

Benedicte Smedby

**Inpatient cognitive behavioural therapy for adults with
longstanding eating disorders with or without childhood
trauma: A process-outcome study**

Graduate thesis in Clinical Psychology

Supervisors: Siri Weider, KariAnne Vrabel and Odin Hjemdal

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Norwegian University of Science and Technology

Faculty of Social and Educational Sciences

Department of Psychology



Norwegian University of
Science and Technology

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Author: Benedicte Smedby

Supervisor: Siri Weider

Co-supervisors: KariAnne Vrabel and Odin Hjemdal

Department of Psychology,
Norwegian University of Science and Technology (NTNU)

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Summary

Background:

There is convincing evidence for cognitive behavioural therapy (CBT) as the most effective treatment for eating disorders (EDs). However, research shows that a large portion of the patients do not respond to the treatment. Why some patients benefit from the treatment while others do not, is not clear. Childhood trauma has been suggested as predictor for a non-favourable outcome. Additionally, the clinical view of many professionals is that CBT has limited effect in more complex cases.

Methods:

This study examined the outcome and process of transdiagnostic inpatient CBT for EDs in 48 patients with longstanding EDs with or without childhood trauma. The course and outcome were assessed comparing the patients' scores on questionnaires measuring ED symptoms, depression, trauma and psychosocial impairment at four times of measurement: pre-evaluation, admission, discharge and at one-year follow-up. Patients with and without trauma were compared, to assess differences between the groups in course and outcome. These analyses were performed using mixed-model- and repeated-measures ANOVAs, supplemented by clinical significant change and effect sizes. The treatment process was investigated using weekly measures, allowing examination if one specific variable predicted ED symptoms over time and if changes in a variable one week predicted changes in ED symptoms the following week. The possible predictors, cognitions and alliance, were assessed using multilevel mixed model analyses.

Results and conclusion:

Results support the effectiveness of CBT for longstanding EDs. The trauma group reported higher levels of symptoms than the non-trauma group at all times of measurement, although only a significant difference was found in depression. The results indicated no differences in course between the groups. General and specific problematic cognitions and alliance predicted levels of ED symptoms throughout the treatment. Changes on the alliance subscales 'agreement on goals' or 'agreement on tasks' for a particular patient one week, predicted changes in ED symptoms the following week.

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Introduction

Eating disorders (EDs) are associated with serious physical, psychological and social consequences. Rø, Martinsen, Hoffart, Sexton, and Rosenvinge (2005) stated that only 30-75% of patients recover from anorexia nervosa and 50-70% from bulimia nervosa after treatment. This suggests that a large portion of patients do not benefit from the treatment they receive. Most studies are conducted on adolescents or adults in their early twenties, and therefore, less is known about patients with longstanding EDs. There is also a shortage of studies examining factors predicting outcome. Nevertheless, available studies and clinical experience has pointed out childhood trauma as an unfavourable prognostic factor. In conclusion, there is a need for research examining the outcome in treatment for patients with longstanding EDs taking childhood trauma and other possible predictors into account.

In this thesis, three broad questions will be addressed: What are the course and outcome for patients with longstanding eating disorders receiving inpatient cognitive behavioural treatment? Are there differences in the course and outcome between patients with and without childhood trauma? Do problematic cognitions and therapeutic alliance predict change in ED symptoms from week to week during inpatient treatment? The questions will be addressed through a naturalistic psychotherapy study following patients with longstanding EDs receiving cognitive behavioural therapy in an inpatient setting.

Background

Eating disorders (EDs) are a group of mental diseases characterised by a disturbance of eating and eating-related behaviour. Over-evaluation of shape and weight are common in patients struggling with an ED, leading to weight concerns and subsequent weight-control behaviour such as altered consumption of food (American Psychiatric Association, 2013; Fairburn, 2008). However, today's understanding of EDs is a result of a heterogeneous manifestation throughout the history of psychiatry. Although the terms 'anorexia' and 'bulimia' have been well established for years, the symptoms relating them were traditionally seen as the consequence of a diversity of illnesses, particularly gastrointestinal disorders (Vandereycken, 2002).

At the end of the 17th century, the English physician Richard Morton described 'nervous consumption' in terms of emotional disturbances. Even though this is often seen as the first medical report of anorexia nervosa (AN), the attention of this description was absent until three centuries later (Vandereycken, 2002). The first explicit description of AN as a mental disorder was given by the Parisian clinician Ernest-Charles Lasègue in 1873 and the London physician Sir William Withey Gull in 1874. Their descriptions included no underlying organic pathology but instead characteristics like severe weight loss, amenorrhea, constipation and restlessness which are characteristics still valid today (Vandereycken, 2002).

For a long time, EDs were seen as synonymous with AN (Skårderud, Rosenvinge, & Gøtestam, 2004). One can see essential changes in the understanding of EDs even in more recent times, with significant changes from the 1980s onward. The disorder is no longer just exclusively linked to the relatively rare condition AN and associative characteristics like self-induced weight-loss, low body weight and disturbed body image (Skårderud et al., 2004; WHO, 1999). Bulimia nervosa (BN) has been a valid diagnostic category in the diagnostic and statistical manual of mental disorders (DSM) since 1979 and is characterized by episodes of binge eating and compensatory behaviours (American Psychiatric Association, 2013). Hence, even though AN was put forth as a mental disorder in the late 19th century, characteristics such as over-evaluation of shape and body weight, the use of weight control-strategies like dieting and purging have only acquired attention in the late 20th century (Vandereycken, 2002). Since the introduction of BN as a diagnostic category, new editions of DSM, including modifications in the diagnostic criteria for EDs, have been published. The newest edition, DSM-5, was published in 2013, and should be the edition best reflecting the understanding of EDs by clinical professionals today.

The understanding of eating disorders in relation to DSM-5

DSM is the most used classification system in the research field of psychiatry and the leading standard classification of disorders by health professionals in the U.S. (American Psychiatric Association, 2013). The DSM-5 chapter 'Feeding and Eating Disorders' consists of several different diagnostic categories. In addition to AN and BN, as previously mentioned, the chapter also provides diagnostic criteria for binge eating disorder (BED), pica, rumination disorder and avoidant/restrictive food intake disorder. For patients not fulfilling the diagnostic criteria of the other EDs in the chapter, but still presenting symptoms characteristic of an ED causing clinically significant impairment, the chapter includes the categories 'Other specified feeding or eating disorder' (OSFED) and 'Unspecified feeding or eating disorder'. Studies indicate that the residual category in DSM-IV, 'Eating disorder not otherwise specified' (EDNOS), was the most common ED diagnosis. The modifications from DSM-IV to DSM-5 included categorising BED as a formal diagnosis and lowering the threshold for AN and BN. The aim of which was to reduce the need for the new and renamed residual category OSFED (American Psychiatric Association, 2013; Call, Walsh, & Attia, 2013). Fairburn and Cooper (2011) are arguing that DSM-5 only partially succeeds in correcting the shortcomings in DSM-IV. The remainder of this section focuses on providing a deeper understanding of AN, BN and OSFED in relation to the diagnostic criteria in DSM-5.

Anorexia nervosa. With regard to DSM-5, AN can be understood in terms of three different features. First, the patient displays persistent restricted energy intake, leading to a significantly low body weight. Patients also show an intense fear of weight gain or becoming fat, or show behaviour contradictory to weigh gain. In addition, patients with AN are assessed as having disturbances in perceived weight or shape of the self (American Psychiatric Association, 2013). The DSM-5 distinguishes between two types of AN. A restricting type and a binge-eating/purging type. The distinction between the two provides information about how the weight loss is achieved (Table 1). In case of the restricted type of AN, weight loss is achieved mainly through dieting, fasting and/or exercising. Patients with the binge-eating/purging type of AN show episodes of binge-eating or purging behaviour (ie., self-induced vomiting or misuse of laxatives, diuretic, or enemas). The severity of AN is specified based on current BMI for adults and on BMI percentile for children and adolescents. For adults, AN are specified as Mild: BMI ≥ 17 , Moderate: BMI 16-16.99, Severe: 15-15.99, Extreme: BMI < 15 (American Psychiatric Association, 2013).

Bulimia nervosa. BN is, according to DSM-5, characterized by recurrent episodes of binge-eating and inappropriate compensatory behaviour with the aim of avoiding weight gain.

For patients with BN, the self-evaluation is also largely based on body shape and weight (Table 2). The severity of the disorder is judged based on the average of inappropriate compensatory behaviours per week; Mild: 1-3 episodes per week; Moderate: 4-7 episodes per week Severe: 8-13 episodes per week and Extreme: 14 or more episodes per week (American Psychiatric Association, 2013).

Other specified feeding or eating disorders. OSFED is a ‘residual category’ reserved for cases in which the patient does not fulfil all the diagnostic criteria for any of the other EDs, but still shows clinical distress or impairment of function. This category is used when the clinician specifies the reason the patient does not meet the criteria for another eating or feeding disorder in the chapter. Examples of conditions which can be specified: 1. Atypical AN, in which all the criteria are met except for significant weight loss; 2. BN of low frequency or limited duration; 3. BED of low frequency or limited duration; 4. Purging disorder, when purging is used to control weight and shape in absence of binge-eating, and 5. Night-eating syndrome, in which there are recurrent episodes of eating after awakening from sleep or excessive food consumption after the evening meal (American Psychiatric Association, 2013).

Table 1

DSM-5 criteria for AN (American Psychiatric Association, 2013)

-
- A. Restriction of energy intake relative to requirements, leading to a significantly low body weight in the context of age, sex, developmental trajectory, and physical health. *Significantly low weight* is defined as a weight that is less than minimally normal or, for children and adolescents, less than minimally expected.
 - B. Intense fear of gaining weight or of becoming fat, or persistent behaviour that interferes with weight gain, even though a significantly low weight.
 - C. Disturbance in the way in which one’s body weight or shape is experienced, undue influence of body weight or shape on self-evaluation, or persistent lack of recognition of the seriousness of the current low body weight.

Restricting type: During the last 3 months, the individual has not engaged in recurrent episodes of binge eating or purging behaviour.

Binge-eating/purging type: During the last 3 months, the individual has engaged in recurrent episodes of binge eating or purging behaviour.

