meaning is maintained in memory and might reoccur if there is a change in context (e.g., if confronted with a spider while on vacation) or as time passes (e.g., if confronted with a spider after several years; Bouton, 2002). A relapse of anxiety might occur post-treatment, as the original excitatory meaning is still in memory. With regard to ILM, the aim of exposure therapy is therefore to help youth develop new, non-threatening associations and to make these new associations accessible in different contexts and over time (Abramowitz, 2013). Whether the exposure has been successful or not, can best be decided after treatment termination or at follow-up assessments. At this point, the inhibitory learning, which was

acquired during previous exposures, will shape how fear is expressed by the youth. Thus, whether habituation occurred during exposure is not important according to this model (Craske et al., 2008). An implication of the ILM is that during exposure, fear tolerance is considered more important than fear reduction (which is proposed in EPT; Abramowitz, 2013). What is essential during exposure, according to ILM, is not fear reduction itself, but rather, that youth learn that fear can be tolerated. Inhibitory associations (e.g. the spider is not venomous) can be maximally acquired to the degree that fear is tolerated (Arch & Craske, 2011). Thus, teaching youth that they can tolerate fear, both during and after exposure, might be more important than habituation (reduction of anxiety within- and between session; Abramowitz, 2013). The importance of fear tolerance is consistent with research suggesting that acceptance of negative emotional states reduces longer-term distress (Eifert & Heffner, 2003) whereas attempts to control, suppress, avoid, or escape from negative emotions (e.g., avoiding the feeling of being anxious) are associated with more severe symptoms of anxiety disorders (e.g., Abramowitz, Lackey, & Wheaton, 2009; Berman, Wheaton, McGrath, & Abramowitz, 2010; Forsyth, Eifert, & Barrios, 2006).

Despite the fact that there are different ways to understand how exposure to feared stimuli works to reduce anxiety, there is little debate concerning the importance of exposure during the course of CBT (Clark, 1999; Orsillo, Roemer, Lerner, & Tull, 2004).

2.3.3 Trajectories of change in CBT involving exposure

Researchers have not only been questioning how anxiety reduction happens, but also when in treatment the change takes place. To date, there is limited knowledge concerning the trajectories of change in CBT for anxiety disorders, but some researchers have attempted to investigate the change patterns.

In 1997, Kendall and Sugarman compared 16-week CBT to waitlist control (WLC) and found greater symptom change during sessions that involved exposure tasks, which were introduced mid-treatment. The results indicated non-significant differences between CBT and WLC at mid-treatment, but significant differences at post-treatment. Hence, their conclusion was that the majority of symptom change occurred during the second half of therapy when exposure began, suggesting that exposure may represent a qualitatively different component in treatment compared to sessions where the focus is mainly on affective and cognitive skills. Their finding was challenged by a later study, which suggested a steady, gradual and linear change during treatment (Walkup et al., 2008). Walkup and colleagues assumed that therapy

improvement occurred in a linear fashion and at a constant rate, meaning that clients made a relatively additive progress across sessions from pre- to post-treatment. A study by Chu and colleagues (2013) was conducted to investigate these earlier findings and their research suggested that change patterns might be more complex than previously thought. They did not find a gradual decline in symptoms, but rather that anxiety declined relatively rapidly during the first half of treatment, then flattened during the first sessions involving exposure, and then dropped again in later sessions. This was a novel finding as this slope of change suggested significant symptom change in both the first and second half of treatment, which according to Chu and colleagues could be interpreted in different ways. First, the flattening of the curve when the first exposure tasks were assigned could be due to the start of a more challenging treatment phase. The observation of a flattening is important for therapists delivering exposure-based CBT, as the flattening (or conversely, spike) in symptoms might be misinterpreted as representing a disruption in the clinical process, which might discourage the therapist to continue exposure. Second, the flattening of the curve during early exposure could be due to a temporary transition between two phases of symptom decline. Consequently, it is important to encourage families to continue treatment even after initial improvement and to persist with the treatment plan as the exercises get more challenging and should result in further improvements.

It should also be noted that Chu and colleagues (2013) found a presence of early responders. Early responders have also been found in previous CBT research (e.g., Tang & DeRubeis, 1999), which has suggested that 50-60% of total client improvement could be achieved by the fifth week of treatment. Findings of sudden gains (e.g., Clerkin, Teachman, & Smith-Janik, 2008; Norton, Klenck, & Barrera, 2010) suggest that changes in anxiety reduction might appear earlier in the treatment course than expected, for example during initial psychoeducational or cognitive components of CBT. A recent study by Peris and colleagues (2015) support this suggestion. They found that the use of cognitive restructuring, which was introduced prior to the exposure tasks, contributed to substantial improvements in anxiety symptoms.

In sum, research is inconclusive regarding when in the exposure-based CBT process symptomatic changes occur. The evidence suggests that the change patterns are complex, and anxiety decline does not seem to occur in a linear fashion. These recent studies suggest that exposure sessions are important contributors to symptomatic change, yet more research is needed to establish previous research findings.

2.3.4 Challenges to exposure treatment

Despite the fact that exposure might be the key catalyst within CBT (Beidel et al., 2000; Kazdin & Weisz, 1998; Kendall et al., 2005), it remains underutilized in community clinics (Storch et al., 2007). A recent study by Hipol and Deacon (2013) indicated that community therapists were three times more likely to report using cognitive restructuring than exposure. The reasons why clinicians might be reluctant to focus on exposure during CBT are likely to be varied (Barlow, Levitt, & Bufka, 1999). It has been suggested that the hesitancy is connected to a fear among clinicians that youth will be unable to tolerate the distress that exposure evokes, drop out of therapy, experience an increase in symptoms, or that it will rupture the therapeutic alliance (Peterman et al., 2015). As a result, clinicians may choose to deliver exposure in a less intense manner, or not at all (Hipol & Deacon, 2013). However, research has shown that there is no link between attrition and use of exposure in therapy (Gryczkowski et al., 2013), and youth who complete CBT often recall exposure as important (Kendall & Southam-Gerow, 1996). Moreover, research has shown that exposure contributes to improvements in anxiety (Peris et al., 2015) and that it does not negatively affect the therapeutic alliance (Kendall et al., 2009).

Findings from this thesis and similar studies will hopefully address some of these concerns or challenges and subsequently help clinicians implement exposure more efficiently.

3 Evidence-based treatment manuals

Several manual-based treatments for anxiety and emotional difficulties are available, e.g., the Coping Cat (Kendall, 1990, 2006), FRIENDS (Barrett & Ryan, 2004; Barrett, 2004), and SMART (Neumer & Junge-Hoffmeister, 2010). These manuals strive to incorporate all the core elements of CBT: psychoeducation, coping with physiological reactions, cognitive restructuring, problem solving, and exposure (Velting, Setzer, & Albano, 2004). However, they differ in level of structure and standardization, in addition to how the different elements, including exposure, are weighted (Neumer, Martinsen, Gere, & Villabø, 2011). Treatment manuals provide a framework with outlines of session and treatment goals, as well as strategies for how the therapist may achieve these goals with the patient in treatment (Kendall, Chu, Gifford, Hayes, & Nauta, 1998).

Offering manual-based treatments has been both celebrated and dismissed. Critics have proposed a number of objections, with most of them based on the assumption that using manuals involves a rigid approach to treatment, in which help is offered in a linear and strict fashion, at the expense of the individual client and his or her unique history and concerns (Addis, Cardemil, Duncan, & Miller, 2006; Weisz, Jensen-Doss, & Hawley, 2006). Others have offered critic based on the apparent lack of focus on the therapeutic process and alliance in manuals (Kendall et al., 1998).

Proponents of manuals on the other hand, urge the use of manuals for a number of reasons. They claim that manuals can be helpful and facilitate both treatment delivery and therapist training, as well as making treatment evaluation easier (Moncher & Prinz, 1991; Moras, 1993; Waltz, Addis, Koerner, & Jacobson, 1993). Kendall and colleagues (1998) proclaimed that if the critics were right, and manuals were applied in a highly inflexible manner, then their arguments would be valid. However, a number of researchers have emphasized the fact that both developers and supporters of manuals warn against the use of manuals in a thoughtless, compliant, or rigid way (Hamilton, Kendall, Gosch, Furr, & Sood, 2008; Kendall et al., 1998). Further, it has been argued that therapists should always consider the patient at hand and use the manual as a guide (Hamilton et al., 2008). In that manner, a manual can both be flexible and vibrant, leaving room for creativity. Yet, clinical skill is needed for proper implementation, while being sensitive to the patients' characteristics and needs (Hamilton et al., 2008).

Even though manual-based treatments have shown promising results, a few pitfalls have been noted (Kendall et al., 1998; Neumer et al., 2011). By following the manual too strictly,

and trying to cover all the session material, there might be little time for fun and games in sessions, which is outlined in some manuals. This increases the risk of the clinician acting more like a teacher than a therapist. This might turn the session into more of an academic environment (Kendall et al., 1998). Further, if the therapist only reads straight from the workbook, the youth may become passive, lose interest, and participate less. In sum, these arguments acknowledge some limitations regarding the use of manuals; yet highlight the effectiveness of the manuals if used in a flexible manner (Beidas, Benjamin, Puleo, Edmunds, & Kendall, 2010).

The CBT treatment manual, aimed at anxiety disorders, with the most empirical support is Philip Kendall's Coping Cat, aimed at treating youth with SOP, SAD and GAD (Kendall, 1990). This program has later been translated and adjusted for its use Norway, where it was named Mestringskatten (Kendall, Martinsen, & Neumer, 2006a, 2006b). Mestringskatten has been used in a clinical trial at the Regional Center for Child and Adolescent Psychiatry in eastern Norway (R-BUP Sør-Øst). In five community clinics, 165 youth with CADs have been treated and so far, results are promising (Norwegian Research Council, 2016).

Paula Barrett modified the Coping Cat for its use in Australia, where it was known as The Coping Koala (Barrett, Dadds, & Rapee, 1991). The implementation of The Coping Koala was both favorable and efficient (Barrett, Dadds & Rapee, 1996). A further development of this program resulted in FRIENDS for Life (Barrett, 2004), the treatment manual used in the current thesis.

3.1 The FRIENDS for Life program (FRIENDS)

FRIENDS was primarily developed for youth aged 8-16 (one child- and one adolescent version) for use in both individual- and group therapy (Barrett, 2008). The program comprises ten weekly sessions, each lasting 60 minutes (individual CBT; ICBT) or 90 minutes (group CBT; GCBT). Parents are offered parallel lessons, both individually with the therapist and together with the youth. Parents are included in the last 15 minutes of each session, the beginning of session 6, and are offered two separate parent evenings. The inclusion of parents in the treatment process is considered important (Iizuka, Barrett, & Morris, 2013).

FRIENDS is an acronym describing the steps of the program, see Table 1. The program is skills-based (e.g., identifying, and challenging anxious thoughts, problem-solving skills

training, social support training), and exposure tasks are negotiated as specific home tasks done weekly from mid-treatment onwards.

A number of studies have examined the effectiveness of FRIENDS when treating youth in individual and group therapy (Barrett et al., 1996; Barrett, Duffy, Dadds, & Rapee, 2001; Shortt et al., 2001). The first RCT evaluating the efficacy of FRIENDS indicated that youth who completed the program showed greater improvement than the WLC (Shortt et al., 2001). Of the 71 youth who all met the diagnostic criteria for an anxiety disorder, 68% of those completing the program were free of their diagnosis at treatment end, compared to 6% of the youth in the WLC. Treatment gains were maintained at 12-month follow-up and 76% of the youth in the treatment group remained diagnosis free. Thus, Shortt and colleagues concluded that FRIENDS is efficient when treating youth with anxiety disorders.

Over the years, further adjustments and revisions have been made, and FRIENDS is now available as a prevention and social skills program for school-aged children, with promising results (e.g., Barrett, Farrell, Ollendick, & Dadds, 2006; Barrett, Turner, & Sonderegger, 2000; Dadds, Spence, Holland, Barrett, & Laurens, 1997; Lock & Barrett, 2003; Lowry-Webster, Barrett, & Dadds, 2001; Lowry-Webster, Barrett, & Lock, 2003, Maggin & Johnson, 2014). FRIENDS has been used in various countries around the world, both in prevention and treatment settings (e.g., Ahlen, Breitholtz, Barrett, & Gallegos, 2012; Barrett, Sonderegger, & Xenos, 2003; Stallard, Simpson, Anderson, & Goddard, 2008; Wergeland et al., 2014).

Table 1. *An explanation of each aim in the acronym FRIENDS*

FRIENDS	Aim of step
<i>F - Feeling worried</i>	Youth learn to talk about feelings, recognize feelings and imagine how other people are feeling.
<i>R - Relax and feel good</i>	Youth learn different relaxation techniques and how to implement these in both daily life and anxiety-provoking situations.
<i>I - Inner helpful thoughts</i>	Youth learn how to differentiate between maladaptive thoughts and helpful thoughts.
<i>E - Explore plans</i>	Together, the therapist and youth develop a step plan for exposure; a hierarchy of fearful situations, from the least anxiety-provoking situation to the most, which the youth is encouraged to work through outside of sessions.
<i>N - Nice work, now reward yourself</i>	Youth are taught how to reward themselves for their effort. Different ways of reinforcement are taught, like doing something fun with their families after a completed step in their step plan.
<i>D - Don't forget to practice</i>	Youth are encouraged to practice skills daily with friends and family, and continue to use the skills learned in treatment after the therapy is completed.
<i>S - Stay calm for life!</i>	Youth learn to notice the skills taught in the program and to understand that they can safely deal with challenges later in life.

Note. Table content is collected from Barrett (2004) and Iizuka and colleagues (2013).

4 Research on exposure guidelines

Available CBT manuals offer guidelines for conducting exposure effectively (Kendall, et al., 2005; Rapee, Wignall, Hudson, & Schniering, 2000). Some of the guidelines emphasize the importance of both preparing the youth for the upcoming task as well as post-processing after the completion of an anxiety-provoking task (Bouchard et al., 2004). There is however limited empirical evidence for the relevance of these guidelines. A recent study by Tiwari and colleagues (2013) attempted to explore how these guidelines and their characteristics contribute to treatment outcome. Independent observers used the Exposure Session Rating Form (ESRF; Tiwari et al., 2013) to rate the preparation for and processing of in-session exposure tasks, in a sample drawn from Kendall, Hudson, Gosch, Flannery-Schroeder, and Suveg (2008). The participants were 61 youth, ranging in age from seven to 13 years. They were diagnosed with SOP, SAD or GAD and were treated with the Coping Cat program (Kendall, 1990). The results from Tiwari and colleagues (2013) indicated that post-processing of exposure tasks was significantly associated with diagnostic improvement. Additional analyses suggested that treatment responders were also more likely to be rewarded for their efforts in sessions and be assigned between-session exposure tasks (homework) by their therapists. The researchers had expected preparation for the tasks to be just as important as post-processing; however, preparation for exposure tasks was not significantly related to outcome. Hence, contrary to the study hypotheses, it was evident that the activities that happened after the tasks were conducted were more influential in reducing the level of anxiety over the course of CBT sessions. Future research is needed to both confirm and further explore these findings, as other aspects of the exposure component remain unexamined. There is still limited research on whether other aspects of the exposure component might have an even greater impact on anxiety reduction than for instance post-processing. It is also important that various treatment programs are examined to generalize the findings.

Through this thesis, we aimed to contribute to this base of knowledge by investigating the exposure component in relation to treatment outcome. We examined the exposure component in the child part of the ATACA-study. As expected by the researchers (Wergeland et al., 2014), treatment was superior to WLC. The recovery rates were still lower compared to other trials, and an important question is why this was the case.

Wergeland and colleagues (2016) examined predictors of outcome and the most consistent findings were that youth-rated anxiety symptoms, functional impairment, and

parent internalizing symptoms predicted poorer outcome at post-treatment. Further, the results indicated that youth-rated anxiety symptoms, lower family social class, lower pretreatment youth motivation, and parent internalizing symptoms predicted poorer outcome at one-year follow-up. The findings from Wergeland and colleagues are important. However, an essential question is whether variables related to the CBT itself mattered for outcome. Continuous research on this sample is of interest, as it is the largest FRIENDS-trial in the world to date. More research is needed to be able to both improve the program and maintain efficiency when transported to community clinics (Wergeland et al., 2014).

5 Research questions and hypotheses

To be able to answer questions concerning the quality of the exposure component in the FRIENDS sessions, a reliable and valid measure is required. In this thesis we aimed to answer the following research questions: 1) Can the quality of the exposure component be reliably rated with the Quality of the Exposure Component Form (QECF)? 2) Does quality of the exposure component predict treatment outcome? These questions were examined via three main aims outlined below.

First, we aimed to assess the psychometric properties of QECF to evaluate whether this form is applicable for measuring the quality of the exposure component in the FRIENDS sessions. Specifically, we aimed to assess inter-rater reliability and internal consistency.

Second, given that the QECF had acceptable psychometric properties we wanted to assess the QECF's predictive validity, i.e., explore if quality could predict treatment outcome. Specifically, we aimed to assess whether the exposure component would be of different quality in the group of responders vs. non-responders. We hypothesized that treatment responders (operationalized as not meeting the diagnostic criteria for the anxiety disorder(s) previously present) would have significantly higher total scores on the QECF than non-responders, both at post-treatment (T2) and at one-year follow-up (T3). Further, we wanted to control for age and gender. Age, because older children might more easily understand the rationale for exposure and because younger children might be less willing to participate in exposure tasks (e.g., Piacentini, Peris, March, & Franklin, 2011), and gender, as research have suggested gender differences in anxiety symptomatology (e.g., Dierker et al., 2001; McLean & Anderson, 2009; Villabø, Gere, Torgersen, March, & Kendall, 2012).