Table 2

DSM-5 criteria for BN (American Psychiatric Association, 2013)

- A. Recurrent episodes of binge eating. An episode of binge eating is characterized by both the following:
 - 1. Eating, in a discrete period of time (e.g. within any 2-hour period), an amount of food that is definitely larger than what most individuals would eat in a similar period of time under similar circumstances.
 - 2. A sense of lack of control over eating during the episodes (e.g., a feeling that one cannot stop eating or control what or how much one is eating).
 - B. Recurrent inappropriate compensatory behaviours in order to prevent weight gain, such as self-induced vomiting; misuse of laxatives, diuretics, or other medications; fasting; or excessive exercise.
 - C. The binge eating and inappropriate compensatory behaviours both occur, on average, at least once a week for 3 months.
 - D. Self-evaluation is unduly influenced by both shape and weight.
 - E. The disturbance does not occur exclusively during episodes of anorexia nervosa.
-

A transdiagnostic view of eating disorders

Distinguishing between groups of EDs, like in the DSMs, can be useful. Even so, the different EDs have more characteristics in common than those separating them. In addition, studies indicate a strong tendency of fluctuations between ED diagnoses. As a result, there has been a change toward viewing EDs as a single disorder rather than separate ones (Fairburn, 2008). The transdiagnostic models of EDs stresses the common pathology of patients struggling with EDs; the over-evaluation of eating, weight and shape, and the perceived consequences if the ability to control these factors is lost (Fairburn, 2008; Waller et al., 2007).

The common beliefs explain the typical behaviour seen in patients with EDs, like attempts to limit food intake (except for BED) and checking-behaviour such as frequently monitoring weight and body. Furthermore, an excessive focus on the parts of the body they dislike or avoiding looking at themselves due to a conviction that they look fat and disgusting (Fairburn, 2008). Fairburn (2008) also describes a different form of the psychopathology where the patients show over-evaluation of control over eating itself. In these cases, one typically sees intense dieting and dietary checking, like calorie-counting and avoidance of various types of food. Patients can also be driven by other motives such as asceticism, competitiveness, and a desire to attract attention from others (Fairburn, 2008).

So, there are many similarities in patients with different EDs. Therefore, considering the common characteristics for patients struggling with EDs, not only what is separating them, is deemed valuable. The common psychopathology across EDs is also an argument for giving the same treatment regardless of which type of ED the patient is suffering from (Fairburn, 2008; Waller et al., 2007).

Prevalence

The studies examining the prevalence of EDs have led to mixed results. Different definitions of EDs and the use of incomparable methods may be two among many possible reasons for that. For instance, studies using the DSM-5, typically report a higher prevalence of AN and BN than studies using the earlier editions of the DSM (Birkegård & Norring, 2011; Rosenvinge & Pettersen, 2015; Smink, van Hoeken, & Hoek, 2012; Smink, van Hoeken, & Hoek, 2013). Based mainly on studies from Europe and the USA, the average prevalence is 0.3% for AN, 1.3% for BN and 1% for BED for young females (Hoek, 2006; Hoek & van Hoeken, 2003). The most common ED category is, however, argued to be the DSM-IV residual category EDNOS. This group is not easy to define due to its heterogeneity, including symptoms from AN, BN and BED. Based on different definitions, the prevalence reported in different studies are not easy to compare. A nation-wide community sample of young females concluded that point prevalence was 2.4% for EDNOS (Machado, Machado, Goncalves, & Hoek, 2007). Currently, only limited studies of prevalence using the new edition DSM-5 and the new rest category, OSFED, exist, but several of them indicate that the DSM-5 criteria has effectively reduced the proportion of EDNOS diagnoses (Birkegård & Norring, 2011; Keel, Brown, Holm-Denoma, & Bodell, 2011; Machado, Goncalves, & Hoek, 2013; Smink et al., 2013; Sysko & Walsh, 2011).

Research indicates a remarkable gender difference for EDs. Using the DSM-IV criteria for EDs, Hudson, Hiripi, Pope, and Kessler (2007) estimated the lifetime prevalence of AN, BN, and BED as 0.9%, 1.5% and 3.5% among women, and 0.3%, 0.5% and 2% among men. They concluded that the prevalence was 1 $\frac{3}{4}$ to 3 times higher among women than men. Another study concluded with a 3-8 times higher prevalence rate for women than men for all types of EDs (Preti et al., 2009). The gender difference is most striking in the case of AN, where different studies have considered the gender ratio being 10:1 (Hoek & van Hoeken, 2003; Raevuori et al., 2009; Smink et al., 2012). Although the female-to-male ratio varies in studies and some studies have found a lower ratio, one can question whether the lower ratio in some studies originates from methodological weaknesses (Smink et al., 2012). Additionally,

the understanding of EDs in society as a ‘female disorder’ is stigmatizing and can result in males not reporting their difficulties. There is probably a number of unrecorded cases of males suffering from EDs, and therefore, the prevalence and gender ratio presented here can be misleading. Strother, Lemberg, Stanford, and Tuberville (2012) found that both the prevalence and incidence in males is increasing, and questioned whether this is a result of more men seeking help or being identified during general treatment. The general incidence rate for EDs has, however, remained relatively stable over time. Nevertheless, for teenage girls aged 15-19, researchers have found an increase in the incidence rate (Smink et al., 2012).

Consequences of eating disorders

EDs are associated with high psychiatric comorbidity, and are considered to have severe physical, psychological and social consequences (Halvorsen & Bergwitz, 2010).

Comorbidities. The presence of comorbid disorders varies according to the type of ED and its severity, which makes it difficult to compare results from different studies (Statens helsetilsyn, 2017). Symptoms such as depression and anxiety are common both in adolescents and adults with EDs (Hudson et al., 2007; Swanson, Crow, Le Grage, Swendsen, & Merikangas, 2011). Hudson et al. (2007) found a lifetime prevalence of 42.1% in AN, 70.7% in BN and 46.4% in BED for any mood disorder. Major depressive disorder was clearly the most prevalent disorder in all EDs. Other studies have found similar high comorbidity rates in patients with EDs, suggesting that 50-75% of the patients have comorbid severe depression or dysthymia and 4-6% meet the criteria for bipolar disorder (Braun, Sunday, & Halmi, 1994; Halmi et al., 1991).

Comorbid anxiety disorders are also prevalent. Hudson et al. (2007) found that 47.9%, 80.6% and 65.1% in AN, BN, and BED, respectively, met the criteria for any anxiety disorder. Specific phobia and social phobia were found to be the most prevalent for all EDs. For BN, PTSD shown a similar prevalence as the phobias (Hudson et al., 2007). Fairburn (2008) argues that depressive symptoms are especially common in patients with binge eating, and anxiety is more prevalent in patients with high levels of dietary restraint. Furthermore, he argues that the obsessional features that tend to be prominent in underweight patients is a partial consequence of being underweight. Studies indicate that about 25% of patients with AN and BN will fulfil the criteria for obsessive compulsive disorders (Braun et al., 1994; Halmi et al., 1991; Skodol et al., 1993). Many patients with EDs also report substance dependence or abuse. Research indicates that about 40% of patients diagnosed with BN are

reporting substance abuse, which is twice as much as patients diagnosed with AN (Halmi et al., 1991).

Additionally, studies indicate that EDs and personality disorders (PDs) often appear together. One meta study found that 60% of patients with an ED had comorbid PD (Rosenvinge, Martinussen, & Østensen, 2000). The percentage was even higher for inpatients. According to Fairburn (2008), it is particularly hard to diagnose PDs in patients with EDs. Many of them have suffered from an ED throughout adulthood, and the ED may be entangled into personality, making it difficult to differentiate between the ED and PDs. Traits like perfectionism and low self-esteem are common in the patient group and have likely been present before the development of an ED. PDs are, however, common for these patients. Many of the patients who often engage in self-injury or substance misuse fulfil the criteria for borderline PD (Fairburn, 2008). Jordan et al. (2007) found elevated prevalence of cluster B PDs for patients with BN or AN binge eating purging subtype. They also found elevated cluster C and anxiety prevalence across ED samples.

Physical consequences and somatic complications. AN, BN and BED result in different physical outcomes and will therefore lead to different somatic complications. Most of the somatic symptoms seen in patients struggling with AN are an expression of the body trying to adjust to undernourishment. Hence, most of the somatic symptoms are reversed when food intake goes back to normal and these do not need further treatment (Fairburn & Harrison, 2003). Some of them can, however, be life threatening or can provoke serious and persistent damage if not treated in time (Statens helsetilsyn, 2000). BED typically results in obesity with its associated medical complications. Pi-Sunyer (2002) lists type 2 diabetes mellitus, hypertension, dyslipidemia, cardiovascular disease, gallstones and cholecystitis, respiratory dysfunction, and increased incidence of some types of cancer, as medical complications caused by obesity.

Hypoglycemia often appears in patients struggling with an ED and is seen in cases of considerable undernourishment. Hypoglycemia is seen as a contributory factor for cardiac arrhythmia (Frostad, 2004; Rich, Caine, Findling, & Shaker, 1990). Hypokalemia is often seen when vomiting is frequent or in cases where the patient is abusing laxatives or diuretics. Hypokalemia seems to be a dispositive factor for cardiac arrhythmia. Different studies also show shortage in thiamin for patients struggling of a severe ED (Winston, Jamieson, Madira, Gatward, & Palmer, 2000). Serious lack of thiamin can lead to disturbances in cognitive functions (Frostad, 2004).

In young patients, one can see stunted growth and if prepubertal onset, failure of breast development. Other physical signs can be dry skin and fine downy hair (lanugo) on the forearms, on the side of the face and on the back. Many will also have cold hands and feet. Struggling with EDs can also lead to osteopenia and osteoporosis with heightened fracture risk (Fairburn & Harrison, 2003). Many studies have shown larger risk for osteoporosis in severe AN, and some have found the same risk in BN (Mehler, 2003). In patients with frequent vomiting there is a risk of electrolyte disturbances and dental damages because of acid erosion. Therefore, patients with EDs will often be in need of treatment by a dentist (Fairburn & Harrison, 2003; Frostad, 2004).

Cognitive consequences. Several studies have shown neuropsychological impairment in patients with EDs (Duchesne et al., 2004; Weider, Indredavik, Lydersen, & Hestad, 2015). Although cognitive deficits can be a consequence of serious underweight, there is evidence suggesting that this is likely not the only explanation. Some cognitive dysfunctions are found to disappear after treatment, while others remain stable (Duchesne et al., 2004). Research has pointed to the possibility that cognitive deficits seen in patients with EDs may be lasting, as a result of changes in the brain due to the durable underweight or premorbid disposing traits (Weider et al., 2015).

Social consequences. Many people with EDs also frequently experience difficulties when socializing, and it is not unusual for them to avoid social situations because of these difficulties. They are often caused by their fear of eating in front of others, the feeling of pressure to eat more than they are comfortable with, difficulties undressing in front of others or to be touched by others. Social situations like celebrations often involve eating together with family or friends and will for many patients be extremely anxiety provoking (Fairburn, 2008; Statens helsetilsyn, 2017)

Mortality and death causes. Although the mortality rates vary a lot between studies, all EDs have an increased mortality risk, especially so for AN. Studies show that for one decade, the mortality lies between 0% and 10%, but some researchers found it to be as high as 20% (Frostad, 2004; Smink et al., 2012; Statens helsetilsyn, 2000). A meta-analysis including 3006 patients, hospitalized for severe EDs, found an average ten-year mortality rate of 5.9% (Sullivan, 1995). It is not clear when the mortality is highest. Some studies found that the mortality increases with time, while others indicate highest mortality rate the first years after onset (Nielsen et al., 1998; Statens helsetilsyn, 2000). The most prevalent death causes are found to be suicide (27%) and somatic complications (54%) such as heart failure. In many cases (19%), however, the cause of death is unknown (Sullivan, 1995). Nielsen et al. (1998)

found that 'unknown reason' was the most common cause. These irregularities may reflect differences in the execution, or lack, of autopsies in different societies (Statens helsetilsyn, 2000).

Eating disorders and trauma

As described earlier, EDs are complex disorders. Studies have in recent years looked into the relationship between EDs and trauma, and several studies conclude that a significant proportion of the patients with EDs also report a history of trauma (Kong & Bernstein, 2009). They indicate that 45% of patients with EDs have a history of childhood abuse or trauma. For inpatients with EDs, the number is 48% (Rayworth, Wise, & Harlow, 2004; Rodriguez, Perez, & Garcia, 2005). The findings linking EDs with trauma have been extended from adults to children and adolescents, including boys and men. Trauma is shown to be more common in BN than other EDs (Brewerton, 2007).

Rayworth et al. (2004) concluded that women reporting childhood physical abuse were twice as likely to suffer from subclinical ED symptoms or meet the DSM-IV criteria for an ED than women reporting no abuse. For women reporting childhood sexual abuse and childhood physical abuse, the risk for developing ED symptoms were three times higher and four times higher for meeting the DSM-IV criteria for an ED, compared to women reporting no history of childhood abuse. Kong & Bernstein (2009) found emotional abuse, physical neglect and sexual abuse to be three significant predictors for EDs. They also found depression to be a significant mediator for the relationship between some forms of childhood trauma and eating psychopathology. This suggests that whether a traumatized individual experiences depression or not, is a better predictor for eating psychopathology than the traumatic experience itself.

Isomaa, Blackholm, and Birgegård (2015) also present exposure to traumatic events as a possible risk factor for developing EDs. Individuals can, however, experience a traumatic event without this causing a psychological impairment. Isomaa et al. (2015) emphasize that there need not be a relation between the experience of a traumatic event and the development of an ED.

Isomaa et al. (2015) also found that posttraumatic stress disorder (PTSD) had an impact on the severity of EDs, but that the impact was mediated by psychological distress. Brewerton (2007) concluded that trauma is not necessarily associated with greater ED severity. Several studies do, however, indicate higher probability of poor treatment outcomes for individuals with EDs exposed to childhood trauma or abuse and other violent acts at an

early age (Mahon, Bradley, Harvey, Winston, & Palmer, 2001; Rodriguez et al., 2005). Rodriguez et al. (2005) also found dramatically higher dropout and relapse rates for individuals with an ED who reported previous traumatic events compared to patients with no such history. Brewerton (2007) emphasizes that the trauma and PTSD symptoms must be satisfactorily addressed to achieve full recovery from the ED and all associated comorbidity.

Evidence based treatment for eating disorders

Today, a number of different psychological therapies are used for patients with EDs. Individual therapy for EDs is recommended for patients with AN. However, different systematic reviews conclude that no specific individual psychological therapy has shown to be favourable compared to others (Bulik, Berkman, Brownley, Sedway, & Lohr, 2007; Hay, Claudina, Touyz, & Elbaky, 2015). There is no convincing evidence that supports pharmacological treatment of patients with AN (Fairburn & Harrison, 2003). According to the National Institute for Health and Care Excellence (NICE), the recommended psychological treatments for AN are individual ED-focused CBT (CBT-ED), Maudsley AN treatment for adults (MANTRA) and specialist supportive clinical management (SSCM) (National Institute for Health and Clinical Excellence, 2017).

For BN and BED, there is strong evidence for cognitive behavioural therapy (CBT) as the most effective form of psychological intervention (Fairburn & Harrison, 2003; Waller et al., 2007). However, many patients with these disorders, do not benefit from CBT. Interpersonal therapy is also an effective treatment for patients with BN, although it shows less symptom change than CBT. Pharmacological therapy is also recommended for BN and BED, in contrast to AN (Fairburn & Harrison, 2003). The NICE guidelines recommend starting with guided self-help for both disorders. If this does not work, individual CBT-ED is recommended for BN and group CBT-ED should be tried before individual CBT-ED for BED (National Institute for Health and Clinical Excellence, 2017)

Cognitive behavioural therapy. Fairburn (2008) perceives EDs as fundamentally cognitive disorders, which makes CBT a natural treatment choice. There are, however, several forms of CBT and not all of them are evidence based. Both Fairburn (2008) and Waller et al. (2007) present evidence based CBT for EDs, but the one presented by Waller et al. (2007) will be in focus here. Like Fairburn (2008), Waller et al. (2007) recommend CBT based on a transdiagnostic model in which cognitions, thoughts and emotions are linked regardless of ED diagnosis. The aim is to treat the psychopathology, and not specific diagnoses.

Most patients with EDs are ambivalent to treatment. Therefore, working with motivation and to get an understanding of the patient's thoughts about participating in treatment will be essential in the beginning of the treatment course (Waller et al., 2007). Furthermore, it will be necessary to build a relationship with the patient through acquiring a common understanding about the patient's difficulties in everyday life. This can be done through developing a case formulation, which is a representation of the patient's difficulties in form of a diagram. The diagram should present what is maintaining the ED, and earlier antecedent factors if required. Additionally, psychoeducation is also an important theme in CBT, helping the patients understand their disorder and how to change their thinking (Waller et al., 2007)

Addressing cognitions is certainly central in CBT. Cognitive restructuring alone is, however, less effective. To change cognitions, it is important to include behavioural experiments to test the relevant beliefs. The idea behind behavioural experiments is that new knowledge or experience gathered will be used to alter the tested beliefs into more adaptive beliefs (Waller et al., 2007). Behavioural experiments are commonly used in relation to eating, weight and shape cognitions and feared consequences. Waller et al. (2007) also describes other central characteristics in CBT for EDs, like planning the treatment with the patient and setting an agenda for the session, while still maintaining an appropriate flexibility. Additionally, homework is often a central part of the treatment. Weight gain or stabilisation, which are often in focus in CBT for EDs, separates this specific treatment from CBT for other disorders. Late in the treatment course, relapse prevention will be a natural focus (Waller et al., 2007).

Treatment outcome of eating disorders

Reaching a conclusion regarding the treatment outcome of EDs is challenging. Couturier and Lock (2006) found a variation in recovery rates between 57% and 95%. The large variation in these rates may be a consequence of different definitions of recovery in different studies. While some studies evaluate outcome by calculating the portion of patients not meeting the diagnostic criteria for an ED or not reporting ED symptoms, other studies use weight or general psychological distress. Using the diagnostic criteria may be problematic as it is not unusual that patients treated for AN and BN will be in the OSFED group during the recovery process (Vrabel, 2009). Different definitions of recovery make it difficult to compare results across studies and treatment programs. In addition to different definitions,

recovery rate also depends on clinical characteristics as well as the duration of the follow up period (Steinhausen, 2002).

An exhaustive review of the outcome of AN, including 119 studies using different psychotherapeutic approaches, found large variations in the outcome parameters. On average, less than half of the patients recovered, one third improved and about 20% remained chronically ill (Steinhausen, 2002). A Norwegian prospective study, where the mean duration of follow-up was 14.4 years, found that 37% of patients had a favourable outcome, while 46% had a poor and 17% an extremely poor outcome (Rosenvinge & Mouland, 1990). The mortality was 10%, and in agreement with previous findings.

Rø et al. (2005) did a two-year follow-up on adults with chronic EDs after inpatient CBT. Of the participants available for the follow-up (90% of participants), 71% improved and 26% no longer met the DSM-IV criteria for an ED. Vrabel, Rø, Martinsen, Hoffart, and Rosenvinge (2008) found, at five years follow-up of the same patients, that 61% had improved and 39% did not meet the diagnostic criteria for an ED. They also found that 27% had no improvement over time.

As described by Rø et al. (2005), research shows that 30-75% of patients recover from AN and 50-70% recover from BN. So, studies consistently show that treatment is of no or limited success for a large portion of the ED patients. A critique of the psychotherapy research of EDs is that most outcome studies are based on adolescents or adults in their early twenties. There is a lack of studies examining the course and outcome of adults with longstanding EDs, who fail to respond to treatment and experience relapses (Rø et al., 2005).