Third, we aimed to assess whether specific aspects of the exposure component would be of different quality in responders vs. non-responders. We hypothesized that treatment responders would have significantly higher scores compared to non-responders, on items measuring post-processing, homework, and use of rewards at T2 and T3, in line with the findings from Tiwari and colleagues (2013).

6 Method

This thesis used data material from the ATACA-study, child part (Wergeland et al., 2014, 2016). A description of the ATACA-study, procedure and results will be given prior to the presentation of the selected sample for the current study.

6.1 The ATACA-study

The sample that received FRIENDS comprised 182 youth aged 8-15 years ($M = 11.5$ years, $SD = 2.1$, 53% girls, 90.7% Caucasian) recruited from referrals to seven public child and adolescent mental health outpatient clinics from 2008 to 2010. All the therapy sessions were videotaped. The ATACA-study was approved by Regional Committee for Medical Research Ethics West (Project number 2011/1004).

The SOP, SAD, and GAD modules from The Anxiety Disorder Interview Schedule for DSM-IV (ADIS-C/P; Silverman & Albano, 1996) was used to assess inclusion diagnoses, and as the primary outcome measure. The youth were randomized to ICBT ($N = 77$), GCBT ($N = 67$), or WLC ($N = 38$). After a wait-list period, another 14 youth received ICBT, leaving a total of 91 youth included in the analyses (see Wergeland et al., 2014 for study flow chart). In this thesis, only data material from ICBT was analyzed.

Prior to the ATACA-study, the FRIENDS for Life manual (4th edition) was translated from English to Norwegian by a team of researchers in co-operation with the manual author, Paula Barrett. Minor adaptations to the program were made to make the manual culturally appropriate for use with families in Norway. Barrett approved the alterations. The child version of the FRIENDS manual was used for youth aged 8-12, and the adolescent version was used for ages 12-15. Youth aged 12 years old were administered the child ($N = 34$) or adolescent version ($N = 5$) based on convenience following block randomization (i.e., to the child or youth condition based on the ages of other children in the respective block).

For each of the 10 sessions, the therapists were provided a list of both core treatment tasks and elective tasks (Wergeland et al., 2014). It was emphasized in training that the exposure tasks were essential. In the ICBT condition, parents attended two of the ten youth sessions, as well as the last 15 minutes of the other eight sessions. Parents also attended two separate parent-only sessions, prior to session 1 and 6. During the parent sessions, program content was explained. Two booster sessions were conducted one and three months after session 10. Mean treatment period for ICBT was 13.5 weeks ($SD = 3.7$).

After receiving the program (either ICBT or GCBT), 22.9% of youth no longer met criteria for any of the inclusion anxiety diagnoses, compared to 2.9% in WLC. Full diagnostic recovery rate was 25.3% for those receiving the ICBT (Wergeland et al., 2014). Even though treatment seemed to be effective and approximately one quarter of the patients gained recovery, the recovery rates were lower than what has been reported for other CBT effectiveness studies of youth anxiety (Bodden et al., 2008; Lau, Chan, Li, & Au, 2010; Nauta, Scholing, Emmelkamp, & Minderaa, 2003) and previous efficacy trials (In-Albon & Schneider, 2007; James et al., 2013). The authors of this thesis, Ditlefsen and Unsvåg, were given permission from the ATACA-study group to continue research on this sample through video rating and further analyses.

6.2 Participants

For this thesis, two researchers from the ATACA-study group randomly selected 45 of the 91 youth from the ICBT condition. Half the sample was unrecovered, half recovered, defined as loss of primary anxiety disorder. The selected sample ($N = 45$) ranged in age from 8-15 years (M age = 11.1, $SD = 1.9$, 57.8% boys). They all met diagnostic criteria from DSM-IV for SOP, SAD or GAD (one or multiple) prior to treatment. Twenty-eight of the 45 youth in the sample met the criteria for a secondary diagnosis and 16 youth met the criteria for a third diagnosis. The most prevalent primary diagnosis was SOP (37.7%, see Table 2). There were 14 different therapists in the sample: eight clinical psychologists, one social worker and five clinical pedagogues. At post-treatment, 27 out of 45 youth (60.0%) had lost their primary diagnosis and 21 out of 45 youth (46.7%) had lost all their anxiety diagnoses. At one-year follow-up, 19 out of 35 youth (54.3%) had lost all anxiety diagnoses (see Table 3). These were the same participants as had lost their primary anxiety disorder (19 of 35, 54.3%), i.e., identical subsamples. This means there were no participants who had lost their primary disorder at T3 who had not also lost all other anxiety disorders. Therefore, all analyses of outcome at T3 were conducted with the group that had lost all anxiety disorders.

Table 2. *Overview of anxiety disorders at pre-treatment among 45 youth.*

	Primary diagnosis	Secondary diagnosis ¹	Tertiary diagnosis ²
SAD	31.1%	21.4%	37.5%
SOP	37.7%	39.2%	12.5%
GAD	31.1%	39.2%	37.5%

Note. SAD = Separation anxiety disorder, SOP = Social phobia, GAD = Generalized anxiety disorder. ¹N = 28, ²N = 16.

Table 3. *Recovery rates for 45 youth treated with FRIENDS.*

	Loss of primary diagnosis at T2	Loss of all diagnoses T2	Loss of primary diagnosis T3 ¹	Loss of all diagnoses T3 ¹
Yes	60.0%	46.7%	54.3%	54.3%
No	40.0%	53.3%	45.7%	45.7%

Note. T2 = post treatment, T3 = one-year follow-up. ¹N = 35.

6.3 Rated sessions

In this study, videotapes from session number 5, 6 or 7 (child version) and session number 6, 7, or 8 (adolescent version) from the FRIENDS manual were rated. These sessions were selected because they are the main sessions where exposure tasks are worked on according to the manual (E; Explore plans, Barrett, 2008). A total of 80 sessions were rated. In 35 of the 45 cases, two treatment sessions were rated. In ten cases, one treatment session was rated, based on availability of tapes.

6.4 Measures

6.4.1 Independent measures

Quality of the Exposure Component Form (QECF)

The QECF (see Appendix A, Copy A1) was developed by the ATACA study-group for the purpose of rating FRIENDS sessions. This form is an adjusted version of the ESRF developed by Tiwari and colleagues (2013) with the purpose of rating Coping Cat-sessions. The QECF was translated into Norwegian by an Associate Professor at the Department of Psychology, University of Oslo. Translation and adjustments were done with consent from the ESRF developers (Tiwari et al., 2013).

The QECF consists of 19 items which comprise five main themes, aiming to cover the core aspects of the exposure component: (1) *Preparation* (five items, e.g., To what degree was there given psychoeducation about exposure?); (2) *Actual exposure* (two items, e.g., To what degree were exposure tasks performed in session?); (3) *Post-processing* (five items, e.g., To what degree were the challenges of exposure discussed in session?); (4) *Collaboration/Climate* (four items, e.g., To what degree did the youth show resistance? and, (5) *Parent contribution* (two items, e.g., To what degree were the parents involved in the exposure plan through their contribution in session?). A final item captures an overall evaluation of the exposure component (Overall, how would you rate the quality of the exposure component in this session?). The items were rated on a five point Likert scale: 1 (not at all), 2 (limited), 3 (sufficient/adequate), 4 (a lot), and, 5 (very much).

6.4.2 Dependent measures

The Anxiety Disorders Interview Schedule for DSM-IV (ADIS-C/P; Silverman & Albano, 1996)

In this thesis, ADIS-C/P measures from the ATACA-study were used. The measurements were completed at pre- (T1) and post-treatment (T2), and at one-year follow-up (T3). Treatment outcome was operationalized as the loss of diagnoses (either primary diagnosis or all diagnoses) according to ADIS C/P, hence a positive outcome was defined as a loss of one or multiple anxiety disorder(s). The overall inter-rater agreement estimated by kappa (k) for the presence of an inclusion anxiety diagnosis was 0.84 (ADIS-C) and 0.86 (ADIS-P). For the specific anxiety disorders in the combined child and parent report, kappas were: SAD = 0.86, SOP = 0.83 and GAD = 0.86 (Wergeland et al., 2014). The ADIS-C/P has generally demonstrated excellent inter-rater reliability, test-retest reliability and concurrent validity (Lyneham, Abbott, & Rapee, 2007; Silverman, Saavedra, & Pina, 2001; Wood, Piacentini, Bergman, McCracken, & Barrios, 2002).

6.5 Procedure

The authors of this thesis (Ditlefsen & Unsvåg) rated the 80 videotapes over a three-month period (June-August 2015) at The Department of Psychology at The University of Oslo. All data material, including videotapes, was given an anonymous ID number and stored confidentially. The videotapes were rated with the independent measure (QECF). The raters were blind to both primary diagnosis and treatment outcome. The raters were trained with

reading materials and an educational presentation of the QECF. Practice sessions were rated together with an experienced clinician who had previously rated another sample of tapes from the same population. The raters followed agreed-upon scoring guidelines (see Appendix A, Copy A2) and thoroughly discussed the content of each item and criteria for each score to ensure a satisfactory level of inter-rater reliability. After a practice period, each rater was assigned 20 videotapes, which were rated independently. Both raters rated 20% of these tapes and reliability analyses were done to ensure acceptable inter-rater agreement. When this was achieved, each rater was randomly assigned another 20 videotapes, which were also rated independently. Subsequently, both raters rated 20% of these tapes, and an additional reliability analysis was performed to prevent rater drift (see Table 4). Data was plotted into SPSS for further descriptive and exploratory analysis.

6.5.1 Rating procedures

All videotapes were rated in a closed off room to ensure anonymity and limited distractions. The QECF forms were prepared with correct ID-numbers prior to rating. The developed scoring guidelines and the FRIENDS manual were available during the rating of videotapes. The raters were allowed breaks in between tapes and had the possibility to pause or rewind the videotapes whenever needed. A maximum of five tapes were rated per day, to limit effects of fatigue.

6.5.2 Ethical considerations

The authors signed a confidentiality declaration prior to commencing the video rating, and general ethical guidelines have been followed during this course of research. In the planning phase of the ATACA-study, parents and youth gave written consent to participate, except the youth under the age of 11 who gave verbal assent. Consent was also given with regard to being videotaped. Einar Heirvang (PI of the ATACA-study) gave permission for the videotapes to be stored confidentially at the Department of Psychology at the University of Oslo.

6.6 Statistical analyses

The data material was analyzed by using IBM SPSS 22.0. Statistical analyses were performed in two stages: first, preliminary analyses, second, main statistical analyses. Preliminary analyses were conducted to assess missing data and assumptions concerning normality in the distribution of scores.

For the main analyses, a total score on QECF was calculated for each youth. For the cases where two therapy sessions had been rated (35 out of 45) a mean total score was calculated. This was done to assure that each case/youth and his or her outcome-measurement only was included once in the analyses, leaving a total of 45 cases. In addition, mean scores on each item and subscale in the QECF were also calculated for the consecutive analyses (see Table 4). Reliability analyses (inter-rater and internal consistency) were conducted and a correlation matrix was produced to assess the psychometric properties of the QECF.

Independent samples t-tests (two-tailed) were conducted to investigate whether there were significant differences in the mean scores on the QECF between responders and non-responders at T2 and T3. Further, differences in quality at item and subscale level were examined by conducting additional independent samples t-tests (two-tailed).

To investigate if age or gender mattered for whether exposure quality predicted treatment outcome, we conducted multiple logistic regressions. This was done with the enter method, based on recommendations from Jaccard, Guliamo-Ramos, Johanson, and Bouris (2006). Variance component analyses were conducted to investigate the amount of variance at therapist or clinic level, to identify possible nesting effects (Guo, 2005).

In this thesis, effect sizes were measured with Cohen's d for t-tests, and Pearson's r for correlation analyses. Cohen (1988, 1992) has established rules of thumb for interpreting d and r : small effect ($d = 0.20$, $r = .10$), medium effect ($d = 0.50$, $r = .30$) and large effect ($d = 0.80$, $r = .50$).

7 Results

7.1 Preliminary analyses

7.1.1 Missing data

Two of the 80 videotapes were excluded from the analyses. One tape was not playable for an unknown reason, the second tape stopped after 23 minutes, presumably before the step plan was introduced. This leaves a number of 78 rated videotapes from 45 different clients. QEFC-ratings were removed from analyses if less than 80% of the items in the QEFC were answered. No forms had more than 20% missing items and all were included in the analyses. A missing value analysis, using Little's missing completely at random (MCAR) test showed that the missing values were random ($p = .324$), meaning there was not a systematic pattern. There were a small number of missing values (i.e., $< 2.6\%$ for any item). All QEFC-ratings were excluded pairwise in the consecutive analyses. This level of missing values was considered acceptable for the conducted analyses. For example, Schafer (1999) asserted that a missing rate of 5% or less is inconsequential. Bennett (2001) maintained that statistical analysis is likely to be biased when more than 10% of data are missing.

7.1.2 Assessment of normality

Several of the statistical techniques applied in this study assume a normal distribution of scores on the continuous variables. Thus, descriptive analyses were done to assess the assumption of normality for the QEFC. A comparison of the original mean ($M = 2.27$), to the 5% trimmed mean ($M = 2.26$) showed that the extreme scores did not have a strong influence on the mean. The skewness value (.340), kurtosis value for QEFC (.468), and the Kolmogorov-Smirnov statistic ($p = .200$) indicated normality of scores. The actual shape of the distribution appeared to be reasonably normal (see appendix B, Figure B1), this was also supported by an inspection of the normal probability plot (Q-Q plot), and the detrended normal Q-Q plot (see Appendix B, Figure B2 and Figure B3). The reasonably straight line, in addition to the absence of clustering of points, suggested a normal distribution. When examining the distribution of the QEFC, one outlier was visible. When excluding the outlier from the analyses, the Kolmogorov-Smirnov significance value did not change and it was therefore included in the consecutive analyses.

7.1.3 Mean scores on the QECF

When investigating the mean scores on each item in the QECF (see Table 4), it appears that psychoeducation was used to a close to sufficient degree, meaning that the step plan was explained by the therapists as a gradual approach towards a feared situation or object (see appendix A, Copy A3 for scoring guidelines). Yet, the *Preparation* subscale had an overall score of below limited, indicating that step plans often were made without proper step-differentiation, and that the steps' level of difficulty were seldom addressed in session. The overall mean score on the *Actual exposure* subscale was below limited, indicating a low amount of exposure tasks in session and further, that exposure tasks were rarely conducted at home. Further, the subscale *Post-processing* and its related items yielded scores below limited, indicating that the therapists and youth to a small degree spent their time discussing what went well during the exposure task, possible challenges, what the youth might could have done differently, or adjusted the step plan. The mean score on the *Collaboration/Climate* subscale indicate above sufficient quality, meaning that youth collaborated in sessions, contributed in the making of the step plan, and that most youth received verbal validation for their effort. Two of the items in the *Collaboration/Climate* subscale, measuring avoidance and resistance, were reversed in the analyses. The high mean scores on these items therefore indicate that overall, there was very little avoidance and resistance, thus contributing to higher quality in climate. *Parent contribution* yielded a mean score below sufficient, closer to limited, indicating that parents seldom talked about their youths' step plan and/or their contribution.

Descriptive analyses showed that the mean total score on the QECF was 2.3 ($SD = 0.4$) and the highest score was 2.83, out of 5. This indicates that, on average, the total quality of the exposure component in this sample was just under limited, with no one reaching an overall sufficient quality (total score of 3). Independent samples t-tests showed that there was no significant difference in the exposure component quality between girls ($M = 2.2$, $SD = 0.4$) and boys ($M = 2.3$, $SD = 0.4$); $t(43) = .840$, $p = .405$ (two-tailed). Cohen's $d = 0.25$. Further, the correlation between exposure quality and age was $r = -.25$, $p = .104$.

7.2 Reliability measures for QECF

7.2.1 Raters as indicators of reliability (inter-rater agreement)

The inter-rater reliability for QECF was calculated using intraclass correlation coefficients (ICCs; see Table 4). The ICC provides an estimate of the ratio of the true score

variance to the total variance (Shrout & Fleiss, 1979). The item “If the youth had not completed exposure tasks outside of session, to what degree was this addressed?” was excluded from the analyses, as it was only relevant in 12 of the 78 sessions. A one-way random effects model with measures of consistency was chosen as the raters were considered to be a random sample from a larger population and systematic variability due to raters was considered irrelevant (Fjermestad et al., 2012; McLeod & Weisz, 2005; Shrout & Fleiss, 1979).

With respect to evaluating the ICC statistic, used for measuring inter-rater levels of agreement, researchers have developed guidelines for determining levels of practical, substantive, or clinical significance (e.g., Cicchetti & Sparrow, 1981, ref. in Cicchetti, 1994; Fleiss, 1981; Landis & Koch, 1977). The guidelines developed by Cicchetti and Sparrow (1981), referred to in Cicchetti (1994), state that when the reliability coefficient is between .60 and .74, the level of clinical significance is *good* and when it is between .75 and 1.00, the level of clinical significance is *excellent*. From reviewing the criteria, it can be concluded that the agreement between raters in the current study was *excellent*, except for one item, which was *good*.

7.2.2 Internal consistency

The internal consistency of the QECF was equated with Cronbach’s (1951) coefficient alpha. Alpha is defined as the proportion of a scale’s total variance that is attributable to a common source, presumably the true score of the quality of the exposure component, underlying the items. There are different reports about the acceptable values of alpha for a scale, ranging from 0.70 to 0.95 (e.g., Nunnally & Bernstein, 1994; DeVellis, 2003). According to guidelines by Cicchetti and Sparrow (1990), the level of clinical significance is *unacceptable* when the size of the coefficient alpha is below .70, the level of clinical significance is *fair* when it is between .70 and .79, the level of clinical significance is *good* when it is between .80 and .89 and the level of clinical significance is *excellent* when it is .90 and above. Reliability analysis done on the sample for this study indicated a *good* internal consistency in the QECF with Cronbach $\alpha = .87$ ($N = 45$). The internal consistency for every subscale in the QECF was also assessed, with alpha values ranging from .02 - .86 (see Table 4).

Table 4. *QECF Item content, mean scores, inter-rater reliability, and internal consistency for 45 youth.*

	M	SD	ICC
Preparation ($\alpha = .61$)	1.8	0.4	
<i>2.1 Use of psychoeducation</i>	2.6	0.5	.790
<i>2.2 Step plan as an anxiety hierarchy</i>	2.0	0.8	.927
<i>2.3 Addressing and ensuring gradual difficulty</i>	1.5	0.5	.915
<i>2.4 Discussion of the practical aspects of exposure</i>	2.0	0.7	.955
<i>2.5 Role play of exposure tasks in session</i>	1.0	0.2	1.0
Actual exposure ($\alpha = .02$)	1.7	0.4	
<i>2.6 Doing exposure tasks in session</i>	1.1	0.2	.905
<i>2.7 Doing exposure tasks at home</i>	2.4	0.8	.903
Post-processing about exposure ($\alpha = .86$)	1.7	0.6	
<i>2.9 Discussing what went well</i>	1.7	0.7	.894
<i>2.10 Discussing challenges</i>	1.5	0.6	.952
<i>2.11 Discussing what may be done differently</i>	1.9	0.8	.836
<i>2.12a Adjustment of the step plan</i>	1.6	0.7	.971
Collaboration/climate ($\alpha = .52$)	3.6	0.4	
<i>2.12b To what degree did the youth cooperate</i>	2.6	0.6	.805
<i>2.13 Use of reinforcement</i>	2.8	0.7	.873
<i>2.14 Avoidance in the youth *r</i>	4.3	0.7	.884
<i>2.15 Resistance *r</i>	4.8	0.5	.846
Parent contribution ($\alpha = .74$)	2.4	0.6	
<i>2.16 Involvement of parents in session</i>	2.4	0.7	.922
<i>2.17 Discussing the parents role in exposure tasks</i>	2.3	0.6	.746
Overall quality of the exposure component in session	2.3	0.7	.907
<i>2.18 Overall quality of the exposure component in session</i>			

Note. M = mean, SD = standard deviation, ICC = intraclass correlation coefficient. *r = reversed item.

7.2.3 Correlations between the QECF and subscales

Table 5 shows the correlations between the total QECF scores and each subscale measured by Pearson product-moment correlation coefficient. When inspecting the correlations, it appears that except from the total score, it is the *Preparation* subscale that is most strongly correlated with the other subscales.

Table 5. Correlation matrix for the QECF and subscales.

	Total QECF	Preparation	Actual exposure	Post-processing	Collaboration/climate	Parent involvement
Total QECF	1					
Preparation	.823**	1				
Actual exposure	.181	-.044	1			
Post-processing	.803**	.570**	.207	1		
Collaboration/climate	.413**	.349*	.108	.153	1	
Parent involvement	.538**	.299*	.073	.217	.160	1

Note. QECF = Quality of the Exposure Component Form. *Correlation is significant at the 0.01 level (two-tailed), **Correlation is significant at the 0.05 level (two-tailed).

7.3 Evaluating the predictive validity of the QECF

7.3.1 The overall quality of the exposure component and its relation to outcome

Three independent samples t-tests (two-tailed) were conducted to compare the mean quality of the exposure component, as measured by QECF, for those who lost and those who did not lose their primary and/or all diagnoses at post-treatment (T2) and at one-year follow-up (T3). The analyses indicated that there were no significant differences in exposure component quality between treatment responders and non-responders at either T2 or T3 ($p > .05$), see Table 6 for t-test results. Calculations of Cohen's d indicated zero to medium effect sizes (Cohen, 1988).

Table 6. Mean scores on the QECF for treatment responders and non-responders at post-treatment and at one-year follow-up.

Time Outcome	T2		T2		T3 ¹	
	Loss of pr. dx		Loss of all dx		Loss of all dx	
	Yes	No	Yes	No	Yes	No
N	27	18	21	24	19	16
Mean	2.3	2.3	2.3	2.3	2.4	2.2
SD	0.3	0.4	0.4	0.4	0.3	0.4
T-value	.251		.246		1.328	
Sig. ^a	.803		.807		.193	
Cohen's <i>d</i>	0.00		0.00		0.57	

Note. T2 = post-treatment, T3 = One-year follow-up. pr. dx = primary diagnosis, dx = diagnoses. SD = Standard deviation. ^aSig.-values < .05 were considered significant. ¹All who lost primary disorder at T3 also lost all disorders.

7.3.2 Assessing the importance of specific aspects of the exposure

component: group differences at subscale and item level

Differences in quality of the exposure component at subscale and item level were investigated between those who had and those who had not lost their primary and/or all diagnoses at T2 and T3. Independent samples t-tests (two-tailed) were conducted for each item (Q2.1 - 2.18) and each subscale (*Preparation, Actual exposure, Post-processing, Collaboration/Climate and Parent involvement*). There were no significant differences between responders and non-responders on specific items or subscales at either T2 or T3 ($p > .05$). See appendix C, Table C1, for an overview of the means and standard deviations from the t-test results.

7.3.3 Predicting treatment outcome

We wanted to investigate whether measured quality of the exposure component could predict treatment outcome, while controlling for age and gender. Prior to conducting logistic regression analyses, variance component analyses were done to investigate whether there were any therapist- or clinic-effect. The analyses were done to calculate the amount of variance in treatment outcome that were attributable to each therapist/clinic in the sample. The analyses showed that 3.0% of the variance in treatment outcome was attributable to the

different therapists. Further, the results suggested that 4.7% of the variance in outcome was attributable to the different clinics. This level of therapist- and clinic-variance is considered small (e.g., <25%; Guo, 2005), i.e., there were negligible nesting effects.

Logistic regressions (method: enter) were performed to assess the impact of the quality of exposure component, while controlling for age and gender, on the likelihood that youth would have lost their primary and/or all diagnoses at T2 and/or T3. Three models were developed, containing three independent variables (the quality of the exposure component, age, gender) and one dichotomous outcome variable (loss of primary diagnosis at T2, loss of all diagnoses at T2, loss of all diagnoses at T3). The models explained between 3.5-20.6% (Cox and Snell R square) and 4.7-27.5% (Nagelkerke R squared) of the variance in treatment outcome, and correctly classified between 57.8-77.1% of cases.

None of the models were statistically significant, indicating that they not were able to distinguish between youth who lost versus youth who did not lose their primary and/or all diagnoses at T2 and/or T3. The quality of the exposure component and gender did not make a unique statistically significant contribution to either of the models, with p-values above .05. However, youth age was a significant predictor of loss all anxiety disorders at one-year follow-up ($p = .032$) with younger youth showing increased odds for diagnosis loss, and the overall models approached significance ($p = .060$).

8 Discussion

The main purpose of this thesis was to examine 1) if the content of the exposure component in FRIENDS can be reliably assessed based on observations of CBT videotapes and 2) if the quality of the exposure component predicts diagnostic recovery in the ATACA-study. The following key findings emerged: Analysis of inter-rater reliability indicated good to excellent levels. Accordingly, the quality of the exposure content could be reliably assessed using the QECF. Further, the internal consistency reliability of the total QECF was good. However, on three subscales it was not (*Preparation, Actual exposure, Collaboration/Climate*). There were no significant differences between responders and non-responders in the quality of the exposure component, neither in overall quality, nor at subscale or at item level.

Treatment responders did not have significantly higher scores on items measuring post-processing, homework, rewards or parent contribution compared to non-responders, not in line with the findings from Tiwari and colleagues (2013) who found that post-processing was more important for outcome than preparation for exposure tasks. Further, none of the regression models predicting outcome from youth age, gender, and mean exposure quality were significant. However, youth age was a significant predictor of loss of all anxiety disorders at one-year follow-up, with younger youth showing increased odds for diagnosis loss. Because the overall model was non-significant, it cannot be concluded that youth age matters for the validity of exposure in predicting outcome. Nevertheless, the fact that this model approached significance ($p = .060$) implies that youth age may be a factor to consider in future studies of the predictive validity of exposure quality.

In the following, the reliability and validity of the QECF will be considered. Then the possible reasons for why the scores on QECF did not predict treatment outcome will be discussed. Lastly, strengths, implications, and thought on future research will be given.

8.1 Considerations of reliability and validity

8.1.1 Inter-rater reliability

The level of inter-rater agreement on the QECF was good to excellent. Thus, this form can be used to reliably rate the quality of the exposure component in FRIENDS. The high level of inter-rater agreement was achieved after a supervised practice period. According to DeVellis (2003), the underlying logic of using raters as indicators of reliability is that if the

scores from the raters' observations reflect properties of the latent variable then the raters should agree. Hence, it was assumed that the scores were similar because the same underlying construct was measured, i.e., the quality of the exposure component.

8.1.2 Internal consistency

The QECF is an adjusted version of Tiwari and colleagues' (2013) ESRF. In the ESRF the items are separated into subscales and these subscales comprise items assumed to measure the same aspect of the exposure component (e.g., Introductory activities, Processing the exposure task). However, as the QECF is a revised and newly developed version, the subscales have not yet been validated. Thus, when evaluating the internal consistency of the QECF subscales, it is important to keep in mind that some items have been removed, others replaced or reformulated in the revision process.

The low alpha values on *Preparation*, *Actual exposure* and *Collaboration/Climate* could be attributed to numerous factors, e.g., few items, limited variability, low frequency of item behavior, and/or heterogeneous constructs.

The *Actual exposure* subscale had particularly low internal consistency ($\alpha = .23$). When inspecting the correlation matrix, it was evident that this subscale correlated to a small degree with the total scale and other subscales, according to the criteria of Cohen (1988). This finding might be related to the fact that performing exposure tasks in sessions is not explicit content in the FRIENDS manual. Future studies should examine the factor structure of the QECF with a larger sample size and consider whether one or more of the subscales should be adjusted, replaced, or removed. In this thesis, a factor analysis was not conducted as the sample consisted of less than five youth per scale item (Field, 2009; Stevens, 2009).

8.1.3 Evaluation of the scale's validity

A consideration of the validity of the QECF is also relevant, that is, whether the items are able to adequately capture the quality of the exposure component. There are essentially three types of validity that should be considered; content validity, construct validity, and criterion-related validity.

Content validity

The question of content validity concerns the process of item sampling (DeVellis, 2003). In theory, the QECF has content validity if the items that constitute the scale are a chosen

subset from a universe of appropriate items (DeVellis, 2003). This type of validity can be achieved through different processes, e.g., by reviewing research literature and then evaluate whether all relevant exposure content is covered in the scale items. Another validation step is to ask a group of content experts to review the selected items with respect to the conceptual definition of the variable, as to investigate the representativeness of the items (Sterba et al., 2007). A third validation step is to have colleagues or researchers, familiar with the topic in question, review the initial list of items and suggest whether content areas might have been forgotten or perhaps if other areas should be included. We are not familiar with the detailed process of item sampling in the development of the QECF, as this was not conducted by us. However, when reviewing the research literature, which involve common procedures for delivering exposure based CBT, the QECF does cover the most central important elements with regard to the exposure component in CBT (e.g., preparation, development of an hierarchy, actual exposure, evaluation, the inclusion of parents; Ollendick & Hovey, 2009; Seligman & Ollendick, 2011; Woody & Ollendick, 2006). Thus, with regard to general CBT principles, the QECF can be considered to cover all aspects of the exposure component.

Another question is whether the form is adjusted well enough to fit FRIENDS specifically. In line with the manual, the therapists instruct youth to work on their step plan and confront fearful situations or stimuli outside of sessions, rather than in session. Thus, the item measuring performance of exposure tasks in session is probably not as relevant with regard to rating FRIENDS sessions.

In sum, the QECF is considered to have content validity, as it captures all aspects of the exposure component considered important in the research literature (e.g., Friedberg & McClure, 2002; Hollon & Beck, 2013; Seligman & Ollendick, 2011). However, there is room for further improvements for its use with FRIENDS specifically.

Construct validity

The construct validity of the QECF has yet to be established. Construct validity deals with the theoretical relationship of a variable (e.g., a mean score on the QECF) to other variables (Cronbach & Meehl, 1955). Put another way, construct validity concerns the extent to which the QECF “behaves” in the way that the quality of the exposure component in FRIENDS would be expected to behave, from a theoretical stand, with regard to established measures of other constructs (DeVellis, 2003). Future researchers could investigate how well the QECF correlates with other similar forms (e.g., ERSF; Tiwari et al., 2013), while being

different (e.g., lower correlations) from other forms (e.g., measures of alliance or cognitive restructuring).

Criterion-related validity

The question of whether QECF has criterion-related validity concerns the form's empirical association with a criterion; first and foremost, whether the QECF is actually measuring exposure quality. In this sense, it would have been interesting to have ratings of for instance the youths' report on the amount of exposure that was conducted, which the QECF could be examined against. Further evidence of criterion-related validity would be achieved if exposure could predict other variables, such as treatment outcome, which was attempted in this study. Criterion-related validity is also concerned with whether the QECF corresponds with an already established measure for exposure component quality (i.e., concurrent validity). We may question whether using the ESRF by Tiwari and colleagues (2013) on this sample would have yielded the same scores. Had it been the case, it would have given an indication of concurrent validity. Still, the problem is that the form needs to be adjusted to the manual at hand. Since there is no other scale available to measure the exposure component in FRIENDS, it would be difficult to assess the QECF's concurrent validity at this point.

In sum, we conclude that the QECF is a reliable measure, but there is still uncertainty with regard to its validity beyond content validity.

8.2 Why did exposure quality not predict outcome?

None of our hypotheses regarding the relation between exposure quality and outcome were supported. Treatment responders did not have significantly higher scores on the QECF than non-responders, neither at item nor at subscale level and the quality of the exposure component could not predict loss of primary and/or all anxiety diagnoses at post-treatment and at one-year follow-up. There may be several reasons why this was the case. These will be discussed below.

8.2.1 Is exposure as important as theory suggests?

One reason why exposure quality did not predict treatment outcome may be because exposure is not as important as theory suggests. It could be that the null hypothesis is actually correct, that exposure quality does not relate to treatment outcome. Approximately half of the

youth in the sample did lose their diagnoses despite of limited quality on the exposure component. Thus, other elements of treatment must have contributed to their recovery. Other researchers have found that some participants respond early in treatment, with reduction in anxiety symptoms prior to the introduction of exposure tasks, suggesting that other CBT elements and treatment factors are important for anxiety reduction as well (Chu et al., 2013; Peris et al., 2015). If exposure quality does not predict outcome, as indicated by our findings, these other CBT elements may be sufficient for recovery for many participants.

8.2.2 Methodological factors that may explain the null-findings

Another reason why exposure quality did not predict treatment outcome may be due to methodological factors such as limited variability and overall low scores on the QECF, and limitations to the data, such as a small sample size, and the research design. Each of these factors will be discussed in the following sections.

Limited variability and overall low scores on the QECF

Perhaps exposure quality did not predict treatment outcome due to limited variability in the data. This is visible when examining the average total score on the QECF, which was equal for responders and non-responders. Overall, the mean total score on the QECF was slightly above limited (2.3 out of 5), indicating that on average, the quality of the exposure component was low throughout the rated FRIENDS sessions. This score may be interpreted as to say that the different aspects of the exposure component were either not present at all, not sufficiently conducted, or not given enough attention in sessions. However, throughout the rating process, it became evident to us that it was somewhat difficult from the way the QECF is outlined, to separate frequency or presence of exposure component-behaviors from the quality of the exposure component. Other observation scales, such as Creed and Kendall's (2005) Therapist Alliance-Building Behavior Scale (TABBS), are divided into two parts; 1) measures of whether behavior happened and 2) measure of behavior quality. A revision of the QECF to a similar format seems beneficial and should be considered prior to future use.

Independent of whether the low scores are interpreted in terms of frequency and/or quality, the finding is consistent with previous research suggesting that exposure is underutilized in community clinics (Villabø, Cummings, Gere, Torgersen, & Kendall, 2013).