Predictors and moderators of treatment outcome

One further critique of the psychotherapy research in EDs is that most studies concentrate on outcome, not taking the process of the course into account (Steinhausen, 2002). In the above-mentioned review, only some studies provided information on prognosis (Steinhausen, 2002). The review found a large variability of prognostic factors in the different studies included. Short duration of symptoms showed to be favourable, while chronicity led to poor outcome. The findings regarding age of onset were ambiguous. Among other factors, a good child-parent relationship is a favourable prognostic factor, while vomiting showed to be unfavourable. Several studies found that traits of histrionic PD indicated a favourable outcome, while obsessive-compulsive PD is associated with an unfavourable outcome. Comorbid obsessive-compulsive disorder (OCD) and socioeconomic status were found to have no effect on outcome (Steinhausen, 2002). Rosenvinge and Mouland (1990) found that

duration of illness, poor motivation for treatment, social withdrawal and poor family relations, were prognostic factors. In the 2-year follow-up of patients with chronic EDs mentioned above, there was not found any significant predictors for outcome (Rø et al., 2005).

Few studies have examined childhood trauma as a predictor for ED, but both clinical experience and available studies indicate an unfavourable prognosis (Mahon et al., 2001; Rodriguez et al., 2005). There has also been interest within the field for how personality and trauma affect the treatment of EDs. Vrabel, Hoffart, Rø, Martinsen, and Rosenvinge (2010) found that avoidant PD and child sexual abuse were predictors of the course of ED treatment. They interacted in predicting the severity of EDs in a long-term course, but interestingly avoidant PD only predicted the course in patients with child sexual abuse. So, childhood sexual abuse moderates the effect of avoidant PD on the course of EDs (Vrabel et al., 2010).

A recent systematic review of predictors, moderators and mediators of treatment outcome following manualised CBT for EDs, did not find any consistent predictors or moderators (Linardon, de la Piedad Garcia, & Brennan, 2017). This indicates that it is unclear for who and under what circumstances the treatment works. A remarkable limitation with many of the studies investigating predictors and moderators is that they are based on data collected for other purposes, like describing the sample or evaluating the treatment efficacy. Often, variables are not selected on the basis of theory, which is important for finding robust predictors and moderators of outcome (Linardon et al., 2017).

Mediators of treatment outcome

A general critique of psychotherapy research in general is that in spite of decades of research and thousands of studies, it remains unclear how and why psychotherapy leads to change (Kazdin, 2009). This critique is also valid in the treatment of EDs. So, even if there is convincing evidence for CBT as the most effective treatment of EDs, little is known about the mechanism through which the treatment operates (Kazdin, 2009).

In the above-mentioned systematic review of predictors, moderators and mediators of treatment outcome following CBT for EDs, it was concluded that only a few studies tested mediators of treatment outcome (Linardon et al., 2017). The review included 20 such studies, where eight of them were randomized controlled trials. Early change was found to be a consistent mediator of better outcome for all EDs. Furthermore, in the course of BN, reducing dietary restraint was associated with better behavioural outcome. This is in consistency with the cognitive behavioural model (Fairburn, 2008; Linardon et al., 2017). No other mediators were found in the review. Linardon et al. (2017) argues that due to lack of studies and

methodological limitations, the mechanisms producing change in the treatment course are still unclear.

In another study, there was found a reciprocal relationship between alliance and ED symptoms (Vrabel, Ulvenes, & Wampold, 2015). Their results indicate that low quality of alliance at the start of the therapy course predicted higher levels of ED symptoms throughout the therapy, and vice versa. Additionally, changes in alliance for a particular patient one week, predicted changes in ED symptoms the following week. This indicates that alliance is an important area of focus to get the best outcome possible.

Despite the argument that the examination of mediators is important to get the best treatment outcome possible and the fact that guidelines on how to examine treatment mediators exists (Kraemer, 2016), this has not yet been applied to ED research (Linardon et al., 2017). First, there are few studies examining mechanisms producing change. Second, looking further into them, many of them have methodological weaknesses. Few studies investigate the treatment processes by disaggregate between- and within-person effects (Curran & Bauer, 2011). Psychotherapy processes are typically modelled using the between-patient effect, which means the effect of the mean level of a time-varying predictor on the outcome variable (Curran & Bauer, 2011; Ketturat et al., 2016). A problem in the psychotherapy research, is that these results achieved from group-data are misattributed to individuals.

In the therapy session, the therapist will normally focus on how the patient is doing in different constructs or functioning relative to the patient in question. For example, is the patient less ashamed of her or his body than the patient usually is? For research to be relevant at this level of understanding, the hypothesis and analysis has to be at the within patient level, something which is only possible when studying intraindividual differences in repeated measures data (Curran & Bauer, 2011). Multiple assessments allow estimation of the patient's expected level of the relevant construct and to calculate the patient's deviance from that estimate at any time of measurement, giving information about the degree to which the patient differs from what is typical for that patient. The findings on the within-person level are not necessarily the same as those visible at the between patient level (Curran & Bauer, 2011). The combination of between-patient and within-patient indices reflect how clinicians think about therapy. The separation of the effects offers many new possibilities (Curran & Bauer, 2011). The separation can contribute to improvement of treatment through the possibility of giving an understanding of the mechanisms producing change in treatment.

An understanding of the mechanisms producing change is essential in order to improve the treatment, which is especially important in the case of EDs where the portion of non-responders is large. A better understanding of the mechanisms producing change in treatment will open up the opportunity to focus more on those mechanisms, during the course of treatment.

Aims and research questions

The overall aim of this study was to examine the course and outcome of longstanding EDs, and to investigate whether there are differences between the patients with and without childhood trauma in course and outcome. An additional aim was to assess possible predictors leading to change. The following research questions will be answered:

1. What is the course and outcome for patients with longstanding EDs receiving inpatient CBT?
2. Are there differences in the course and outcome between patients with and without childhood trauma?
3. Do problematic cognitions and therapeutic alliance predict change in ED symptoms from week to week during inpatient treatment?

Materials and methods

Study Design

The study was part of a larger project, a randomized controlled trial where patients were randomly assigned to one of two treatment conditions: CBT or Compassion-focused therapy (CFT). This study examines the process and outcome following CBT in a natural inpatient setting for patients with longstanding EDs with or without childhood trauma.

The patients were admitted to the unit for a total of 13 weeks, divided in 6 weeks inpatient treatment (phase 1), 2 weeks home stay, and 5 weeks inpatient treatment (phase 2). Patients that had been discharged for one year, also participated on a one-year follow-up with a duration of one week. Data was collected at four times: (1) Pre-evaluation, (2) Admission, (3) Discharge and (4) One-year follow-up. Data was, additionally, collected weekly to assess the treatment process.

Participants

All participants were voluntarily hospitalized at Modum Bad between November 2014 and March 2017 in groups of eight patients. Before admission, all patients participated in a four-day pre-evaluation. They were allocated to the treatment group based on inclusion criteria similar to clinical practice: (a) satisfying the DSM-5 criteria for an ED, either AN, BN or OSFED, and for half of the patients (b) have a history of childhood trauma. The exclusion criteria were: (a) current suicidal risk, (b) current psychosis, (c) ongoing trauma (e.g. current involvement in an abusive relationship; Vrabel, Wampold, Hoffart, Waller, & Goss, 2011). All patients were assessed by independent psychologists or psychiatrists with experience in diagnostic assessment. If inclusion criteria were met, the patients were placed on a waiting list for an average of 20 weeks before admission.

After the four-days pre-evaluation, 53 patients were eligible and agreed to participate. Five patients were, however, lost due to lack of eligibility at admission. Four of them did not longer meet the DSM-5 criteria for an ED, and they were all transferred to other appropriate treatment programs. One participant still met the criteria for an ED, but no longer wanted treatment.

The total sample thus consisted of 48 participants and included 94% women (N=45). Five patients dropped out before completing the treatment. They reported loss of weight gain, problems coping with weight gain or problems reducing the frequency of vomiting and binge-eating, as reasons for dropping out. One participant reported problems relating to other

patients with ED as a reason for dropping out. The participation rate at one year follow-up was considerably lower compared to the previous times of measurement. This was due to the fact that time since discharge was less than a year for 17 participants. Figure 1 gives an overview of the participation rate at different times of assessment.

The participants had all suffered from an ED for several years and had earlier been treated without success. Table 3 gives an overview of age, duration and earlier treatment for the sample. The distribution of ED diagnoses in the sample was: 25% AN, 35.4% BN and 39.6% OSFED. In addition, 42% of the patients had a history of childhood trauma. Most patients, 87.5%, met or had a history of meeting the criteria for comorbid disorders. The most prevalent disorders in this sample were affective disorders and anxiety disorders, met by 70.8% and 64.6% of the patients, respectively. Other comorbid disorders were PTSD (10.4%), body dysmorphic disorder (8.3%), substance addiction or abuse (12.5%), ADHD (2.1%) and PDs (2.1%). The patients were diagnosed with PD at the end of the treatment period where the ED symptoms expectedly had decreased. This was done to control for the symptomatological influence on personality traits.

Treatment

The treatment is considered a multicomponent program, including components such as individual therapy sessions and small group therapy sessions. For an overview over the different components, see Table 4. The group sessions included the eight patients and two group leaders delivering treatment. In addition to individual therapy delivered by a therapist, the patients also had individual milieu therapy. The milieu therapy was focused on the 'here-and-now' situation, symptoms and weighing. The individual psychotherapy went more in depth and focused on psychological conflicts and psychotherapeutic themes originating from the group sessions. Despite different sessions, the delivered treatment was exclusively manualised CBT (Vrabel, 2013).

The CBT that was given was adapted from the outpatient treatment for ED, postulated by Waller et al. (2007). This treatment is rooted in a transdiagnostic view of EDs, and the same elements and strategies were used independently of specific ED diagnoses. The treatment is seen as highly intensive psychotherapy focusing on the factors responsible for sustaining the ED. Present and future are in other words in focus, and the origins of the EDs are explored if needed. The treatment makes use of cognitive and behavioural strategies, as well as psychoeducation. The intention is to help the patients enhance their control over

eating and their life in general. This multicomponent treatment focuses on both psychological, physical and social functioning.

Nutritional rehabilitation is a very important component in the treatment of patients with ED. For the first 5 weeks at dinner and for the first four weeks at lunch, two therapists sit with the patients during meals. The therapists use CBT procedures, and function as role models for normal eating patterns. After meals, the patients divide into groups, and have no access to bathrooms for 30-60 minutes. After 5 weeks, the patients are gradually exposed to eating meals without the therapists, and they self-manage the time after meals and have access to bathrooms (Vrabel, 2013).