Limited variability due to the response format. Limited variability may also have been caused by the response format in the QECF. It is possible that the Likert scale was not

sensitive enough to detect group differences. It might be that the points on the Likert scale were too broad and that additional response options would be beneficial. Many items or sessions were rated as limited in quality. Even though some of them were better than others they were still not good enough to be rated as sufficient. Additional response options in the Likert scale could possibly increase the form's ability to detect nuances and small differences between the sessions and contribute to greater variance. However, a potential challenge with increasing the number of response options in the Likert scale is that it might be more difficult for raters to achieve adequate reliability.

The preliminary analyses indicated that the scores were normally distributed. However, a possible drawback to this scale is the risk of floor effects, which is a statistical phenomenon in which most data points fall in the very low range of possible values, with few mean scores extending across the higher range of the scale (Bordens & Abbott, 2005). Floor effects would limit the clinical utility of the ratings on the QECF if it were to hide the actual differences in quality.

Low scores due to non-relevant items. When examining the mean scores at subscale level, it is clear that the scores on *Post-processing* were generally low. With regard to this subscale, it should be noted that in approximately 40% of sessions (31/78), the therapist and youth had not reached the point in therapy where *Post-processing* would be relevant (e.g., the youth had not started on his/her step plan yet). In these sessions, the items on *Post-processing* were given a score of 1 (not present), even though a higher score could not be expected. This sets limitations to the subscale and will have influenced the full score. Thus, ratings of sessions later in the course of therapy would have been advantageous by offering us a chance to see whether post-processing did take place in these sessions. For convenience and practical reasons, we were not able to rate more than 80 videotapes and we were also interested in a selection of tapes that covered the different aspects of the exposure component. Thus, the ratings were based on a selection of tapes from different phases of the FRIENDS program. Yet, there is reason to believe that the scores on the QECF have somewhat been underestimated, as some items were not relevant for a considerable portion of the sample, and contributed to low scores and limited variability.

Low scores on Actual exposure due to limitations to the FRIENDS manual. It is possible that the low scores on exposure component quality is simply a consequence of how the FRIENDS manual is outlined and that higher scores could not be expected. A comparison of the FRIENDS and Coping Cat manuals support the assumption that there is limited use of session-based exposure in FRIENDS. In the Coping Cat manual, the second

half of therapy (sessions 6-12) is dedicated to exposure tasks, which are performed together with the therapist. In contrast, in the FRIENDS manual, there are no sessions dedicated solely to performing exposure tasks, though sessions 5-8 focus on a gradual approach to problems (Barrett, 2008). When examining the data, the mean score on the item measuring the performance of exposure tasks in session were particularly low. It is possible that the low scores were specific to this sample and that another sample of videotapes from the ATACA-study would have yielded different a mean score on this item. However, it should be noted that only one of fourteen therapists in the sample included exposure tasks in session. As we have rated sessions from 50% of the participants receiving ICBT, including all youth who gained full recovery, we do not expect that ratings of other ICBT session would have yielded different scores on this item. It is therefore plausible to suggest that lack of actual exposure in session is a limitation to FRIENDS rather than a limitation to this sample.

Even though both FRIENDS and Coping Cat were developed to treat anxiety disorders in youth, it is important to keep in mind that FRIENDS, after being evaluated in clinical settings, gradually developed into a universal prevention program for use in school settings (Farrell & Barrett, 2007; Neumer et al., 2011). Perhaps this is one of the reasons why the preparation aspect (e.g., psychoeducation) to a larger degree than exposure in session or at home is emphasized in FRIENDS (Barrett, 2008). In settings where FRIENDS is utilized for prevention purposes, the need for exposure is probably not as high as in treatment settings, assuming that the youth have not yet developed anxiety disorders. Nevertheless, it is evident that the amount of exposure in the FRIENDS sessions is smaller than in other CBT manuals (Barrett, 2008; Kendall, 1990). With this observation in mind, a relevant question is accordingly why this program was chosen in the ATACA-study, given other available treatment manuals such as the Coping Cat (Kendall, 1990), SMART (Neumer & Junge-Hoffmeister, 2010) or Chilled (Lyneham, Schniering, Wignall, & Rapee, 2006). However, the development of FRIENDS from a treatment program to a prevention program was completed in parallel with the ATACA-study that started in 2008. Perhaps another manual would have been chosen if the trial was initiated today.

Low scores due to unfortunate weighting of relaxation techniques. Another reason for the limited quality and/or frequency of exposure may be due to unfortunate weighting of session content. We wonder whether other treatment components were given more time than necessary at the expense of the exposure component. Voort and colleagues (2010) hypothesized that the more time therapists spent doing anxiety management strategies, the less time would be dedicated to exposure exercises, and as a result, patients would make less

improvement. Their research indicated that improvements in functioning was negatively related to the use of anxiety management strategies, and positively related to the use of exposures. Perhaps this finding from Voort and colleagues (2010) is somewhat transferable to the rated FRIENDS sessions, with regard to time spent on the emotion regulation component. The emotion regulation component in FRIENDS (i.e., *F-Feeling worried, R-Relax and feel good*), involves teaching youth physiological signs of emotions, recognizing these and practicing relaxation strategies (e.g., breathing exercises, muscle relaxation, relaxation imagery). Time spent on this component might have left less time to focus on exposure and consequently influenced the results.

Further, we wonder whether the focus on emotion regulation and relaxation techniques in particular, has compromised the effect of exposure tasks performed in- or outside of session. The use of relaxation techniques, are perhaps contradictory or conflicting to how exposure tasks reduce anxiety, according to theoretical models (e.g., Foa & Kozac, 1986; Craske et al., 2008). According to EPT, exposure works because it allows the youth to experience a natural decline in the fear response in the presence of a feared stimulus or in a feared situation. Relaxation could hinder that experience of a natural decline. Further, from an inhibitory learning perspective, teaching youth to relax during exposure goes against the idea of trying to tolerate it, as fear tolerance is considered more important than fear reduction in ILM (Abramowitz, 2013). This view is supported by other researchers, which suggest that acceptance of negative emotional states reduce longer-term distress (Eifert & Heffner, 2003). It has also been questioned whether relaxation provides short-term anxiety relief, yet not long-term relief, in form of new learning, and that relaxation during exposure may teach patients that mastery of fear is context-specific (e.g., *I can give a speech in class as long as I am relaxed*; Abramowitz, 2013). Knowing this, we might question whether the second step in FRIENDS (*R-Relax and feel good*) compromises the effect of the exposure tasks by not allowing the youth to experience that fear can be tolerated and that the level of anxiety will decline over time. Either way, the possibility that relaxation techniques may have compromised the effect of the exposure tasks, is difficult to investigate. We did not have the opportunity to explore whether or not youth used relaxation techniques during their exposure tasks, as they most often were conducted outside of session. Even if we had been able to obtain measures of out-of-session exposure, there is still an issue of how to create a research design that allows us to capture what is going on inside the youth's mind, as not all relaxation techniques will be observable.

Nevertheless, it is possible that relaxation must be taught and used in therapy for youth to be able to engage in exposure, without dropping out. Exposure might be considered as a more challenging part of therapy and should be recognized as such (Kendall et al., 2005). It follows, we do not suggest that the relaxation techniques are misplaced in FRIENDS, merely that it is a complicated aspect of therapy in general, both according to theories of anxiety reduction through exposure (e.g., ILM) and methodologically.

Low scores due to pitfalls with manual-based treatment. A further explanation of the low total scores on QECF, indicating low exposure component quality, may be that the therapists fell into some of the pitfalls associated with manual-based treatment. During the rating of videotapes, we got the impression that the therapists seemed stressed on time. When reviewing the manual, it is evident that there is a lot of material to cover in each session. If every task is to be completed, the allocated time may seem insufficient. Thus, we question whether this may have influenced how well the rationale for exposure was explained and consequently how it was conducted by the youth at home. Properly understanding the rationale for exposure has been linked to a more positive treatment outcome (Abramowitz, Franklin, Zoellner, & Dibernardo, 2002). We are aware that the research design does not allow us to answer these questions. Nevertheless, the therapists seemed tied to the manual (i.e., high degree of adherence). This observation is supported by Bjaastad and colleagues (2015) who reported therapist adherence in the ATACA-study, from which our sample was drawn. A consequence of being too tied to the manual is that the therapists may act more like teachers than therapists, creating more of an academic environment, and with less individual adaption to the particular youth. We wonder whether there could have been more room for flexibility, a point that has been stressed by other researchers and proponents of the use of manuals (e.g., Hamilton et al., 2008; Kendall et al., 1998; Wilson, 1998). As we did not rate the therapists' flexibility, these remarks should be considered with caution. The observations were prominent, however, and suggest that future studies of exposure quality should consider therapist flexibility in relation to manual use.

In sum, it is possible that treatment outcome could not be predicted due to limited variability in the data, and the scores on QECF were overall low, possibly due to various reasons that have been discussed. Further methodological reasons for our null-findings will be discussed below.

Further limitations in the data

It is possible that exposure quality did not predict treatment outcome due to other limitations in the data. First, the sample size may have been too small. A sufficient sample size is needed to be able to detect a difference of a given magnitude with a specified degree of confidence (DeVellis, 2003). Increasing the sample size can increase the probability of detecting such a difference. However, this was an exploratory study of the QECF and as video rating is extremely time consuming, we were not able to rate more than 80 videotapes. For this reason, the statistical power was maximized given the circumstances. We did not conduct a power analysis as we rated the largest number of tapes to coder capacity. In general, it is difficult to obtain large statistical power in this kind of study. Future observation studies should rely on larger coder teams to enable ratings of larger samples. Another possibility for future researchers would be to include alternative methods for measuring the quality of the exposure component, e.g., self-reports from youths and therapists, to increase the statistical power.

Second, the data were possibly weakened by the fact that only two out of ten sessions contributed to the scores on the QECF. The sessions were selected, as they are the main sessions where the concept of exposure is introduced and worked on according to the manual (Barrett, 2008). It is possible that other sessions also included aspects of the exposure component that we did not have the opportunity to rate. In addition, we cannot know what happened outside of therapy and if or how the feared situations were confronted as homework, as we were only able to rate the content of the 60-minute sessions. Thus, we might have missed relevant information, and following did not capture the true score of the quality of the exposure component. On this note, it would be of interest to develop a research design that allows for ratings of exposure happening both in- and outside of session.

Further, it should also be commented that the sample in the current study had a larger rate of treatment responders than the original ATACA-study sample (46.7% vs. 25.3%). The discrepancy might lead to questions concerning the representativeness and generalizability of findings. However, the aim was to try to differentiate between responders- and non-responders, thus we relied on equal groups with respect to the number of participants.

Lastly, as the ATACA study consisted of both ICBT and GCBT, a relevant question is why only a selection of ICBT-sessions was made for this thesis, and whether ratings from GCBT would have yielded different scores. However, the choice of only rating ICBT-sessions was made because it would have been difficult to assess the quality of the exposure component per youth in a group session, with each group consisting of six youth. Thus,

ICBT-sessions were considered to be able to provide the most accurate measures of the exposure component.

8.3 Strengths

There is limited research on the exposure component in CBT and the field is in need of more data. We have contributed to filling this gap by investigating whether the exposure component can be reliably measured. We attempted to do this with a newly developed form (QEFC) and started the process of evaluating its psychometric properties. This is the first study to our knowledge that has attempted to evaluate the exposure quality in FRIENDS. By rating videotapes, more insight is achieved concerning what goes on in therapy, compared to other research designs (e.g., self reports or interviews of therapists and clients).

A considerable strength of this study is that data were from a community clinic sample. Most treatment programs are both developed and studied in university clinics (Wergeland et al., 2014). However, as most youth are treated in community clinics, there is need of more research investigating the transportability of treatment programs from university to community clinics. There are evident challenges to delivering manual-based treatment programs in community settings (e.g., Weisz & Gray, 2008), thus studies are necessary to evaluate whether evidence-based treatment programs (e.g., FRIENDS, CHILD, SMART, Coping Cat) will be effective when regular therapists are treating youth in natural settings (Neumer et al., 2011).

Other strengths of this study are the reasonably large N for an observation study and the small number of missing data. The amount of missing data was probably minimized by the fact that we both gathered and plotted the data ourselves. Further, unlike set factors (e.g., gender, age, socioeconomic status), we investigated a predictor that can actually be targeted in treatment sessions, as therapists are able to influence the overall quality of the exposure component in therapy.

8.4 Implications

Findings from the current study have important scientific implications. First, the findings demonstrate that the QEFC can be used to measure the quality of the exposure component in sessions from FRIENDS. Second, the findings suggest that exposure quality was not related treatment outcome in the sample. Bearing in mind that a possible explanation for this may be the limited use of exposure in the rated sessions, this finding is of clinical importance,

considering the theoretical rationale of exposures in CBT and the large amount of literature that stress the importance of doing exposure (e.g., Beidel et al., 2000; Chorpita et al., 2002; Kazdin & Weisz, 1998; Kendall et al., 2005). Perhaps increasing the amount of exposure in session should be considered in future implementation of FRIENDS in treatment settings, with the hope that this will be positively related to treatment outcome.

Despite the lack of significant findings, we suggest that a form like the QECF can be considered as a tool for clinical guidance and/or for supervision purposes when exposure based treatments are offered in clinics in Norway. Even though outcome could not be predicted by the QECF it is a reliable instrument that can be used to assess the quality of exposure. Thus, the QECF can be used to both raise awareness about the importance of exposure and guide clinicians throughout the course of treatment.

8.5 Conclusion

The QECF scores did not predict diagnostic recovery, and this tells us that we are in need of another form or a revised version, unless we settle for the null hypothesis and choose to believe treatment outcome cannot be predicted from exposure quality. Based on previous literature and CBT theory, we believe there are methodological reasons for our null-findings, rather than that exposure quality does not matter for outcome. In this respect, rating of exposure outside of session, in addition to rating what happens in therapy, might be an important contribution. Further, perhaps future research should investigate whether an increase in the use of exposure both in- and outside sessions might be related to better treatment outcomes, as suggested by theory.

Following this thesis, we are hoping for more studies investigating treatment of anxiety in youth, especially with regard to the effect of manual-based CBT programs when implemented in Norwegian community clinics. Even though research has established CBT for anxiety disorders in youth as efficacious (Silverman, Pina, & Viswesvaran, 2008), there is still need for more research concerning the transportation of CBT programs into clinical practice (Neumer et al., 2011).

References

- Abramowitz, J. S. (2013). The Practice of Exposure Therapy: Relevance of Cognitive-Behavioral Theory and Extinction Theory. *Behavior Therapy, 44*(4), 548-558. doi: 10.1016/j.beth.2013.03.003
- Abramowitz, J. S., Deacon, B. J., & Whiteside, S. P. (2011). *Exposure therapy for anxiety: Principles and practice*. New York: Guilford Press.
- Abramowitz, J. S., Franklin, M. E., Zoellner, L. A., & Dibernardo, C. L. (2002). Treatment compliance and outcome in obsessive-compulsive disorder. *Behavior Modification, 26*(4), 447-463. doi: 10.1177/0145445502026004001
- Abramowitz, J. S., Lackey, G. R., & Wheaton, M. G. (2009). Obsessive-compulsive symptoms: The contribution of obsessional beliefs and experiential avoidance. *Journal of Anxiety Disorders, 23*(2), 160-166. doi: 10.1016/j.janxdis.2008.06.003
- Addis, M., Cardemil, E. V., Duncan, B. L., & Miller, S. D. (2006). Does manualization improve therapy outcomes? In J. C., Norcross, L. E. Beutler, & R. F. Levant (Eds.), *Evidence-based practices in mental health: Debate and dialogue on the fundamental questions*. (pp. 131-160). Washington, DC: American Psychological Association.
- Ahlen, J., Breitholtz, E., Barrett, P. M., & Gallegos, J. (2012). School-based prevention of anxiety and depression: A pilot study in Sweden. *Advances in School Mental Health Promotion, 5*(4), 246-257. doi: 10.1080/1754730X.2012.730352
- American Psychiatric Association. (1994). *Diagnostic and Statistical Manual of Mental Disorders (DSM-IV)* (4th ed.). Washington, D.C.: American Psychiatric Association.
- Arch, J. J., & Craske, M. G. (2011). Addressing relapse in cognitive behavioral therapy for panic disorder: Methods for optimizing long-term treatment outcomes. *Cognitive and Behavioral Practice, 18*(3), 306-315. doi: 10.1016/j.cbpra.2010.05.006
- Arendt, K., Thastum, M., & Hougaard, E. (2016). Efficacy of a Danish version of the Cool Kids program: a randomized wait-list controlled trial. *Acta Psychiatrica Scandinavica, 133*(2), 109-121. doi: 10.1111/acps.12448
- Bandura, A. (1978). Self-efficacy: Toward a unifying theory of behavioral change. *Advances in Behaviour Research and Therapy, 1*(4), 139-161. doi: 10.1016/0146-6402(78)90002-4
- Barlow, D. H., Levitt, J. T., & Bufka, L. F. (1999). The dissemination of empirically supported treatments: a view to the future. *Behavior Research and Therapy, 37*, 147-162. doi: 10.1016/S0005-7967(99)00054-6

- Barmish, A. J., & Kendall, P. C. (2005). Should Parents Be Co-Clients in Cognitive-Behavioral Therapy for Anxious Youth? *Journal of Clinical Child & Adolescent Psychology, 34*(3), 569-581. doi: 10.1207/s15374424jccp3403_12
- Barrett, P. M. (2004). *Friends for life - Group leader's manual* (4th ed.). Brisbane: Australian Academic Press.
- Barrett, P. M. (2008). *Friends for life (in Norwegian)*. Bergen: Innovest AS.
- Barrett, P. M., Dadds, M. R., & Rapee, R. M. (1991). Coping koala workbook. *Unpublished manuscript*.
- Barrett, P. M., Dadds, M. R., & Rapee, R. M. (1996). Family Treatment of Childhood Anxiety: A Controlled Trial. *Journal of Consulting and Clinical Psychology, 64*(2), 333-342. doi: 10.1037/0022-006X.64.2.333
- Barrett, P. M., Duffy, A. L., Dadds, M. R., & Rapee, R. M. (2001). Cognitive-behavioral treatment of anxiety disorders in children: Long-term (6-year) follow-up. *Journal of Consulting and Clinical Psychology, 69*(1), 135-141. doi: 10.1037//0022-006X.69.1.135
- Barrett, P. M., Farrell, L. J., Ollendick, T. H., & Dadds, M. R. (2006). Long-term outcomes of an Australian universal prevention trial of anxiety and depression symptoms in children and youth: an evaluation of the friends program. *Journal of clinical child and adolescent psychology, 35*(3), 403-411. doi: 10.1207/s15374424jccp3503_5
- Barrett, P. M., & Ryan, S. (2004). *Friends for Life: For Children*. Australian Academic Press.
- Barrett, P. M., Sonderegger, R., & Xenos, S. (2003). Using FRIENDS to combat anxiety and adjustment problems among young migrants to Australia: A national trial. *Clinical Child Psychology and Psychiatry, 8*(2), 241-260. doi: 10.1177/1359104503008002008
- Barrett, P. M., Turner, C. M., & Sonderegger, R. (2000). Childhood anxiety in ethnic families: Current status and future directions. *Behaviour Change, 17*(3), 113-123. doi: 10.1375/beh.17.3.113
- Bennett, D. A. (2001). How can I deal with missing data in my study? *Australian and New Zealand journal of public health, 25*(5), 464-469. doi: 10.1111/j.1467-842X.2001.tb.00294.x
- Bearman, S. K., & Weisz, J. R. (2012) Cognitive-Behavior Therapy - An Introduction. In E. Szigethy, J. R. Weisz, & R. L Findling (Eds.), *Cognitive-Behavioral Therapy for Children and Adolescents* (pp. 1-29). Washington, DC: American Psychiatric Publishing.
- Beck, A. T. (1976). *Cognitive therapy and the emotional disorders*. New York: International University Press.