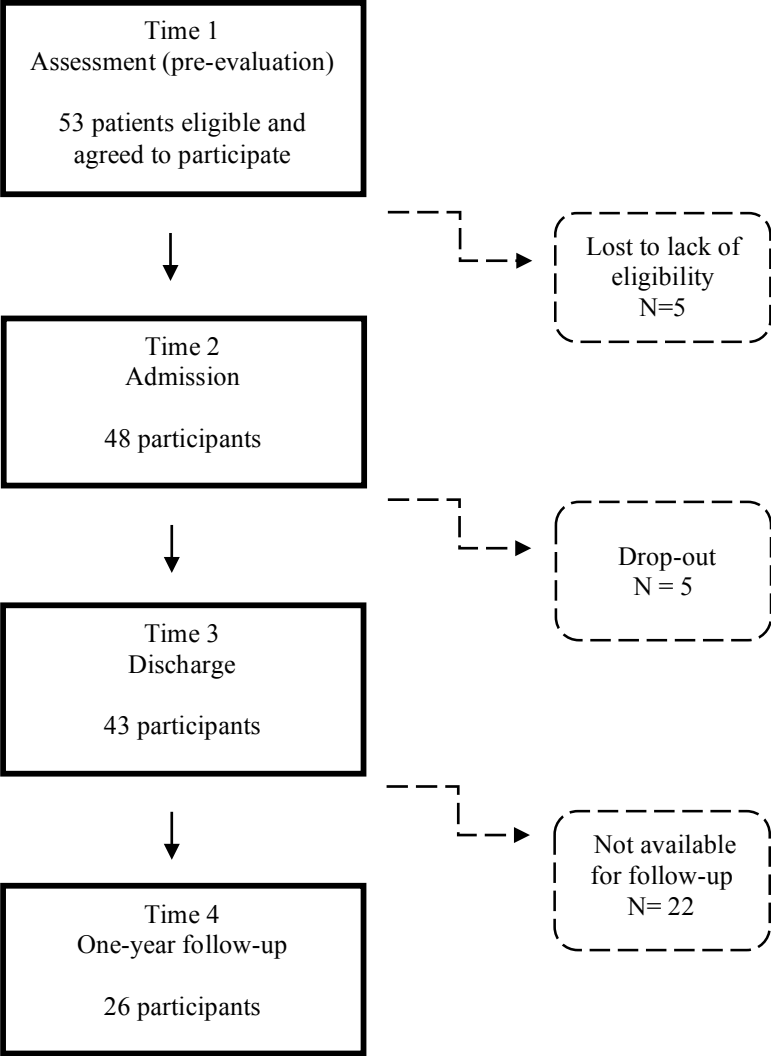


Figure 1. Flow chart illustrating the participation rate.

The psychotherapeutic sessions are divided into three phases. For the first three weeks (phase 1) the focus lies on psychoeducation and explaining the CBT model for EDs, and thereafter linking the patient's goals to the model. For many patients, understanding the model gives a sense of control and hope. The treatment is based on the interaction between thoughts, feelings and behaviours. The patients will learn that thoughts about the self, the world and the future will affect mood and behaviour. In the next three weeks (phase 2), the ED beliefs and other beliefs, like thoughts about shape and weight, are explored. The therapist will encourage the patient to look for alternative coping strategies. Normalizing eating is also in focus. The last 5 weeks (phase 3) are characterized by exposure and behavioural experiments. The patients work with transferring their changes to daily life. After 6 weeks, they have a 2 weeks home-stay where they can practice implementing the changes in everyday life. The final part of the treatment also emphasizes repetition and relapse prevention (Vrabel, 2013).

Table 4

Overview of different components in the inpatient treatment

Components	Specific CBT shared by the 8 patients in the group	Common therapy shared by all the members at the unit
Individual therapy sessions	2 each week/ 22 in total	
Group therapy sessions	6 each week/ 66 in total	
Milieu therapy sessions	1 each week/ 11 in total	
Meals	4 each day/28 each week	
Meeting after meals	10 each week/ 110 in total	
Physical exercise		2 each week/ 22 in total
Community meetings		1 each week/ 11 in total
Total (not including meals)	19 each week/ 209 in total	3 each week/ 33 in total

Note. Specific CBT is shared by the 8 patients in the group, while common therapy is shared by all the members at the unit. The table is retrieved from the treatment manual written for this study (Vrabel, 2013).

The unit

Modum Bad is a psychiatric hospital which offers a specialised treatment program for patients struggling with EDs or trauma. The unit is located in a rural district 1.5 hours west of Oslo, Norway. Modum Bad attempts to avoid a medical atmosphere by furnishing the buildings like typical Norwegian homes. The patients have private rooms. They share a living room and dining room with the other patients in the same group. The unit is 'open' and the patients with stable conditions are free to go outside. They have access to the rest of the hospital, including recreational rooms, a culture house, the gym and a church. An 'open' unit furnished as a home gives the advantage of exposing patients to potential triggers they will meet in everyday life (Vrabel, 2013).

Therapists

The team includes psychologists, milieu therapists (primary psychiatric nurses) and one occupational therapist who is the leader of the team. In addition, a dietitian and exercise physiologist assists the team. A psychiatrist was responsible for assessing and following up on the patient's medical condition, and if complications arose, refer to an appropriate medical specialist. The therapists have several years of experience delivering CBT. Competence and adherence to the protocol was ensured by weekly peer-supervised session from the architect behind the CBT-model, Glenn Waller.

Measurements

Diagnostic assessments.

Eating Disorder Examination (EDE). A Norwegian translation of the widely used investigator-based interview, EDE 12.0, was used to assess ED psychopathology and generate specific ED diagnoses (Fairburn & Cooper, 1993). The interview generates two types of data: Frequency of behavioural features of EDs, such as number of episodes of a specific behaviour, and subscale scores reflecting the severity of the ED psychopathology (Fairburn, 2008). The interview is comprised of four subscales: dietary restraint, eating concern, weight concern, and shape concern. These items are rated on a 7-point scale (0-6), with higher score reflecting greater severity or frequency. Additionally, the EDE assesses eating and meal patterns, and the frequency of specific behaviour like overeating or binge eating, and inappropriate weight compensatory behaviour (vomiting, laxative use, diuretic use, extreme restrictions or fasting behaviours). The EDE focuses on the last 28 days, except for the diagnostic items which are assessed and rated for specific durations.

EDE is a well-established assessment instrument and has gone through numerous revisions and editions. It is a primary assessment instrument in treatment studies of EDs (Grilo, 2005). Based on existing evidence, EDE is considered to be a valid instrument to distinguish between cases and non-cases of EDs (Berg, Peterson, Frazier, & Crow, 2013). The interview is also determined to be reliable in assessing EDs, even retrospectively (Rivaldi et al., 2004). Research supports test-retest reliability, interrater reliability and internal consistency (Berg et al., 2013).

Mini International Neuropsychiatric interview (MINI). MINI is a widely used structured diagnostic interview for classification of diseases. The interview focuses on classification of current disorders according to the DSM-IV-TR (Lecrubier et al., 1997). In this study, MINI was utilised to examine if the participants fulfilled criteria for disorders other than EDs, using the Norwegian translation (Sheehan et al, 2009). Research indicates the same reliability and validity for MINI as other well-known interviews, such as the Structured Clinical Interview (SCID-P) for DSM-III-R and the Composite International Diagnostic Interview (CIDI) (Sheehan et al., 2009). MINI has the advantage of being able to be executed faster. MINI is recommended by the Norwegian Directorate of Health for assessing psychiatric disorders (Sheehan et al., 2009).

Childhood Trauma Questionnaire Short Form (CTQ-SF). CTQ-SF is a self-reported retrospective questionnaire including 28 items developed to appraise maltreatment (Bernstein & Fink, 1998), and was used to measure possible history of childhood trauma. The questionnaire differentiates between five categories of childhood trauma: emotional abuse, physical abuse, sexual abuse, emotional neglect and physical neglect (Dovran et al., 2013). CTQ-SF is translated into Norwegian and validated in Norwegian clinical samples. Research indicates that CTQ is a valid and reliable screening questionnaire with acceptable psychometric properties (Dovran et al., 2013).

Several studies have argued that the boundaries to fulfil the diagnostic criteria for PTSD are too strict (Brewerton, 2007; Mylle & Maes, 2004). For that reason, childhood trauma was in this study defined as either child abuse or neglect exerted by parents or other adults operationalized by the CTQ-SF.

Measurements of outcome.

Clinical Impairment Assessment Questionnaire (CIA). The CIA was used to measure the severity of psychosocial impairment due to suffering from an ED. CIA is a 16 item self-report focusing on the past 28 days. The participants respond to each item on a Likert scale with the options ‘Not at all’, ‘A little’, ‘Quite a bit’ and ‘A lot’. The responses are scored 0, 1,

2, 3, respectively, where a higher rating indicates a higher level of impairment (Bohn & Fairburn, 2008). The items cover impairment in domains typically affected when living with an ED: mood and self-perception, cognitive functioning, interpersonal functioning and work performance. The aim of using CIA is to provide information about the severity of psychosocial impairment secondary to the eating psychopathology. Tests of validity and reliability support the use of this questionnaire (Bohn et al., 2008; Bohn & Fairburn, 2008; Fairburn, 2008).

Eating Disorder Inventory 2 (EDI-2). EDI-2 was used to assess ED symptoms and psychological variables believed to be associated with these symptoms. EDI-2 includes 91-items and 11 subscales: Drive for Thinness, Bulimia, Body Dissatisfaction, Ineffectiveness, Perfectionism, Interpersonal Distrust, Interoceptive Awareness, Maturity Fears, Asceticism, Impulse Regulation and Social Insecurity (Garner, 1991; Peterson & Mitchell, 2005). EDI-2 is widely used in research settings and clinical practice, and is translated into a number of languages (Peterson & Mitchell, 2005). In this study, the Norwegian version translated by Øyvind Rø and Jan H. Rosenvinge was used.

The internal consistency is found to be good for the first eight subscales, generally higher than .80 (Garner, 1991). Research also indicates a good test-retest reliability and validity for this measurement (Garner, 1991; Thiel & Paul, 2006; Wear & Owen, 1987). Both the reliability and validity are, however, less clear for the three newest subscales that were not part of the first edition (Garner, 1991; Peterson & Mitchell, 2005).

Beck Depression Inventory II (BDI-II). BDI-II is one of the most commonly used self-report questionnaires, measuring degree of depression in adolescents older than 13 years and adults (Beck, Steer, & Brown, 1996). BDI was first published in 1961, and the newest edition, BDI-II, was published in 1996. The Norwegian translation, used in this study, was published in 2005 (Siqueland & Kornør, 2011). The Inventory includes 21 items where every item describes a physiological or cognitive symptom of depression. The frequency of depressive features, like mood, self-evaluation, guilt, suicidal ideation and physical symptoms, are the target (Beck et al., 1996; Peterson & Mitchell, 2005).

On a scale ranging from 0 to 3, the respondents chose the statement best fitting their experienced severity of depressive symptoms (Beck et al., 1996). The patient's scores on each item are added, resulting in a total score. A higher score indicates a higher depressive severity (Peterson & Mitchell, 2005). A total score of 0-13 indicates no or little depression, 14-19 mild depression, 20-28 moderate depression and 29-63 severe depression (Beck et al., 1996).

Research on the Norwegian version indicates an adequate internal consistency, test-retest reliability and validity (Siqueland & Kornør, 2011).

PTSD Symptom Scale-Self-Rating (PSS-SR). The PSS-SR is the self-report version of the PTSD Symptom Scale Interview (PSS-I). Like the PSS-I, the PSS-SR includes 17 items assessing frequency and intensity of PTSD symptoms based on DSM-III-R (Foa, Riggs, Dancu, & Rothbaum, 1993). The questionnaire consists of three subscales: re-experiencing, avoidance and arousal. The questionnaire focuses on the last two weeks and participants respond using a four-point Likert scale: 0 = not at all, 1 = a little bit, 2 = somewhat, and 3 = very much (Foa et al., 1993). The questionnaire is scored by adding the responses of every item, which gives a total score between 0 and 51. A higher total score indicates a higher presence of PTSD symptoms. A score of 13 or higher indicates the likelihood of PTSD.

Research indicates adequate reliability and validity for this questionnaire, however, much of the research is based on combat veterans rather than victims of other types of trauma. Hence, less is known about the reliability and validity regarding other trauma victims, like survivors of childhood trauma. Nevertheless, in a sample of victims of recent assault, highly satisfactory psychometric properties for the PSS-SR were found (Foa, Cashman, Jaycox, & Perry, 1997).

Body mass index (BMI). Based on measured height and weight, body mass index was computed for each of the participants (dividing weight in kilograms by height in meters squared; Kg/m²).

Weekly measures to assess the treatment process.

Eating Disorder Examination – Questionnaire (EDE-Q). The EDE-Q is a widely used self-report questionnaire which assesses ED symptoms (Fairburn & Beglin, 1994). The questionnaire is a self-report version based on the EDE, which is seen as the gold standard for assessing eating disorder psychopathology by many researchers (Fairburn & Cooper, 1993).

The EDE-Q consists of four subscales: dietary restraint, eating concern, shape concern and weight concern. It consists of 33 items focusing on ED symptoms and attitudes over the past 28 days. The patients respond to the questionnaire on a scale from 0 to 6, where a higher score represents a greater level of psychopathology. The questionnaire also includes an assessment of the frequency of symptoms such as binge eating and compensatory behaviour (Mitchell & Peterson, 2005). The EDE-Q is scored the same way as the EDE (Fairburn, 2008). During the weekly measurements in this study, a revised version, which took the last 7 days into account instead of the last 28, was used.

Research suggests that the EDE-Q is a valid and reliable instrument to assess attitudinal features of EDs, although the reliability for the behavioural features is somewhat lower (Calugi et al., 2017; Peterson & Mitchell, 2005; Rose, Vaewsorn, Rosselli-Navarra, Wilson, & Weissman, 2013).

Working Alliance Inventory-Short Revised (WAI-SR). The WAI-SR is a 12 item self-report questionnaire used to measure the therapeutic alliance in individual therapy in this study. The questionnaire is based on the widely used Working Alliance Inventory and consistent with Bordin's model of alliance (Hatcher & Gillaspay, 2006). The questionnaire consists of three subscales: agreement between patient and therapist on the goals of the treatment (goals), agreement between patient and therapist about the task to achieve these goals (tasks), and the quality of the bond between the patient and the therapist (bond) (Paap & Dijkstra, 2017). The items are rated on a 7 point Likert scale ranging from 1 = 'never' to 7 = 'always' (Munder, Wilmers, Leonhart, Linster, & Barth, 2010). The psychometric properties for the WAI-SR are found to be good, also in an inpatient setting (Munder et al., 2010).

Automatic Thought Questionnaire (ATQ). The ATQ is a self-report questionnaire developed to assess negative automatic thoughts related to depression (Hollon & Kendall, 1980). The original version of the questionnaire consists of 30 items. In this study only 10 items of the Norwegian translated version were used. The items are rated on a five-point scale from 1 (not at all) to 5 (all the time). The measure is scored by adding the individual score of every item, which gives a total score. A higher total score reflects a higher frequency of negative automatic thoughts. The Norwegian version of the questionnaire has shown adequate reliability and validity (Chioqueta & Stiles, 2004).

Ethical perspectives

Information about the study was given to all participants before they agreed to participate, and all participants provided written informed consent. Approvals from the Regional Committees for Medical and Health Research Ethics (REK, no. 2014/836) and Norwegian Centre for Research Data (NDS, Personvernombudet) were collected. Data was collected in accordance with Norwegian laws. The treatment given in this study is part of the standard treatment program at Modum Bad and was not considered to imply any further risk for harmful effects in comparison to the standard psychotherapy given at the hospital.

Statistical analyses

This study aims to assess the course and outcome in patients receiving inpatient CBT, and evaluate possible differences in patients with and without childhood trauma. Additionally, the study aims to examine possible predictors for change. This required the use of different statistical analyses. To assess outcome and differences between groups, analyses of variance (ANOVAs) were used. A multilevel mixed model was used to test for possible variables predicting change in ED symptoms.

The statistical analyses were executed using the Statistical Package for Social Sciences (SPSS), version 24.0. In the analyses, p-values less than 0.05 were considered statistically significant.

Clinically Significant Change

Clinically significant change was used as a complementary method to ANOVA. Its purpose was to assess clinical meaningful changes in ED and depression symptoms at discharge and one-year follow-up. Within ED treatment, a common and meaningful way of defining clinical significant change, is having ED features less than one standard deviation above the community mean (Fairburn et al., 2009). This was the definition used in this study.

Danish norms were used due to the lack of Norwegian community norms for the EDI-2 (Clausen, Rokkedal, & Rosenvinge, 2009). Norwegian female community norms were used for the BDI-II (Siqueland & Kornør, 2011).

Analyses of treatment outcome and between-group differences

The first research question asks what the course and outcome for the patients is. The second research question asks whether there are differences in the course and outcome of patients with and without childhood outcome. These questions were explored together running a *mixed model ANOVA*. The mixed-model ANOVA was executed four times, one for each of the different outcome variables: ED symptoms (EDI-2), trauma (PSS-SR), depression (BDI-II) and psychosocial impairment related to ED features (CIA). Only three times of measurement were included in the analyses: pre-evaluation, admission and discharge. This was a result of the low participating rate at one year follow-up and the requirement of complete data sets in ANOVA.

The lasting treatment effect was assessed in a separate analysis including all four times of measurement. Differentiation between groups was not executed in this analysis due to the

lower participating rate at one year follow-up. As a result of only including within-subject variables, a *repeated-measure ANOVA* was chosen. Four analyses were conducted, one for each of the outcome variables described for the mixed-model ANOVA above.

A *repeated-measures ANOVA* was also used to assess change in BMI over three times of measurement. Weight gain was only a purpose in underweight patients, excluding patients with a normal weight, overweight or obesity. Therefore, only patients with a BMI less than 20 at pre-evaluation were included in this analysis. As a result of a lower participant number, there was not differentiated between groups in this analysis.

In all analyses, a significant *p*-value was followed-up with a post hoc test to discover where the differences lie. For each treatment group, all unique combinations are compared using pairwise comparisons in SPSS. This allows testing for familywise error, the error rate across statistical tests conducted on the same data, by correcting the level of significance for each test such that the overall Type I error rate across all comparisons remains at .05 (Field, 2013).

Before conducting the analyses, different assumptions were tested for. The assumptions regarding the variables were found to be met. Normality was tested for using the Shapiro-Wilk Normality test. The patient's scores on the questionnaire measuring PTSD symptoms, PSS-SR, were found to be significantly different from a normality distribution. The lack of normality is important to keep in mind when evaluating the credibility of these results. Outliers were detected using the Explore window in SPSS. Few outliers were found, and their nature was further investigated. A score of 0 in EDI-2 was identified as an outlier. This was likely incorrectly coded, and therefore removed. Some outliers were not removed, as they were deemed plausible scores. For instance, a patient's BMI score of 15. This one of the DSM-5 criteria for severe AN, and therefore, a plausible score in this sample.

The analyses were conducted two times, one time including outliers and one time excluding them, showing that the removal of outliers did not affect the results. Therefore, outliers were not removed in the results presented below. The fact that the scores at different times of measurement will be related in a repeated measure ANOVA, raises the need for the assumption of sphericity. Sphericity refers to the equality of variances between conditions (Field, 2013). To test for sphericity, the Mauchly's test was used. In cases where the test was statistically significant, assuming differences in variance between the levels of treatment, the sphericity was violated and corrected using the Greenhouse-Geisser estimate.

In the outcome analyses, missing data was 18.8% (N=9) for EDI, 18.8% (N=9) for BDI, 20.8% (N=10) for CIA, 31% (N=15) for PSS-SR and 12% (N=3) for BMI.