- Beidas, R. S., Benjamin, C. L., Puleo, C. M., Edmunds, J. M., & Kendall, P. C. (2010). Flexible Applications of the Coping Cat Program for Anxious Youth. *Cognitive and Behavioral Practice, 17*(2), 142-153. doi: 10.1016/j.cbpra.2009.11.002
- Beidel, D. C., Turner, S. M., & Morris, T. L. (2000). Behavioral Treatment of Childhood Social Phobia. *Journal of Consulting and Clinical Psychology, 68*(6), 1072-1080. doi: 10.1037/0022-006X.68.6.1072
- Beidel, D. C., Turner, S. M., & Morris, T. L. (2000). Behavioral treatment of childhood social phobia. *Journal of consulting and clinical psychology, 68*(6), 1072-1080. doi: 10.1037//0022-006X.68.6.1072
- Benjamin, C. L., Harrison, J. P., Settapani, C. A., Brodman, D. M., & Kendall, P. C. (2013). Anxiety and Related Outcomes in Young Adults 7 to 19 Years After Receiving Treatment for Child Anxiety. *Journal of Consulting and Clinical Psychology, 81*(5), 865-876. doi: 10.1037/a0033048
- Berman, S. L., Weems, C. F., Silverman, W. K., & Kurtines, W. M. (2000). Predictors of outcome in exposure-based cognitive and behavioral treatments for phobic and anxiety disorders in children. *Behavior Therapy, 31*(4), 713-731. doi: 10.1016/S0005-7894(00)80040-4
- Berman, N. C., Wheaton, M. G., McGrath, P., & Abramowitz, J. S. (2010). Predicting anxiety: The role of experiential avoidance and anxiety sensitivity. *Journal of Anxiety Disorders, 24*(1), 109-113. doi: 10.1016/j.janxdis.2009.09.005
- Bjaastad, J. F., Haugland, B. S. M., Fjermestad, K. W., Torsheim, T., Havik, O. E., Heiervang, E. R., & Öst, L. G. (2015). Competence and Adherence Scale for Cognitive Behavioral Therapy (CAS-CBT) for Anxiety Disorders in Youth: Psychometric Properties. *Psychological Assessment*, No Pagination Specified. doi: 10.1037/pas0000230
- Bodden, D. H., Bögels, S. M., Nauta, M. H., De Haan, E., Ringrose, J., Appelboom, C., ... & Appelboom-Geerts, K. C. (2008). Child Versus Family Cognitive-Behavioral Therapy in Clinically Anxious Youth: An Efficacy and Partial Effectiveness Study. *Journal of the American Academy of Child & Adolescent Psychiatry, 47*(12), 1384-1394. doi: 10.1097/CHI.0b013e318189148e
- Bouchard, S., Mendlowitz, S. L., Coles, M. E., & Franklin, M. (2004). Considerations in the use of exposure with children. *Cognitive and Behavioral Practice, 11*(1), 56-65. doi: 10.1016/S1077-7229(04)80007-5
- Bouton, M. E. (2002). Context, ambiguity, and unlearning: Sources of relapse after behavioral extinction. *Biological Psychiatry, 52*(10), 976-986. doi: 10.1016/S0006-3223(02)01546-9

- Bouton, M. E., & King, D. A. (1983). Contextual control of the extinction of conditioned fear: tests for the associative value of the context. *Journal of Experimental psychology: Animal Behavior processes*, *9*(3), 248–265. doi: 10.1037/0097-7403.9.3.248
- Bordens, K. S., & Abbott, B. B. (2005). *Research and design methods: a process approach* (6th ed.). Boston: McGraw Hill.
- Bordin, E. S. (1979). The generalizability of the psychoanalytic concept of the working alliance. *Psychotherapy: Theory, Research & Practice*, *16*(3), 252-260. doi: 10.1037/h0085885
- Brady, E. U., & Kendall, P. C. (1992). Comorbidity of anxiety and depression in children and adolescents. *Psychological Bulletin*, *111*(2), 244-255. doi: 10.1037/0033-2909.111.2.244
- Carr, A. (2006). *The handbook of child and adolescent clinical psychology: a contextual approach*. London: Routledge.
- Cartwright-Hatton, S., Roberts, C., Chitsabesan, P., Fothergill, C., & Harrington, R. (2004). Systematic review of the efficacy of cognitive behaviour therapies for childhood and adolescent anxiety disorders. *British Journal of clinical psychology*, *43*(4), 421-436. doi: 10.1348/0144665042388928
- Chavira, D. A., Stein, M. B., Bailey, K., & Stein, M. T. (2004). Child anxiety in primary care: Prevalent but untreated. *Depression and anxiety*, *20*(4), 155-164. Doi: 10.1002/da.20039
- Chorpita, B. F., Yim, L. M., Donkervoet, J. C., Arensdorf, A., Amundsen, M. J., McGee, C., ... & Morelli, P. (2002). Toward Large-Scale Implementation of Empirically Supported Treatments for Children: A Review and Observations by the Hawaii Empirical Basis to Services Task Force. *Clinical Psychology: Science and Practice*, *9*(2), 165-190. doi: 10.1111/j.1468-2850.2002.tb00504.x
- Chu, B. C., Choudhury, M. S., Shortt, A. L., Pincus, D. B., Creed, T. A., & Kendall, P. C. (2004). Alliance, Technology, and Outcome in the Treatment of Anxious Youth. *Cognitive and Behavioral Practice*, *11*(1), 44-55. doi: 10.1016/S1077-7229(04)80006-3
- Chu, B. C., Skriner, L. C., & Zandberg, L. J. (2013). Shape of Change in Cognitive Behavioral Therapy for Youth Anxiety: Symptom Trajectory and Predictors of Change. *Journal of Consulting and Clinical Psychology*, *81*(4), 573-587. doi: 10.1037/a0033390
- Cicchetti, D. V. (1994). Guidelines, criteria, and rules of thumb for evaluating normed and standardized assessment instruments in psychology. *Psychological assessment*, *6*(4), 284-290. doi: 10.1037/1040-3590.6.4.284
- Cicchetti, D. V., & Sparrow, S. S. (1990). Assessment of adaptive behavior in young children. In J. H. Johnson & J. Goldman (Eds.), *Developmental assessment in clinical child psychology: A handbook* (pp. 173-196). Elmsford, NY: Pergamon Press.

- Clark, D. M. (1999). Anxiety disorders: why they persist and how to treat them. *Behavior Research and Therapy*, 37, 5-27. doi: 10.1016/S0005-7967(99)00048-0
- Clerkin, E. M., Teachman, B. A., & Smith-Janik, S. B. (2008). Sudden gains in group cognitive-behavioral therapy for panic disorder. *Behaviour Research and Therapy*, 46(11), 1244-1250. doi: 10.1016/j.brat.2008.08.002
- Cohen, J. (1988). *Statistical power analysis for the behavioral sciences*. Hillsdale, N. J: Laurence Erlbaum.
- Cohen, J. (1992). A power primer. *Psychological Bulletin*, 112(1), 155-159. doi: 10.1037/0033-2909.112.1.155
- Costello, E. J., Mustillo, S., Keeler, G., & Angold, A. (2004). Prevalence of Psychiatric disorders in children and adolescents. In B. Levine, J. Petrila, & K. Hennessey (Eds.), *Mental health services: A public health perspective* (pp. 111-128). New York: Oxford University Press.
- Craske, M. G., Kircanski, K., Zelikowsky, M., Mystkowski, J., Chowdhury, N., & Baker, A. (2008). Optimizing inhibitory learning during exposure therapy. *Behaviour Research and Therapy*, 46(1), 5-27. doi: 10.1016/j.brat.2007.10.003
- Creed, T. A., & Kendall, P. C. (2005). Therapist alliance-building behavior within a cognitive-behavioral treatment for anxiety in youth. *Journal of consulting and clinical psychology*, 73(3), 498-505. doi: 10.1037/0022-006X.73.3.498
- Cronbach, L. J. (1951). Coefficient alpha and the internal structure of tests. *Psychometrika*, 16(3), 297-334. doi: 10.1007/BF02310555
- Cronbach, L. J., & Meehl, P. E. (1955). Construct validity in psychological tests. *Psychological Bulletin*, 52(4), 281-302. doi: 10.1037/h0040957
- Dadds, M. R., Spence, S. H., Holland, D. E., Barrett, P. M., & Laurens, K. R. (1997). Prevention and early intervention for anxiety disorders: a controlled trial. *Journal of Consulting and Clinical Psychology*, 65(4), 627-635. doi: 10.1037/0022-006X.65.4.627
- Deacon, B. J. & Abramowitz, J. S., (2004). Cognitive and behavioral treatments for anxiety disorders: A review of meta-analytic findings. *Journal of Clinical Psychology*, 60(4), 429-441. doi: 10.1002/jclp.10255
- DeVellis, R. F. (2003). *Scale development: theory and applications*. Thousand Oaks, Calif: Sage.
- Dierker, L. C., Albano, A. M., Clarke, G. N., Heimberg, R. G., Kendall, P. C., Merikangas, K. R., ... & Kupfer, D. J. (2001). Screening for Anxiety and Depression in Early Adolescence. *Journal of the American Academy of Child & Adolescent Psychiatry*, 40(8), 929-936. doi: 10.1097/00004583-200108000-00015

- Digiuseppe, R., Linscott, J., & Jilton, R. (1996). Developing the therapeutic alliance in child-adolescent psychotherapy. *Applied and Preventive Psychology, 5*(2), 85-100. doi: 10.1016/S0962-1849(96)80002-3
- Durlak, J. A., Fuhrman, T., & Lampman, C. (1991). Effectiveness of cognitive-behavior therapy for maladapting children: A meta-analysis. *Psychological Bulletin, 110*(2), 204-214. doi: 10.1037/0033-2909.110.2.204
- Eifert, G. H., & Heffner, M. (2003). The effects of acceptance versus control contexts on avoidance of panic-related symptoms. *Journal of Behavior Therapy and Experimental Psychiatry, 34*(3), 293-312. doi: 10.1016/j.jbtep.2003.11.001
- Emmelkamp, P. M. G. (2013). Behavior Therapy With Adults. In M. J. Lambert (Ed.), *Bergin and Garfield's handbook of psychotherapy and behavior change* (6th ed., pp. 343-392). New Jersey: John Wiley & Sons.
- Farrell, L. J., & Barrett, P. M. (2007). Prevention of childhood emotional disorders: Reducing the burden of suffering associated with anxiety and depression. *Child and Adolescent Mental Health, 12*(2), 58-65. doi: 10.1111/j.1475-3588.2006.00430.x
- Field, A. (2009). *Discovering statistics using SPSS*. London, UK: Sage.
- Fjermestad, K. W. (2012). *The therapeutic alliance in cognitive behavioral therapy for youth anxiety disorders*. Doctoral Dissertation, University of Bergen, Bergen, Norway.
- Fjermestad, K. W., McLeod, B. D., Heiervang, E. R., Havik, O. E., Öst, L. G., & Haugland, B. S. (2012). Factor structure and validity of the therapy process observational coding system for child psychotherapy–alliance scale. *Journal of Clinical Child & Adolescent Psychology, 41*(2), 246-254. doi: 10.1080/15374416.2012.651999
- Fleiss, J. L. (1981). *Statistical methods for rates and proportions*. New York, NY: John Wiley.
- Foa, E. B., & Kozak, M. J. (1986). Emotional processing of fear: Exposure to corrective information. *Psychological Bulletin, 99*(1), 20-35. doi: 10.1037/0033-2909.99.1.20
- Foa, E. B., & McNally, R. J. (1996). Mechanisms of change in exposure therapy. In R. M. Rapee (Ed.), *Current controversies in the anxiety disorders* (pp. 329–343). New York: Guilford Press.
- Forsyth, J. P., Eifert, G. H., & Barrios, V. (2006). Fear conditioning in an emotion regulation context: A fresh perspective on the origins of anxiety disorders. In D. Hermans, D. Vansteenwegen, & M. G. Craske (Eds.), *Fear and learning: From basic processes to clinical implications* (pp. 133-153). Washington, DC: American Psychological Association.

- Friedberg, R. D., & Gorman, A. (2007). Integrating Psychotherapeutic Processes with Cognitive Behavioral Procedures. *On the Cutting Edge of Modern Developments in Psychotherapy*, 37(3), 185-193. doi: 10.1007/s10879-007-9053-1
- Friedberg, R. D., & McClure, J. M. (2002). *Clinical Practice of Cognitive Therapy with Children and Adolescents: The Nuts and Bolts*. New York: Guilford Press.
- Ginsburg, G. S., & Drake, K. L. (2002). School-Based Treatment for Anxious African-American Adolescents: A Controlled Pilot Study. *Journal of the American Academy of Child & Adolescent Psychiatry*, 41(7), 768-775. doi: 10.1097/00004583-200207000-00007
- Glenn, D., Golinelli, D., Rose, R. D., Roy-Byrne, P., Stein, M. B., Sullivan, G., ... & Craske, M. G. (2013). Who gets the most out of cognitive behavioral therapy for anxiety disorders? The role of treatment dose and patient engagement. *Journal of Consulting and Clinical Psychology*, 81(4), 639-649. doi: 10.1037/a0033403
- Gosch, E. A., Flannery-Schroeder, E., Mauro, C. F., & Compton, S. N. (2006). Principles of Cognitive-Behavioral Therapy for Anxiety Disorders in Children. *Journal of Cognitive Psychotherapy*, 20(3), 247-262. doi: 10.1891/jcop.20.3.247
- Grave, J., & Blissett, J. (2004). Is cognitive behavior therapy developmentally appropriate for young children? A critical review of the evidence. *Clinical psychology review*, 24(4), 399-420. doi: 10.1016/j.cpr.2004.03.002
- Grova, B. (2007). Kognitive metoder i terapi med barn og ungdom. In H. Øvreeide, & H. Haavind (Eds.), *Barn og unge i psykoterapi* (1st. ed., pp. 196-222). Oslo: Gyldendal Akademisk.
- Gryczkowski, M. R., Tiede, M. S., Dammann, J. E., Jacobsen, A. B., Hale, L. R., & Whiteside, S. P. (2013). The Timing of Exposure in Clinic-Based Treatment for Childhood Anxiety Disorders. *Behavior Modification*, 37(1), 113-127. doi: 10.1177/0145445512456546
- Guo, S. (2005). Analyzing grouped data with hierarchical linear modeling. *Children and Youth Services Review*, 27(6), 637-652. doi: 10.1016/j.childyouth.2004.11.017
- Hamilton, J. D., Kendall, P. C., Gosch, E., Furr, J. M., & Sood, E. (2008). Flexibility within fidelity. *Journal of the American Academy of Child & Adolescent Psychiatry*, 47(9), 987-993. doi: 10.1097/CHI.ObO13e31817eed2f
- Haugland, B. S. M. (2011). En utviklings sensitiv tilnærming til kognitiv atferdsterapi med barn og ungdom. *Tidsskrift for Norsk psykologforening*, 48 (1), 4-11.
- Hedtke, K. A., Kendall, P. C., & Tiwari, S. (2009). Safety-seeking and coping behavior during exposure tasks with anxious youth. *Journal of Clinical Child & Adolescent Psychology*, 38(1), 1-15. doi: 10.1080/15374410802581055

- Hipol, L. J., & Deacon, B. J. (2013). Dissemination of Evidence-Based Practices for Anxiety Disorders in Wyoming A Survey of Practicing Psychotherapists. *Behavior Modification*, 37(2), 170-188. Doi: 10.1177/0145445512458794
- Hofmann, S., Asnaani, A., Vonk, I. J., Sawyer, A. T., & Fang, A. (2012). The Efficacy of Cognitive Behavioral Therapy: A Review of Meta-analyses. *Cognitive Therapy and Research*, 36(5), 427-440. doi:10.1007/s10608-012-9476-1
- Hollon, S. D., & Beck, A. T. (2013). Cognitive and cognitive behavioral therapies. In M. J. Lambert (Ed.), *Bergin and Garfield's Handbook of Psychotherapy and Behavioral Change* (6 ed., pp. 393-442). New York: Wiley.
- Hudson, J. L., Rapee, R. M., Lyneham, H. J., McLellan, L. F., Wuthrich, V. M., & Schniering, C. A. (2015). Comparing outcomes for children with different anxiety disorders following cognitive behavioural therapy. *Behaviour Research and Therapy*, 72, 30-37. doi: 10.1016/j.brat.2015.06.007
- Hughes, A. A., & Kendall, P. C. (2007). Prediction of Cognitive Behavior Treatment Outcome for Children with Anxiety Disorders: Therapeutic Relationship and Homework Compliance. *Behavioural Cognitive Psychotherapy* 35(4), 487-494. doi: 10.1017/S1352465807003761
- Iizuka, A. C., Barrett, P. M., & Morris, K. (2013). Anxiety Prevention in School, Children and Adolescents: The FRIENDS Program. In C. A. Essau, & T. H. Ollendick (Ed.), *The Wiley-Blackwell Handbook of the Treatment of Childhood and Adolescent Anxiety* (pp. 519-543). Chichester, West Sussex, UK: John Wiley and Sons, Ltd.
- In-Albon, T., & Schneider, S. (2007). Psychotherapy of childhood anxiety disorders: a meta-analysis. *Psychotherapy and psychosomatics*, 76(1), 15-24. doi: 10.1159/000096361
- Jaccard, J., Guliamo-Ramos, V., Johanson, M., & Bouris, A. (2006). Multiple regression analyses in clinical child and adolescent psychology. *Journal of Clinical Child and Adolescent Psychology*, 35, 456-479. doi: 10.1207/s15374424jccp3503_11
- James, A. C., James, G., Cowdrey, F. A., Soler, A., & Choke, A. (2013). Cognitive behavioural therapy for anxiety disorders in children and adolescents. *Cochrane Database Systematic Reviews*, 6. doi: 10.1002/14651858.CD004690.pub3.
- Kazantzis, N., Deane, F. P., & Ronan, K. R. (2000). Homework Assignments in Cognitive and Behavioral Therapy: A Meta-Analysis. *Clinical Psychology: Science and Practice*, 7(2), 189-202. doi: 10.1093/clipsy.7.2.189
- Kazdin, A. E. (2000). *Encyclopedia of Psychology: 8-Volum Set*. New York: Oxford University Press/American Psychological Association

- Kazdin, A. E. (2004). Psychotherapy for children and adolescents. In M. J. Lambert (Ed.), *Bergin and Garfield's handbook of psychotherapy and behavior change* (5th ed., pp.543-589). New York: Wiley.
- Kazdin, A. E., & Weisz, J. R. (1998). Identifying and developing empirically supported child and adolescent treatments. *Journal of consulting and clinical psychology, 66*(1), 19-36. doi: 10.1037/0022-006X.66.1.19
- Kazdin, A. E., Whitley, M., & Marciano, P. L. (2006). Child-Therapist and Parent-Therapist Alliance and Therapeutic Change in the Treatment of Children Referred for Oppositional, Aggressive, and Antisocial Behavior. *Journal of Child Psychology and Psychiatry, 47*(5), 436-445. doi: 10.1111/j.1469-7610.2005.01475.x
- Kendall, P. C. (1990). Coping Cat manual. Ardmore, PA: Workbook Publishing.
- Kendall, P. C. (1994). Treating anxiety disorders in children: results of a randomized clinical trial. *Journal of consulting and clinical psychology, 62*(1), 100-110. doi: 10.1037/0022-006X.62.1.100
- Kendall, P. C. (2006). Coping cat workbook: Workbook Pub.
- Kendall, P. C., Chu, B., Gifford, A., Hayes, C., & Nauta, M. (1998). Breathing life into a manual: Flexibility and creativity with manual-based treatments. *Cognitive and Behavioral Practice, 5*(2), 177-198. doi: 10.1016/S1077-7229(98)80004-7
- Kendall, P. C., Comer, J. S., Marker, C. D., Creed, T. A., Puliafico, A. C., Hughes, A. A., ... & Hudson, J. (2009). In-session exposure tasks and therapeutic alliance across the treatment of childhood anxiety disorders. *Journal of Consulting and Clinical Psychology, 77*(3), 517-525. doi: 10.1037/a0013686
- Kendall, P. C., Flannery-Schroeder, E., Panichelli-Mindel, S. M., Southam-Gerow, M., Henin, A., & Warman, M. (1997). Therapy for youths with anxiety disorders: A second randomized clinical trial. *Journal of consulting and clinical psychology, 65*(3), 366-380. doi: 10.1037/0022
- Kendall, P. C., Furr, J. M., & Podell, J. L. (2010). Child-focused treatment of anxiety. In J. R. Weisz, & A. E. Kazdin (Eds.), *Evidence-based psychotherapies for children and adolescents* (2 ed., pp. 45-60). New York: Guilford Press.
- Kendall, P. C., Hudson, J. L., Gosch, E., Flannery-Schroeder, E., & Suveg, C. (2008). Cognitive-behavioral therapy for anxiety disordered youth: a randomized clinical trial evaluating child and family modalities. *Journal of consulting and clinical psychology, 76*(2), 282-297. doi: 10.1037/0022-006X.76.2.282
- Kendall, P. C., Martinsen, K. D., & Neumer, S. (2006a). Mestringskatten: Kognitiv atferdsterapi for barn med angst. Arbeidsbok: Oslo: Universitetsforlaget.

- Kendall, P. C., Martinsen, K., & Neumer, S. (2006b). *Mestringskatten: Kognitiv atferdsterapi for barn med angst terapeutmanual*: Oslo: Universitetsforlaget.
- Kendall, P. C., Robin, J. A., Hedtke, K. A., Suveg, C., Flannery-Schroeder, E., & Gosch, E. A. (2005). Considering CBT with Anxious Youth? Think Exposures. *Cognitive and Behavioral Practice, 12*(1), 136-148. doi: 10.1016/S1077-7229(05)80048-3
- Kendall, P. C., Safford, S., Flannery-Schroeder, E., & Webb, A. (2004). Child Anxiety Treatment: Outcomes in Adolescence and Impact on Substance Use and Depression at 7.4-Year Follow-Up. *Journal of Consulting and Clinical Psychology, 72*(2), 276-287. doi: 10.1037/0022-006X.72.2.276
- Kendall, P. C., & Southam-Gerow, M. A. (1996). Long-Term Follow-Up of a Cognitive-Behavioral Therapy for Anxiety-Disordered Youth. *Journal of Consulting and Clinical Psychology, 64*(4), 724-730. doi: 10.1037/0022-006X.64.4.724
- Kendall, P. C., & Sugarman, A. (1997). Attrition in the treatment of childhood anxiety disorders. *Journal of Consulting and Clinical Psychology, 65*(5), 883-888. doi: 10.1037/0022-006X.65.5.883
- King, N. J., Heyne, D., & Ollendick, T. H. (2005). Cognitive-Behavioral Treatments for Anxiety and Phobic Disorders in Children and Adolescents: A Review. *Behavioral Disorders, 30*(3), 241-257. Retrieved April 09, 2016, from <http://search.proquest.com/docview/219675337?accountid=14699>
- Landis, J. R., & Koch, G. G. (1977). The measurement of observer agreement for categorical data. *Biometrics, 33*(1), 159-174. doi: 10.2307/2529310
- Lang, P. J. (1971). The application of psychophysiological methods to the study of psychotherapy and behavior modification. In A. E. Bergin, & S. L. Garfield (Eds.), *Handbook of psychotherapy and behaviour change: an empirical analysis*. (pp. 75-125). New York: Wiley.
- Lau, W. Y., Chan, C. K. Y., Li, J. C. H., & Au, T. K. F. (2010). Effectiveness of group cognitive-behavioral treatment for childhood anxiety in community clinics. *Behaviour Research and Therapy, 48*(11), 1067-1077. doi: 10.1016/j.brat.2010.07.007
- Layne, A. E., Bernstein, G. A., Egan, E. A., & Kushner, M. G. (2003). Predictors of Treatment Response in Anxious-Depressed Adolescents With School Refusal. *Journal of the American Academy of Child & Adolescent Psychiatry, 42*(3), 319-326. doi: 10.1097/00004583-200303000-00012

- Lock, S., & Barrett, P. M. (2003). A longitudinal study of developmental differences in universal preventive intervention for child anxiety. *Behaviour Change*, 20(4), 183-199. doi: 10.1375/behc.20.4.183.29383
- Lowry-Webster, H. M., Barrett, P. M., & Dadds, M. R. (2001). A universal prevention trial of anxiety and depressive symptomatology in childhood: Preliminary data from an Australian study. *Behaviour Change*, 18(01), 36-50. doi: 10.1375/behc.18.1.36
- Lowry-Webster, H. M., Barrett, P. M., & Lock, S. (2003). A universal prevention trial of anxiety symptomatology during childhood: Results at 1-year follow-up. *Behaviour change*, 20(01), 25-43. doi: 10.1375/behc.20.1.25.24843
- Lyneham, H. J., Abbott, M. J., & Rapee, R. M. (2007). Interrater reliability of the Anxiety Disorders Interview Schedule for DSM-IV: child and parent version. *Journal of the American Academy of Child & Adolescent Psychiatry*, 46(6), 731-736. doi: 10.1097/chi.0b013e3180465a09
- Lyneham, H.J., Schniering, C.A., Wignall, A., & Rapee, R. M. (2006). The Cool Kids Anxiety Program – Adolescent Workbook. Centre for Emotional Health, Macquarie University: Sydney.
- Maggin, D. M., & Johnson, A. H. (2014). A meta-analytic evaluation of the FRIENDS program for preventing anxiety in student populations. *Education and Treatment of Children*, 37(2), 277-306. doi: 10.1353/etc.2014.0018
- McLean, C. P., & Anderson, E. R. (2009). Brave men and timid women? A review of the gender differences in fear and anxiety. *Clinical psychology review*, 29(6), 496-505. doi: 10.1016/j.cpr.2009.05.003
- McLeod, B. D., & Weisz, J. R. (2005). The therapy process observational coding system-alliance scale: measure characteristics and prediction of outcome in usual clinical practice. *Journal of Consulting and Clinical Psychology*, 73(2), 323-333. doi: 10.1037/0022-006X.73.2.323
- Merikangas, K. R., & Avenevoli, S. (2002). Epidemiology of mood and anxiety disorders in children and adolescents. In M. T. Tsuang, & M. Tohen (Eds.), *Textbook in psychiatric epidemiology* (2th ed., pp. 657-704). New York: Wiley-Liss.
- Moncher, F. J., & Prinz, R. J. (1991). Treatment fidelity in outcome studies. *Clinical Psychology Review*, 11(3), 247-266. doi:10.1016/0272-7358(91)90103-2
- Moras, K. (1993). The use of treatment manuals to train psychotherapists: Observations and recommendations. *Psychotherapy: Theory, Research, Practice, Training*, 30(4), 581-586. doi: 10.1037/0033-3204.30.4.581
- Nauta, M. H., Scholing, A., Emmelkamp, P. M., & Minderaa, R. B. (2003). Cognitive-behavioral therapy for children with anxiety disorders in a clinical setting: No additional effect of a

- cognitive parent training. *Journal of the American Academy of Child & Adolescent Psychiatry*, 42(11), 1270-1278. doi:10.1097/01.chi.0000085752.71002.93
- Neumer, S. -P., Junge-Hoffmeister, J. (2010). *SMART. Forebygging av emosjonelle problemer hos ungdom. Veileder*. Oslo: Kommuneforlaget.
- Neumer, S. -P., Martinsen, K. D., Gere, M., & Villabø, M. A. (2011). Kognitiv-atferdsterapeutiske programmer i klinikk: Utfordringer og muligheter. *Tidsskrift for Norsk Psykologforening*, 48(1), 21-25.
- NICE (2013). Clinical guidelines for children and young people with social anxiety disorder. Retrieved April 09, 2016, from <https://www.nice.org.uk/guidance/cg159/chapter/1-Recommendations#interventions-for-children-and-young-people-with-social-anxiety-disorder-2>
- NICE (2014). Quality standard for anxiety disorder. Retrieved April 09, 2016, from <https://www.nice.org.uk/guidance/qs53/chapter/Quality-statement-2-Psychological-interventions>
- Norton, P. J., Klenck, S. C., & Barrera, T. L. (2010). Sudden gains during cognitive-behavioral group therapy for anxiety disorders. *Journal of anxiety disorders*, 24(8), 887-892. doi: 10.1016/j.janxdis.2010.06.012
- Norwegian Board of Health (2000). *Angstlidelser - kliniske retningslinjer for utredning og behandling* (utredningsserie 4-99). Retrieved April 09, 2016, from https://www.helsetilsynet.no/upload/Publikasjoner/utredningsserien/angstlidelser_utredning_behandling_ik-2694.pdf
- Norwegian Research Council (03.12.2013). *Barn møter egen angst i ny behandling*. Retrieved April 09, 2016, from http://www.forskningsradet.no/no/Nyheter/Barn_moter_egen_angst_i_ny_behandling/1253990854510
- Nunnally, J. C., & Bernstein, I. H. (1994). *Psychometric theory* (3rd ed.). New York: McGraw-Hill.
- O'Connor, T., & Creswell, C. (2005). Cognitive Behavioural Therapy in Developmental Perspective. In P. J. Gramham (Ed.), *Cognitive behaviour therapy for children and families*. (pp. 25-47). Cambridge: Cambridge University Press.
- Olatunji, B. O., Cisler, J. M., & Deacon, B. J. (2010). Efficacy of cognitive behavioral therapy for anxiety disorders: a review of meta-analytic findings. *Psychiatric Clinics of North America*, 33(3), 557-577. doi: 10.1016/j.psc.2010.04.002

- Ollendick, T. H., & King, N. J. (1998). Empirically supported treatments for children with phobic and anxiety disorders: Current status. *Journal of Clinical Child Psychology, 27*(2), 156-167. doi: 10.1207/s15374424jccp2702_3
- Ollendick, T. H., King, N. J., & Chorpita B. F. (2006). Empirically supported treatments for children and adolescents. In P. C. Kendall (Ed.), *Child and adolescent therapy: cognitive-behavioral procedures* (3rd ed., pp. 492-520). New York: Guilford Press.
- Ollendick, T. H., & Hovey, L. D. (2009). Competencies for treating phobic and anxiety disorders in children and adolescents. In J. Thomas, & M. Hersen (Eds.), *Handbook of clinical psychology competencies*. (pp. 1219–1244) New York: Springer.
- Ollendick, T. H., Jarrett, M. A., Grills-Taquechel, A. E., Hovey, L. D., & Wolff, J. C. (2008). Comorbidity as a predictor and moderator of treatment outcome in youth with anxiety, affective, attention deficit/hyperactivity disorder, and oppositional/conduct disorders. *Clinical Psychology Review, 28*(8), 1447-1471. doi: 10.1016/j.cpr.2008.09.003
- Ollendick, T. H., Öst, L. G., Reuterskiöld, L., & Costa, N. (2010). Comorbidity in youth with specific phobias: Impact of comorbidity on treatment outcome and the impact of treatment on comorbid disorders. *Behaviour research and therapy, 48*(9), 827-831. doi: 10.1016/j.brat.2010.05.024
- O'Neil, K., Brodman, D. M., Cohen, J. S., Edmunds, J. M., & Kendall, P. C. (2012). Childhood Anxiety Disorders. In E. Szigethy, J. R., Weisz, & R. L. Findling (Eds.), *Cognitive-behavior therapy for Children and Adolescents* (pp. 227-263). Washington, DC: American Psychiatric Publishing.
- Orsillo, S. M., Roemer, L., Lerner, J. B., & Tull, M. T. (2004). Acceptance, mindfulness, and cognitive-behavioral therapy: Comparisons, contrasts, and application to anxiety. Mindfulness and acceptance: Expanding the cognitive-behavioral tradition. In S. C. Hayes, & V. M. Linehan. (Eds.), *Mindfulness and acceptance: Expanding the cognitive-behavioral tradition* (pp. 66-95). New York, NY: Guilford Press.
- Perepletchikova, F., & Kazdin, A. E. (2005). Treatment integrity and therapeutic change: issues and research recommendations. *Clinical Psychology: Science and Practice, 12*(4), 365-383. doi: 10.1093/clipsy.bpi045.
- Peris, T. S., Compton, S. N., Kendall, P. C., Birmaher, B., Sherrill, J., March, J., ... & Keeton, C. P. (2015). Trajectories of change in youth anxiety during cognitive—behavior therapy. *Journal of consulting and clinical psychology, 83*(2), 239-252. doi: 10.1037/a0038402