Analyses of treatment process and predictors for change

The third research question asks whether problematic cognitions and therapeutic alliance predict weekly change in ED symptoms. To examine these two possible predictors for change, a *multilevel mixed model* was used.

The model gives the advantage of simultaneously addressing within- and between-person questions about change, meaning descriptions of both how each person changes over time and how these changes differ across people (Curran & Bauer, 2011; Curran, Obeidat, & Losardo, 2010; Field, 2013). The analysis was accomplished using the Linear Mixed Models in SPSS. The data set of weekly measures included 11 times of measurement for each patient and was vertically designed, as required to accomplish multilevel model analyses (MLM). The assumptions for using MLM, like normality for the residuals and homogeneity of variance, was found to be met.

Several growth curve analyses were conducted to examine the possible predictors for change in ED symptoms. EDE-Q served as the dependent variable, while general cognitions, specific cognitions and therapeutic alliance served as predictor variables in different analyses. General cognitions were measured using the total score of the 10 items in the ATQ. Specific cognitions were measured using subscales in EDE-Q, where dietary restriction was the dependent variable and the mean of the three subscales eating-concern, weight-concern and shape-concern was used as the predictor variable. Therapeutic alliance was measured using the three subscales in WAI: goals, tasks and bond.

The first step in the analysis was to build a model for the dependent variable. As recommended by Singer and Willett (2003), the analyses started by building a simple model which gradually develops into a more complex one. At first, the models just included fixed intercepts and no random effects. Subsequently, a random intercept and then a random effect of time was added. Whether a linear or quadratic model yielded the best fit to the data was tested for. There was also tested for homoscedastic and heteroskedastic variance over time and covariance structure, such as unstructured (UN), unstructured correlations (UNR), first-order autoregressive (AR1) and Toeplitz (TP). After adding a new variable, like making the parameters random, the fit of the new model was compared with the older model. The comparison was based on the likelihood-ratio test, $-2LL$, where a smaller value indicates a better fit between the model and the data. As recommended for studies when the time effect is of interest or attributional to the study design, the time effect was not controlled for and the predictor variable was person-mean centered (Wang & Maxwell, 2015).

Models for each of the outcome variables were conducted. Both for the EDE-Q total score and for the EDE-Q subscale 'dietary restraint', a linear model with an unstructured covariance structure for the random effects resulted in the best fit. After finding the model of best fit, the analyses of prediction were conducted, including the predictor variable in addition to the dependent variable. The outcome variables were lagged to establish a potential relationship between the predictor and outcome variable. This allowed to assess whether a change in the predicted score one week was related to change in the outcome variable the next week.

Characteristics of interest in the analyses were intercepts, slopes and the interaction effect between intercept and slope. Estimated random effects were of interest to say something about the level 1 residual variance, variance among the intercepts, variance among the slopes, and the covariance among them.

In the 11 weeks of measures the missing data was 10.2% for EDE-Q, 46% for general cognitions and for the WAI subscales: goals 37.9%, tasks 39.4% and bond 35.4%. The high missing rate on cognitions was due to the inclusion of the questionnaire at a later point in the study, and the data is argued to be missed at random. The high missing rate on WAI subscales was due to the fact that the questionnaire was included in week two after they have met their therapist. The high missing percentage is compensated for using a powerful statistical analysis which does not require complete data sets to estimate the relevant parameters.

Results

Primary treatment outcomes

A mixed-model ANOVA was run to assess possible changes in symptoms of EDs, depression, trauma and psychosocial impairment for the overall group and to compare the outcomes in the trauma and no-trauma group. Sustained change measured at one-year follow-up was assessed in a separate analysis using a repeated-measures-ANOVA, only including the participants participating at the follow-up. A repeated-measures ANOVA was also used to assess change in BMI over three times of measurement.

EDI-2. There was a significant main effect of time on ED symptoms, $F(2, 72) = 39.34, p < .001, \eta^2_p = .522$. This indicates a different rating of ED symptoms from pre-evaluation to discharge for the overall group. Table 5 shows a significant reduction in ED symptoms from admission to discharge, compared to a non-significant reduction from pre-evaluation to admission. At discharge, 43.6% of the patients reported ED symptoms less than a standard deviation above the community mean. Results show a non-significant group by time interaction, $F(2, 72) = .664, p = .518, \eta^2_p = .018$, which indicates that the two groups, trauma and no-trauma, do not respond differently to the treatment. The effect of trauma was not significant, $F(1, 36) = 2.50, p = .142, \eta^2_p = .059$. This suggests that the rating at the different times of measurement were not significantly different between the groups, although Table 5 shows that ratings at pre-evaluation and admission lie approximately 20 points higher for the trauma-group compared to the non-trauma group, resulting in a medium effect size ($d = 0.54$).

BDI-II. The high mean scores in the BDI-II questionnaire, shown in Table 6, indicate an experience of severe depressive symptoms for a large portion of the patients. Results indicate a significant reduction in depressive symptoms over time for the overall group, $F(2, 61) = 30.66, p < .001, \eta^2_p = .453$. The trauma by time interaction was non-significant $F(2, 61) = .125, p = .845, \eta^2_p = .003$, meaning that the groups do not respond differently to the received treatment. Table 6 shows a non-significant change in symptoms from pre-evaluation to admission, but a significant reduction in both groups from admission to discharge. There was, however, a significant difference between the groups in rated depressive symptoms, $F(1, 37) = 4.81, p < .05, \eta^2_p = .115$, meaning that the trauma group displayed significantly higher levels of depressive symptoms compared to the non-trauma group.

At admission, 11% of the trauma patients and 19% of the non-trauma patients reported depressive symptoms less than one standard deviation above the mean in the community

sample. At discharge, the number were 38 % and 60 % for the trauma and no-trauma group, respectively. At one-year follow-up the numbers were 25% for the trauma-group and 45% for the no-trauma group.

CIA. Results indicate a change in reported impairment between the three times of measurement for the overall group $F(2, 56) = 18.83, p < .001, \eta^2_p = .343$. There was no significant interaction between trauma and time, $F(2, 56) = .350, p = .652, \eta^2_p = .010$, which implies that the two groups do not respond differently to treatment in reducing the experienced impairment. Furthermore, there was no significant difference between the groups, $F(1, 36) = .375, p = .375, \eta^2_p = .022$, which indicates that the groups did not differ in reported impairment at the different times of measurement. Table 7 does, however, show a significant increase in reported impairment from pre-evaluation to admission for the trauma-group. One can also see the same tendency in the non-trauma group ($d = 0.59$), although the increase was smaller and not significant ($p = .051$). Both groups showed a significant reduction in experienced impairment from admission to discharge.

PSS-SR. Results display no significant change in trauma symptoms for the overall group, $F(2, 51) = 1.54, p = .225, \eta^2_p = .05$. As expected, there was a significant difference between the groups in reported trauma symptoms at the different times of measurement, $F(1, 31) = 22.59, p < .001, \eta^2_p = .422$. However, no significant interaction between trauma and time was found, $F(2, 51) = .45, p = .930, \eta^2_p = .001$, not indicating different responses to treatment between the groups. Table 8 gives an overview of mean differences between the times of measurement for the two groups and the sample in total.

BMI. Results from the repeated-measures ANOVA indicate a significant change in weight as a function of time for the patients that had a BMI below 20 at pre-evaluation, $F(2, 33) = 69.32, p < .001, \eta^2_p = .768$. Pairwise comparisons, listed in Table 9, show a non-significant change from pre-evaluation to admission and a significant change from admission to discharge.

One year follow-up

Results listed in Table 10, show a non-significant change from discharge to one-year follow-up in all measurements, which indicates a sustained effect of treatment on eating psychopathology (EDE-Q), depression (BDI-II) and experienced impairment due to the ED (CIA). From discharge to one year follow-up, there was a nearly absent reduction in ED symptoms, $MD = 1.06, SD = 6.63, d = 0.03$ and an almost absent increase in psychosocial

impairment due to the eating psychopathology, $MD = -1.29$, $SD = 3.22$, $d = 0.11$. At one year follow-up, 31.60% of the patients reported ED symptoms within one standard deviation above the mean in the community sample, compared to discharge where the percent was 43.60. For the depressive symptoms, there was an increase from discharge to one year after, although not significant, $MD = -4.71$, $SD = 2.09$, $d = 0.36$. The ratings of trauma symptoms were also stable from discharge to one year follow-up, $MD = 2.20$, $SD = 1.67$, $d = 0.18$.

Results of weekly measures

EDE-Q. As part of the disaggregation of within- and between-effects, the development of ED symptoms over time was estimated using multilevel models. As shown in Table 11, the model indicates a significant intercept and time, meaning that the ED symptoms at session one were not zero and that the ED symptoms decreased over time. The model also shows a significantly random intercept and time, indicating that the patients had significantly different starting points as well as symptom change over time. However, there was no significant interaction between the intercept and time. This denotes no relation between the starting point and change by time. So, whether patients start out with high or low levels of ED symptoms, it does not affect the symptom change over time.

For the EDE-Q subscale ‘dietary restraint’, Table 11 shows similar results as for the global score on EDE-Q. The results indicate that ‘dietary restraint’ was rated significantly different from zero at session one. There was also a significant reduction in ‘dietary restraint’ over time. Significant random intercept and time, indicate a different starting point for the patients as well as symptom change over time. No interaction effect between random intercept and time, implies that the level of specific problematic cognitions at session one did not affect the course of change over time.

Predictors of change in eating disorder symptoms

EDE-Q was used as a dependent variable in a multilevel mixed model to assess for possible variables predicting change in ED symptoms. The model included random intercepts and slope and fixed intercept. Two models will be presented. The first one includes between- and lagged within-patient effects of the predictor variable. In the second model, the interaction of between- and lagged within-patient effects of the predictor variable was added. Table 12 and 13 gives an overview of fixed and random effects.

General problematic cognitions. The results show a significant between-patient effect ($p = .038$), indicating that a greater level of general problematic cognitions measured

with ATQ at the beginning of therapy predicted higher levels of ED symptoms across therapy. There was no significant within-person effect ($p = .222$), meaning that a deviance from the patients predicted general problematic cognitions in one week (more or less problematic cognitions than predicted) did not lead to changes in ED symptoms the subsequent week. There was no significant within-between interaction.