- Peterman, J. S., Read, K. L., Wei, C., & Kendall, P. C. (2015). The art of exposure: putting science into practice. *Cognitive and behavioral practice*, 22(3), 379-392. doi: 10.1016/j.cbpra.2014.02.003
- Piacentini, J. C., Peris, T. S., March, J. S., & Franklin, M. E. (2011). Obsessive-Compulsive Disorder. In P. C. Kendall (Ed.), *Child and adolescent therapy: Cognitive-behavioral procedures*. (4th ed., pp. 259-282). New York, NY: Guildford Press.
- Rachman, S. (1980). Emotional processing. *Behaviour Research and Therapy*, 18(1), 51-60. doi: 10.1016/0005-7967(80)90069-8
- Rapee, R. M., Wignall, A., Hudson, J. L., & Schniering, C. A. (2000). *Treating anxious children and adolescents: An evidence-based approach*. Oakland, CA: New Harbinger.
- Richard, D. C. S., & Gloster, A. T. (2007). Exposure therapy has a public relations problem: A dearth of litigation amid a wealth of concern. In D. C. S. Richard, & D. Lauterbach (Eds.), *Handbook of exposure therapy* (pp. 409-425). New York, NY: Academic Press.
- Saavedra, L. M., Silverman, W. K., Morgan-Lopez, A. A., & Kurtines, W. M. (2010). Cognitive behavioral treatment for childhood anxiety disorders: long-term effects on anxiety and secondary disorders in young adulthood. *Journal of Child Psychology and Psychiatry*, 51(8), 924-934. doi: 10.1111/j.1469-7610.2010.02242.x
- Schafer, J. L. (1999). Multiple imputation: a primer. *Statistical methods in medical research*, 8(1), 3-15.
- Seligman, L. D., & Ollendick, T. H. (1998). Comorbidity of anxiety and depression in children and adolescents: An integrative review. *Clinical Child and Family Psychology Review*, 1(2), 125-144. doi: 10.1023/A:1021887712873
- Seligman, L. D., & Ollendick, T. H. (2011). Cognitive-behavioral therapy for anxiety disorders in youth. *Child and adolescent psychiatric clinics of North America*, 20(2), 217-238. doi: 10.1016/j.chc.2011.01.003
- Shirk, S. R., & Karver, M. (2003). Prediction of treatment outcome from relationship variables in child and adolescent therapy: A meta-analytic review. *Journal of Consulting and Clinical Psychology*, 71(3), 452-464. doi: 10.1037/0022-006X.71.3.452
- Shirk, S. R., & Russell, R. L. (1998). Process issues in child psychotherapy. In T. Ollendick (Ed.), *Comprehensive clinical psychology: Children and adolescents: Clinical formulations and treatment* (Vol. 5). Oxford, England: Pergamon Press.
- Shortt, A. L., Barrett, P. M., & Fox, T. L. (2001). Evaluating the FRIENDS program: A cognitive-behavioral group treatment for anxious children and their parents. *Journal of clinical child psychology*, 30(4), 525-535. doi: 10.1207/S15374424JCCP3004_09

- Shrout, P. E., & Fleiss, J. L. (1979). Intraclass correlations: uses in assessing rater reliability. *Psychological bulletin*, *86*(2), 420-428. doi: 10.1037/0033-2909.86.2.420
- Silverman, W. K., & Albano, A. M. (1996). *The anxiety disorders interview schedule for children (ADIS-C/P)*. Albany, NY: Greywind Publications.
- Silverman, W. K., Pina, A. A., & Viswesvaran, C. (2008). Evidence-based psychosocial treatments for phobic and anxiety disorders in children and adolescents. *Journal of Clinical Child & Adolescent Psychology*, *37*(1), 105-130. doi: 10.1080/15374410701817907
- Silverman, W. K., Saavedra, L. M., & Pina, A. A. (2001). Test-retest reliability of anxiety symptoms and diagnoses with the Anxiety Disorders Interview Schedule for DSM-IV: child and parent versions. *Journal of the American Academy of Child & Adolescent Psychiatry*, *40*(8), 937-944. doi: 10.1097/00004583-200108000-00016
- Skinner, B. F. (1963). Operant behavior. *American Psychologist*, *18*(8), 503-515. doi: 10.1037/h0045185
- Sommers-Flanagan, J., & Sommers-Flanagan, R. (1995). Psychotherapeutic techniques with treatment-resistant adolescents. *Psychotherapy: Theory, Research, Practice, Training*, *32*(1), 131-140. doi: 10.1037/0033-3204.32.1.131
- Southam-Gerow, M. A., Kendall, P. C., & Weersing, V. R. (2001). Examining Outcome Variability: Correlates of Treatment Response in a Child and Adolescent Anxiety Clinic. *Journal of Clinical Child & Adolescent Psychology*, *30*(3), 422-436. doi: 10.1207/S15374424JCCP3003_13
- Spence, S. H. (1994). Cognitive therapy with children and adolescents: From theory to practice. *Journal of Child Psychology and Psychiatry*, *35*(7), 1191-1228. doi: 10.1111/j.1469-7610.1994.tb01230.x
- Stallard, P., Simpson, N., Anderson, S., & Goddard, M. (2008). The FRIENDS emotional health prevention programme. *European child & adolescent psychiatry*, *17*(5), 283-289. doi: 10.1007/s00787-007-0665-5
- Sterba, K. R., DeVellis, R. F., Lewis, M. A., Baucom, D. H., Jordan, J. M., & DeVellis, B. (2007). Developing and testing a measure of dyadic efficacy for married women with rheumatoid arthritis and their spouses. *Arthritis Care & Research*, *57*(2), 294-302. doi: 10.1002/art.22538
- Stevens, J. P. (2009). *Applied multivariate statistics for the social sciences*. New York, NY: Routledge.
- Storch, E. A., Geffken, G. R., Merlo, L. J., Mann, G., Duke, D., Munson, M., ... & Goodman, W. K. (2007). Family-based cognitive-behavioral therapy for pediatric obsessive-compulsive

- disorder: Comparison of intensive and weekly approaches. *Journal of the American Academy of Child & Adolescent Psychiatry*, 46(4), 469-478. doi: 10.1097/chi.0b013e31803062e7
- Tang, T. Z., & DeRubeis, R. J. (1999). Reconsidering rapid early response in cognitive behavioral therapy for depression. *Clinical Psychology: Science and Practice*, 6(3), 283-288. doi: 10.1093/clipsy/6.3.283
- Tiwari, S., Kendall, P. C., Hoff, A. L., Harrison, J. P., & Fizur, P. (2013). Characteristics of exposure sessions as predictors of treatment response in anxious youth. *Journal of Clinical Child & Adolescent Psychology*, 42(1), 34-43. doi: 10.1080/15374416.2012.738454
- Toren, P., Eldar, S., Cendorf, D., Wolmer, L., Weizman, R., Zubadi, R., ... & Laor, N. (1999). The prevalence of mitral valve prolapse in children with anxiety disorders. *Journal of Psychiatric Research*, 33(4), 357-361. doi: 10.1016/S0022-3956(99)00005-9
- Velting, O. N., Setzer, N. J., & Albano, A. M. (2004). Update on and advances in assessment and cognitive-behavioral treatment of anxiety disorders in children and adolescents. *Professional Psychology: Research and Practice*, 35(1), 42-54. doi: 10.1037/0735-7028.35.1.42
- Voort, J. L.V., Svecova, J., Jacobson, A. B., & Whiteside, S. P. (2010). A retrospective examination of the similarity between clinical practice and manualized treatment for childhood anxiety disorders. *Cognitive and Behavioral Practice*, 17(3), 322-328. doi: 10.1016/j.cbpra.2009.12.002
- Villabø, M. A., Cummings, C. M., Gere, M. K., Torgersen, S., & Kendall, P. C. (2013). Anxious youth in research and service clinics. *Journal of anxiety disorders*, 27(1), 16-24. doi: 10.1016/j.janxdis.2012.09.003
- Villabø, M. A., Gere, M., Torgersen, S., March, J. S., & Kendall, P. C. (2012). Diagnostic efficiency of the child and parent versions of the Multidimensional Anxiety Scale for Children. *Journal of Clinical Child & Adolescent Psychology*, 41(1), 75-85. doi: 10.1080/15374416.2012.632350
- Walkup, J. T., Albano, A. M., Piacentini, J., Birmaher, B., Compton, S. N., Sherrill, J. T., ... & Iyengar, S. (2008). Cognitive behavioral therapy, sertraline, or a combination in childhood anxiety. *New England Journal of Medicine*, 359(26), 2753-2766. doi: 10.1056/NEJMoa0804633
- Waltz, J., Addis, M. E., Koerner, K., & Jacobson, N. S. (1993). Testing the integrity of a psychotherapy protocol: assessment of adherence and competence. *Journal of consulting and clinical psychology*, 61(4), 620-630. doi: 10.1037/0022-006X.61.4.620

- Weisz, J. R., & Gray, J. S. (2008). Evidence-based psychotherapy for children and adolescents: Data from the present and a model for the future. *Child and Adolescent Mental Health, 13*(2), 54-65. doi: 10.1111/j.1475-3588.2007.00475.x
- Weisz, J. R., Jensen-Doss, A., & Hawley, K. M. (2006). Evidence-based youth psychotherapies versus usual clinical care: a meta-analysis of direct comparisons. *American Psychologist, 61*(7), 671-689. doi: 10.1037/0003-066X.61.7.6712
- Wergeland, G. J. H., Fjermestad, K. W., Marin, C. E., Haugland, B. S. M., Bjaastad, J. F., Oeding, K., ... & Heiervang, E. R. (2014). An effectiveness study of individual vs. group cognitive behavioral therapy for anxiety disorders in youth. *Behaviour research and therapy, 57*, 1-12. doi: 10.1016/j.brat.2014.03.007
- Wergeland, G. J. H., Fjermestad, K. W., Marin, C. E., Bjelland, I., Haugland, B. S. M., Silverman, W. K., ... & Heiervang, E. R. (2016). Predictors of treatment outcome in an effectiveness trial of cognitive behavioral therapy for children with anxiety disorders. *Behaviour Research and Therapy, 76*, 1-12 doi: 10.1016/j.brat.2015.11.001
- Whiteside, S. P., Ale, C. M., Young, B., Dammann, J. E., Tiede, M. S., & Biggs, B. K. (2015). The feasibility of improving CBT for childhood anxiety disorders through a dismantling study. *Behaviour research and therapy, 73*, 83-89. doi: 10.1016/j.brat.2015.07.011
- Wilson, G. T. (1998). Manual-Based Treatment and Clinical Practice. *Clinical Psychology: Science and Practice, 5*(3), 363-375. doi: 10.1111/j.1468-2850.1998.tb00156.x
- Wood, J. J., Piacentini, J. C., Bergman, R. L., McCracken, J., & Barrios, V. (2002). Concurrent validity of the anxiety disorders section of the anxiety disorders interview schedule for DSM-IV: child and parent versions. *Journal of Clinical Child and Adolescent Psychology, 31*(3), 335-342. doi: 10.1207/S15374424JCCP3103_05
- Woody S.R., & Ollendick, T. H. (2006). Technique factors in treating anxiety disorders. In L. G. Castonguay L. & L. E. Beutler (Eds.), *Principles of therapeutic change that work* (pp. 167-186). New York: Oxford University Press.

Appendix

Appendix A: The Quality of the Exposure Component Form (QECF)

Copy A1: Copy of the QECF in English

Tape no: _____

Date: _____

Rater: _____

Assessment of the exposure component – Circle the option that fits

Preparation

2.1 To what degree was psychoeducation about exposure used, e.g., rationale explained?

1	2	3	4	5
Not at all	Limited	Sufficient	A lot	Very much

2.2 To what degree was the step plan created as an anxiety hierarchy, e.g., identification of clear and graded steps?

1	2	3	4	5
Not at all	Limited	Sufficient	A lot	Very much

2.3 To what degree were the steps' levels of difficulty addressed, e.g., by the use of a "feeling thermometer" or some other sort of grading?

1	2	3	4	5
Not at all	Limited	Sufficient	A lot	Very much

2.4 To what degree were practical aspects of the exposure discussed, e.g., time and place of exposure?

1	2	3	4	5
Not at all	Limited	Sufficient	A lot	Very much

2.5 To what degree was role-play about exposure used in session, e.g., role-play between the youth and therapist?

1	2	3	4	5
Not at all	Limited	Sufficient	A lot	Very much

Actual exposure

2.6 To what degree was there actual exposure in the session?

1	2	3	4	5
Not at all	Limited	Sufficient	A lot	Very much

2.7 To what degree did it become apparent that the youth had conducted exposure outside of the FRIENDS-session(s)?

1	2	3	4	5
Not at all	Limited	Sufficient	A lot	Very much

Post-processing about exposure

2.8 If the youth had *not* conducted exposure outside of session, to what degree was this addressed?

1	2	3	4	5
Not at all	Limited	Sufficient	A lot	Very much

2.9 To what degree did the therapist and youth talk about what went well with the exposure?

1	2	3	4	5
Not at all	Limited	Sufficient	A lot	Very much

2.10 To what degree did the therapist and youth talk about what was challenging?

1	2	3	4	5
Not at all	Limited	Sufficient	A lot	Very much

2.11 To what degree did the therapist and youth talk about what the youth might do differently the next time?

1	2	3	4	5
Not at all	Limited	Sufficient	A lot	Very much

2.12a To what degree was the step plan adjusted in preparation for the next task, e.g., steps or order changed?

1	2	3	4	5
Not at all	Limited	Sufficient	A lot	Very much

Collaboration/climate

2.12b To what degree did the youth cooperate on the exposure?

1	2	3	4	5
Not at all	Limited	Sufficient	A lot	Very much

2.13 To what degree were the youth's attempts of exposure rewarded?

1	2	3	4	5
Not at all	Limited	Sufficient	A lot	Very much

2.14 To what degree did the youth show avoidance?

1	2	3	4	5
Not at all	Limited	Sufficient	A lot	Very much

2.15 To what degree did the youth show resistance?

1	2	3	4	5
Not at all	Limited	Sufficient	A lot	Very much

Parent contribution

2.16 To what degree were the parents involved in the exposure by participation in session?

1	2	3	4	5
Not at all	Limited	Sufficient	A lot	Very much

2.17 To what degree was the parents' role in the exposure outside of session talked about?

1	2	3	4	5
Not at all	Limited	Sufficient	A lot	Very much

2.18 Overall, how would you rate the quality of the exposure component in this session?

1	2	3	4	5
Not at all	Limited	Sufficient	A lot	Very much

Copy A2: Copy of the QECF in Norwegian

Kvalitet på eksponeringskomponenten

Tape nr: _____

Dato for koding: _____

Koder: _____

Vurdering av eksponeringskomponenten – sett ring rundt det som passer

Forbredelse

2.1 I hvilken grad ble psykoedukasjon om eksponering brukt, for eksempel rasjonale forklart?

1	2	3	4	5
Ikke i det hele tatt	Begrenset	Tilstrekkelig	Mye	Svært mye

2.2 I hvilken grad ble trappetrinnsplanen laget som et angsthierarki, for eksempel identifisering av klare og graderte trinn?

1	2	3	4	5
Ikke i det hele tatt	Begrenset	Tilstrekkelig	Mye	Svært mye

2.3 I hvilken grad ble trinnes vanskegrad adressert, for eksempel ved bruk av følelsetermometeret, eller annen gradering?

1	2	3	4	5
Ikke i det hele tatt	Begrenset	Tilstrekkelig	Mye	Svært mye

2.4 I hvilken grad ble praktiske sider ved eksponeringen diskutert, for eksempel tid og sted for eksponering?

1	2	3	4	5
Ikke i det hele tatt	Begrenset	Tilstrekkelig	Mye	Svært mye

Reell eksponering

2.5 I hvilken grad ble rollespill om eksponering brukt, for eksempel mellom barnet og terapeuten?

1	2	3	4	5
Ikke i det hele tatt	Begrenset	Tilstrekkelig	Mye	Svært mye

2.6 I hvilken grad ble det gjort faktisk eksponering i timen?

1	2	3	4	5
Ikke i det hele tatt	Begrenset	Tilstrekkelig	Mye	Svært mye

2.7 I hvilken grad kom det frem at barnet/ungdommen hadde drevet eksponering utenom Friends-timen(e)?

1	2	3	4	5
Ikke i det hele tatt	Begrenset	Tilstrekkelig	Mye	Svært mye

Prosessering om eksponering

2.8 Dersom det fremkom at barnet ikke hadde drevet eksponering utenfor timen, i hvilke grad ble dette adressert?

1	2	3	4	5
Ikke i det hele tatt	Begrenset	Tilstrekkelig	Mye	Svært mye

2.9 I hvilken grad ble det snakket om det som gikk bra med eksponeringen?

1	2	3	4	5
Ikke i det hele tatt	Begrenset	Tilstrekkelig	Mye	Svært mye

2.10 I hvilken grad ble det snakket om det som var utfordrende?

1	2	3	4	5
Ikke i det hele tatt	Begrenset	Tilstrekkelig	Mye	Svært mye

2.11 I hvilken grad ble det snakket om hva barnet/ungdommen kan gjøre annerledes neste gang han/hun prøver?

1	2	3	4	5
Ikke i det hele tatt	Begrenset	Tilstrekkelig	Mye	Svært mye

2.12 I hvilken grad ble trappetrinnsplanen justert som forbredelse til neste øvelse, for eksempel trinn eller rekkefølge endret?

1	2	3	4	5
Ikke i det hele tatt	Begrenset	Tilstrekkelig	Mye	Svært mye

Samarbeidsklima

2.12 I hvilken grad samarbeidet barnet/og ungdommen om eksponeringen? (Bruk etterpå hele TPOCS-A her)

1	2	3	4	5
Ikke i det hele tatt	Begrenset	Tilstrekkelig	Mye	Svært mye

2.13 I hvilken grad ble barnets forsøk på eksponering belønnet/forsterket?

1	2	3	4	5
Ikke i det hele tatt	Begrenset	Tilstrekkelig	Mye	Svært mye

2.14 I hvilken grad viste barnet unngåelse?

1	2	3	4	5
Ikke i det hele tatt	Begrenset	Tilstrekkelig	Mye	Svært mye

2.15 I hvilken grad viste barnet motstand?

1	2	3	4	5
Ikke i det hele tatt	Begrenset	Tilstrekkelig	Mye	Svært mye

Øvrig

2.16 I hvilken grad var foreldre involvert i eksponeringen gjennom deltakelse i selve timen?

1	2	3	4	5
Ikke i det hele tatt	Begrenset	Tilstrekkelig	Mye	Svært mye

2.17 I hvilken grad ble foreldres rolle i eksponeringen utenom timen snakket om?

1	2	3	4	5
Ikke i det hele tatt	Begrenset	Tilstrekkelig	Mye	Svært mye

2.18 Alt i alt, hvor god kvalitet syns du det var på eksponeringskomponenten i denne timen?

1	2	3	4	5
Ikke i det hele tatt	Begrenset	Tilstrekkelig	Mye	Svært mye

Copy A3: Copy of the scoring guidelines for the QECF

Scoring guidelines

T = therapist, Y = Youth

2.1 To what degree was psychoeducation about exposure used, e.g., rationale explained?

1	2	3	4	5
Not at all	Limited	Sufficient	A lot	Very much
<i>Step plan mentioned But not talked about</i>	<i>Short explanation (e.g. need aim and goal)</i>	<i>step-wise, aim, gradual Practice on what you fear</i>	<i>Extra examples Extensive explanation</i>	<i>All of the above and more</i>

2.2 To what degree was the step plan created as an anxiety hierarchy, e.g., identification of clear and graded steps?

1	2	3	4	5
Not at all	Limited	Sufficient	A lot	Very much
<i>Not anxiety-relevant Behavior</i>	<i>Defined steps but limited differentiation</i>	<i>Clear cut steps, gradual difficulty</i>	<i>If 2.3 is good + more than expected</i>	

2.3 To what degree were the steps' levels of difficulty addressed, e.g., by the use of a "feeling thermometer" or some other sort of grading?

1	2	3	4	5
Not at all	Limited	Sufficient	A lot	Very much
<i>Not mentioned at all</i>	<i>only mentioned</i>	<i>Every step's difficulty is addressed</i>		

2.4 To what degree were practical aspects of the exposure discussed, e.g., time and place of exposure?

1	2	3	4	5
Not at all	Limited	Sufficient	A lot	Very much
<i>Not mentioned</i>	<i>1 aspect mentioned</i>	<i>More than 1 aspect mentioned (e.g., time & place)</i>	<i>A clear plan (able to picture it)</i>	<i>If excessive discussion</i>

Actual exposure

2.5 To what degree was role-play about exposure used in session, e.g., role-play between the youth and therapist?

1	2	3	4	5
Not at all	Limited	Sufficient	A lot	Very much
		<i>Role-play takes place</i>	<i>More than one role-play</i>	

2.6 To what degree was there actual exposure in the session?

1	2	3	4	5
Not at all	Limited	Sufficient	A lot	Very much
		<i>One task/step is conducted/practiced</i>	<i>Multiple task/steps</i>	<i>Completed step plan</i>

2.7 To what degree did it become apparent that the youth had conducted exposure outside of the FRIENDS-session(s)?

1	2	3	4	5
Not at all	Limited	Sufficient	A lot	Very much
No homework, nothing else	Only homework	Homework + step in step plan	Completed step plan	The above + more

Post-processing about exposure

2.8 If the youth had *not* conducted exposure outside of session, to what degree was this addressed?

1	2	3	4	5
Not at all	Limited	Sufficient	A lot	Very much
	Mentioned	Talked about, asked why		

2.9 To what degree did the therapist and youth talk about what went well with the exposure?
(Does not include praise!)

1	2	3	4	5
Not at all	Limited	Sufficient	A lot	Very much
	Briefly mentioned (e.g., "So it went well.")	Asked about how it went, What went well	Detailed description of the episode, positive aspects	The above + more

2.10 To what degree did the therapist and youth talk about what was challenging?

1	2	3	4	5
Not at all	Limited	Sufficient	A lot	Very much
	Briefly mentioned (e.g., "So it was difficult.")	Asked about how it went, What was challenging	Detailed description of the episode, aspects	The above + more

2.11 To what degree did the therapist and youth talk about what the youth might do differently the next time?

1	2	3	4	5
Not at all	Limited	Sufficient	A lot	Very much
	Y is told to try again	e.g. "Next time you might.." A simple suggestion from T	Concrete suggestions from both T and Y	All the above more

2.12a To what degree was the step plan adjusted in preparation for the next task, e.g., steps or order changed?

1	2	3	4	5
Not at all	Limited	Sufficient	A lot	Very much
	Adjustments are Mentioned	Some steps are changed	A new plan is created	Completely newplan. Start over.

Collaboration/climate

2.12b To what degree did the youth cooperate on the exposure?

1	2	3	4	5
Not at all	Limited	Sufficient	A lot	Very much
T does it all, "one-way street".	Y agrees. Willing.	Y collaborates, Y has to say something about the step plan	Y has a lot of suggestions, active	All of the above + more

2.13 To what degree were the youth's attempts of exposure rewarded?

1	2	3	4	5
Not at all	Limited	Sufficient	A lot	Very much
No praise	Some "good, nice"	Praise, normal validation	A lot praise, gifts, rewards	All of the above + more

2.14 To what degree did the youth show avoidance?

1	2	3	4	5
Not at all	Limited	Sufficient	A lot	Very much
Y is positive, joins everything	Some "I don't know"+ Avoids eye contact	Y talks about something else, not very involved, says "I don't know a lot"	All of the above + physical agitation	

2.15 To what degree did the youth show resistance?

(e.g., Critical, impolite, negative, refusal.)

1	2	3	4	5
Not at all	Limited	Sufficient	A lot	Very much
	Some hostility	Enough to disrupt the session	To the degree that we "feel the transference"	

Parent contribution

2.16 To what degree were the parents involved in the exposure by participation in session?

1	2	3	4	5
Not at all	Limited	Sufficient	A lot	Very much
Exposure is not mentioned	Mentioned with the parents in the room	Parents talk about Step plan/reward/support	All of the above + share, Give suggestions	All the above + more

2.17 To what degree was the parents' role in the exposure outside of session talked about?

1	2	3	4	5
Not at all	Limited	Sufficient	A lot	Very much
Parents not mentioned	"You can look at it Together"	Parent's role is discussed, What they will actually do.	+ Parents contribute, Give suggestions	All the above + more

2.18 Overall, how would you rate the quality of the exposure component in this session?

1	2	3	4	5
Not at all	Limited	Sufficient	A lot	Very much

Appendix B: Figures from preliminary analyses

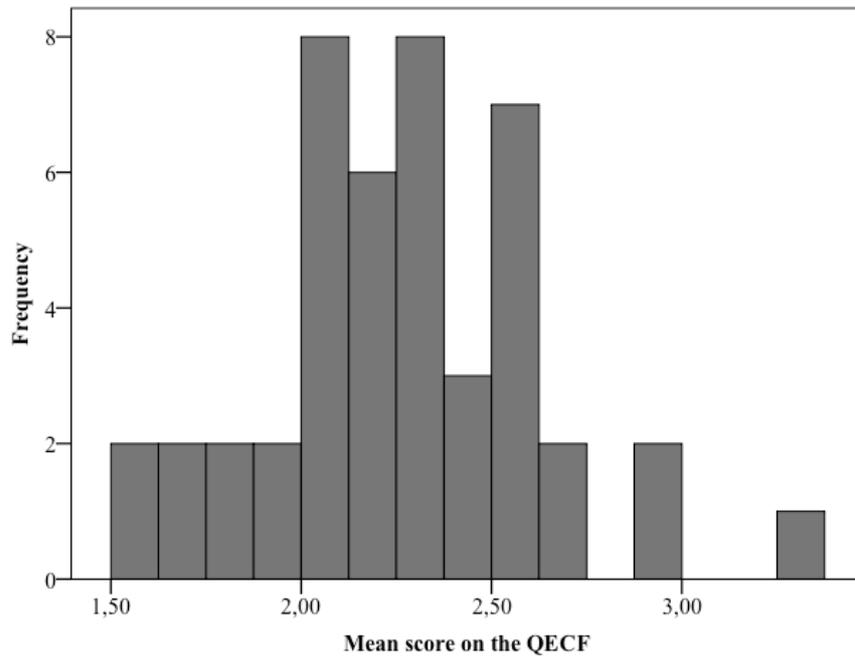


Figure 1. Distribution of the mean QECF scores.

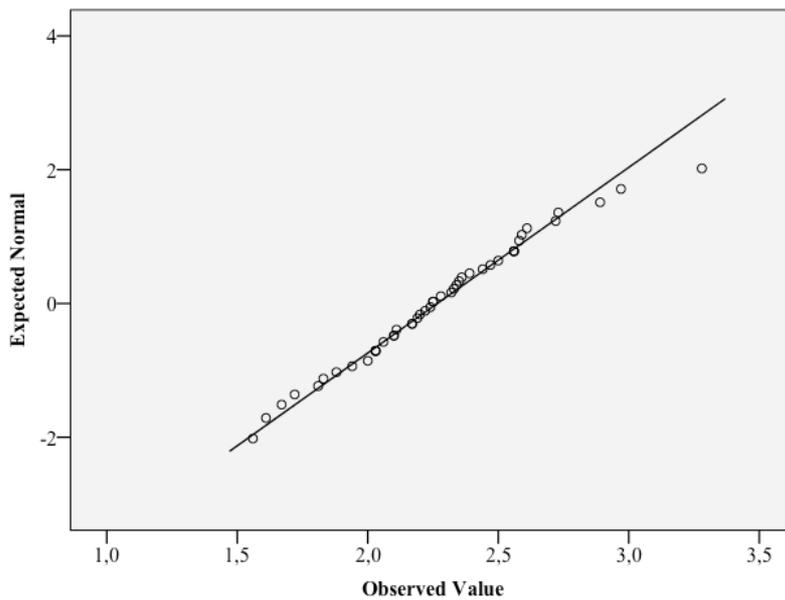


Figure 2. Normal Q-Q-plot of mean scores on the QECF.

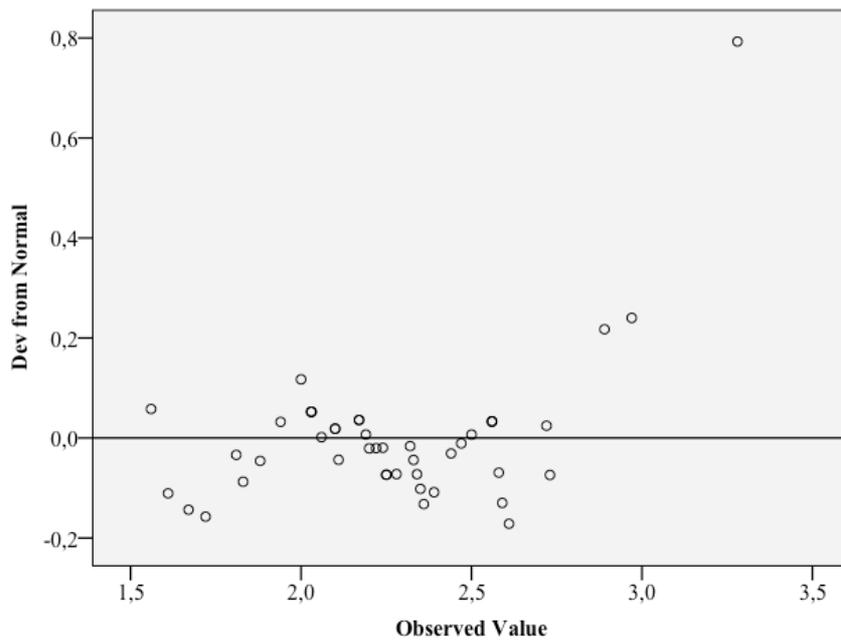


Figure 3. Detrended Normal Q-Q plot of mean scores on the QECF

Appendix C: Means and standard deviations for independent samples t-tests run for all items and subscales in the QECF

Table C1. Means and standard deviations from independent samples t-tests run for all items and subscales in the QECF.

	Loss of pr.dx T2 M (SD) N = 27	No loss of pr.dx T2 M (SD) N = 18	Loss of all dx T2 M (SD) N = 21	No loss of all dx T2 M (SD) N = 24	Loss of all dx T3 ¹ M (SD) N = 19	No loss of all dx T3 ¹ M (SD) N = 16
Preparation						
2.1 Use of psychoeducation	2.6 (0.6)	2.7 (0.4)	2.6 (0.6)	2.6 (0.5)	2.5 (0.4)	2.8 (0.6)
2.2 Step plan as an anxiety hierarchy	1.9 (0.7)	2.2 (0.9)	1.9 (0.7)	2.1 (0.8)	2.1 (0.7)	2.0 (0.9)
2.3 Addressing and ensuring gradual difficulty	1.4 (0.4)	1.5 (0.6)	1.5 (0.4)	1.5 (0.6)	1.6 (0.4)	1.5 (0.6)
2.4 Discussion of the practical aspects of exposure	2.0 (0.8)	2.0 (0.7)	2.0 (0.7)	2.0 (0.8)	2.3 (0.8)	1.9 (0.7)
2.5 Role play of exposure tasks in session	1.0 (0.2)	1.0 (0.1)	1.0 (0.2)	1.0 (0.1)	1.0 (0.0)	1.1 (0.3)
Actual exposure						
2.6 Doing exposure tasks in session	1.0 (0.0)	1.2 (0.3)	1.0 (0.0)	1.1 (0.3)	1.0 (0.1)	1.0 (0.1)
2.7 Doing exposure tasks at home	2.5 (0.8)	2.2 (0.8)	2.5 (0.8)	2.3 (0.8)	2.7 (0.8)	2.2 (0.7)
Post-processing about exposure						
2.9 Discussing what went well	1.7 (0.6)	1.6 (0.7)	1.7 (0.6)	1.6 (0.7)	1.8 (0.7)	1.6 (0.6)
2.10 Discussing challenges	1.6 (0.5)	1.5 (0.8)	1.6 (0.5)	1.5 (0.7)	1.7 (0.5)	1.5 (0.8)
2.11 Discussing what may be done differently	1.7 (0.7)	2.0 (1.0)	1.9 (0.7)	1.9 (0.9)	1.9 (0.7)	1.8 (0.9)
2.12a Adjustment of the step plan	1.5 (0.6)	1.7 (0.9)	1.5 (0.6)	1.6 (0.8)	1.6 (0.6)	1.7 (0.9)
Collaboration/climate						
2.12b To what degree did the youth cooperate	2.6 (0.6)	2.6 (0.7)	2.6 (0.5)	2.6 (0.7)	2.7 (0.6)	2.6 (0.7)
2.13 Use of reinforcement	2.8 (0.6)	2.7 (0.8)	2.8 (0.6)	2.7 (0.7)	3.0 (0.5)	2.5 (0.8)
2.14 Avoidance in the youth *r	4.4 (0.7)	4.1 (0.7)	4.4 (0.7)	4.2 (0.7)	4.5 (0.7)	4.3 (0.6)
2.15 Resistance *r	4.9 (0.3)	4.6 (0.6)	4.9 (0.3)	4.7 (0.6)	4.9 (0.3)	4.8 (0.4)
Parent contribution						
2.16 Involvement of parents in session	2.5 (0.8)	2.3 (0.6)	2.5 (0.8)	2.4 (0.6)	2.7 (0.8)	2.3 (0.6)
2.17 Discussing the parents role in exposure tasks	2.3 (0.7)	2.3 (0.5)	2.3 (0.8)	2.3 (0.5)	2.5 (0.7)	2.2 (0.6)
Overall quality of exposure component in session						
2.18 Overall quality of the exposure component in session	2.3 (0.6)	2.3 (0.8)	2.3 (0.6)	2.3 (0.7)	2.4 (0.5)	2.3 (0.7)

Note. T2 = post-treatment, T3 = one-year follow-up, pr.dx = primary diagnosis, dx = diagnoses. M = mean, SD = standard deviation, N = number of participants. ¹All who lost primary disorder at T3 also lost all disorders. *r = reversed item.