Specific cognitions related to eating psychopathology predicting restriction. There was a significant between-patient effect of the total concern about eating, shape and weight on dietary restraint ($p < .001$), suggesting that a higher concern in the first session predicted higher levels of dietary restriction throughout the treatment. There was no significant within-patient effect ($p = .339$). So, a particular patient's deviation from their own predicted score representing the total concern of eating, shape and weight one week, did not predict changes in dietary restraint the following week. There was either no interaction of between-patient and within-patient effects.

Therapeutic alliance. The assessment of alliance as a predictor for change in ED symptoms was executed separately for the three-subcales to also assess for possible differences between them. Results show that agreement on goals of therapy at the start of therapy predicted ED symptoms across time, indicated by a significant between-person effect ($p = .032$). So, patients reporting a higher agreement on goals at the treatment start, experienced a higher decrease in ED symptoms. Results also show a significant within-person effect ($p = .022$), meaning that patients reporting a higher agreement on goals than predicted for the week will experience a greater reduction in ED symptoms the following week. There was no interaction of between- and within-person effects ($p = .105$)

Results show no between-patient effect when the subscale 'agreement on the tasks of therapy' was yielded as a predictor variable ($p = .052$), although the result was close to statistically significant. A non-significant result means that the degree of agreement on tasks of therapy reported by the patient at first session did not predict decrease in ED symptoms over time. However, there was a significant within-person effect ($p < .001$), signifying that if the patients deviate from the predicted agreement on task of therapy one week, this will predict change in ED symptoms the subsequent week. No interaction effect was found for the between- and within-patient effects.

Furthermore, results show that the patient's experience of the quality of the affective bond with the therapist at the beginning of the treatment course, does not predict change in ED symptoms across time. This is shown by a non-significant between-patient effect ($p = .338$). Additionally, there was no significant within-person effect ($p = .687$), indicating that if

the patient's experienced quality of the affective bond deviates from the predicted value one week, it will not predict change in ED symptoms the following week. The interaction of the between- and within-patient effects was also non-significant.

Discussion

The objectives of this thesis were to examine the course and outcome of inpatient CBT for patients with longstanding EDs. Additionally, there was an aim to assess differences in the treatment course and outcome between patients with and without childhood trauma. Lastly, an exploration of problematic cognitions and therapeutic alliance as predictors for weekly change in eating psychopathology was of interest.

One of the main findings in this study was a significant reduction in symptoms of EDs and depression as well as in psychosocial impairment from admission to discharge. These results were found both in the trauma and the no-trauma group, and indicated no differences in course between the groups. The trauma-group was, however, found to suffer from higher severity of depressive symptoms at the different times of measurement. Moreover, problematic cognitions and therapeutic alliance at the beginning of the treatment course were found to predict ED symptoms over time. Nevertheless, only the changes in two alliance subscales, 'goals' and 'tasks', for a particular patient one week, were found to predict changes in ED symptoms the following week.

Outcome for the overall group

The reduction in ED symptoms, depressive symptoms and psychosocial impairment seen from admission to discharge was found to be sustained at one year follow-up. At discharge, 43.6% of the completers reported ED symptoms within a standard deviation above the community mean. A year after, this number was reduced to 31.6 %. Together, this indicates that CBT serves as an effective treatment in reducing ED symptoms for a large portion of the patients, also seen a year after discharge. This is a promising result taking into account the long duration of illness in these patients ($M = 15.23$ years), a high severity of symptoms as well as several earlier treatment failures. However, since this is a naturalistic explorative study, it is not clear whether the treatment or other conditions cause this change. On the other hand, the results also indicate that most patients report ED symptoms higher than one standard deviation above the mean in the community sample. So, a large portion still show high levels of ED symptoms after treatment. In other words, there is a difference between patients in how well they benefit from the treatment. Why some patients benefit better from treatment than others, will be discussed in a separate section below.

To compare the treatment outcome found in this study with other similar studies, is challenging. This study is argued to be transdiagnostic, including patients with AN, BN and

OSFED. Additionally, all of the patients had longstanding EDs and nearly half of them reported childhood trauma. The given treatment was inpatient CBT. Few other studies examining treatment for EDs are designed like this, which complicates the ability to compare results. Furthermore, the definition of outcome is even more challenging. In addition to statistically significant change, this study used CSC, defined by scores within a standard deviation from the community mean, to assess for reliable change. However, the definition of reliable change differs across studies. For instance, other studies define reliable changes as normal weight, lack of diagnosis or symptoms, or reported symptoms more than two standard deviations from the mean in the dysfunctional group. Different definitions of outcome make it hard to compare results across studies of outcome.

A study defining CSC similarly to this study, is a randomized controlled trial examining outpatient CBT for a transdiagnostic ED sample with a 60 weeks follow-up (Fairburn et al., 2009). Results from this study indicate a reliable change at the end of treatment for 52% of the BN patients and for 53.3% for patients diagnosed with EDNOS. At follow-up, the percent was increased to 61.4% for the BN patients and reduced to 45.7% for the EDNOS group. This is a study supporting the efficacy of transdiagnostic CBT for ED. A reason for the higher percent of reliable change found in that study compared to the one presented in this thesis, can be the exclusion of patients with AN and a BMI below 17.5. The present study is based on a sample which can be seen as more complex, also including patients with high psychiatric comorbidity, BMI lower than 17.5 and longstanding AN which are seen as hard to treat. However, the study by Fairburn et al. was a randomized controlled trial, while this is a naturalistic explorative study, part of a randomized controlled trial.

Fairburn et al. (2009) states that, in their study, the patients struggling with ‘complex’ additional psychopathology had a poorer outcome. There is an agreement across studies, that patients with a more complex psychopathology do not have as desirable treatment outcomes as patients representing less complex ED cases (Fairburn et al., 2009; Vrabel et al., 2010). A natural assumption is that these patients, due to a complex psychopathology, would be in need of a longer treatment course, more intense treatment or a treatment including other elements. For instance, patients with EDs and trauma can be in need of treatment focusing more on the trauma symptoms. Vrabel (2009) maintains that ED features can serve as a coping strategy to regulate distress related to abuse. For instance, by using food as a distraction for difficult cognitions or feelings. When removing the patient’s ability to regulate distress with ED features and the distress itself is not reduced, the patient will be in need of other ways of coping with it.

Results from this study show no change in trauma symptoms from admission to discharge. One can question if the patients with childhood trauma in addition to the ED, representing more complex psychopathologies, will benefit more from a treatment orientation better taking into account the different aspects of their psychopathology. Brewerton (2007) emphasizes that the trauma and PTSD symptoms must be satisfactorily addressed to achieve full recovery from the ED and all associated comorbidity. This study is, as mentioned, part of a larger study comparing CBT with CFT. One of the hypotheses in the overarching study is that CFT takes the complex psychopathology of patients with an ED and childhood trauma better into account.

Differences between the trauma and non-trauma group

Studies have pointed to trauma as a predictor for a non-favourable outcome in EDs (Mahon et al., 2001; Rodriguez et al., 2005; Vrabel et al., 2010). However, it was not possible to find studies comparing patients with EDs with and without childhood trauma with respect to the course and outcome of inpatient CBT like it was done in this study. The trauma group reports a higher mean symptom score on all measurements (ED, depression, trauma and psychosocial impairment) compared to the non-trauma group, although the difference is only significant for depressive symptoms and trauma. The differences between the groups in reported ED symptoms yielded a medium effect size ($d = 0.54$). In response to treatment, there was no difference between the groups. So, although the trauma group showed a higher severity of symptoms, they responded as well to the CBT as the non-trauma group. It is worth mentioning that this study does not take differences between the groups after discharge into account, although childhood sexual abuse is found to predict poorer outcome after inpatient treatment for patients with longstanding EDs (Vrabel et al., 2010).

This study only looks at significant differences at pre-evaluation, admission and discharge, and not at one year follow-up due to the low participation rate. So, differences between the groups in changes after treatment are less known and have to be examined later when the rest of the participants have concluded their one year follow-up. However, 33% of the trauma patients and 30% of the non-trauma patients fell within one standard deviation of the community mean on eating psychopathology at one year follow-up. Due to the fact that only a total of 19 participants answered this questionnaire at follow-up, small differences could affect the percentage greatly. The effect does, however, indicate that patients from the trauma group also showed sustained effect one year after discharge. Although no difference in CSC between the groups can be seen at one year follow, there is a risk for later relapses in

these patients, especially for the trauma group due to the more complex psychopathology and longer duration of the illness.

The lack of other similar studies examining differences in treatment response, makes it difficult to compare the findings from this study with earlier research. Nevertheless, a non-different response to treatment for the two groups, found in this study, indicate that during the treatment course, inpatient CBT is as effective in reducing symptoms in the trauma-group as in the non-trauma group. So, the CBT is not a treatment orientation favouring the non-trauma patients. This is an important finding, due to the interest in whether CBT is less effective in more complex cases of EDs. However, since the trauma group had a higher severity of symptoms, they may need a treatment lasting longer than 3 months. There is, nonetheless, no evidence from this study suggesting that the trauma-group needs a different treatment than CBT, although there is need for more studies designed to investigate this question. The current study does not analyse group differences after discharge. If there are more relapses in the trauma group compared to the non-trauma group in the future, this supports the argument of a poorer lasting effect of treatment for the trauma group. One question is whether the lack of reduction in trauma symptoms during treatment is responsible for more frequent relapses. The patients, especially in the trauma group, still show much psychological distress after treatment, and they may experience relapse because they feel the need to use ED features to regulate that distress. Treatment in more complex ED cases needs more attention in the research field. The understanding of the effect of trauma on treatment course and outcome is far from accomplished.

Trends of the treatment course

The patients report high levels of psychosocial impairment due to the ED at pre-evaluation. At admission, however, the results indicate a significant increase in reported impairment for the trauma-group and a similar tendency, although not significant, in the non-trauma group ($p = .051$). Only looking at the changes from admission to discharge, one can see a significant decrease. Nonetheless, due to the increase from pre-evaluation to admission, the reduction in reported impairment from pre-evaluation to discharge is non-significant. There can be many reasons for why the patients report a higher impairment at admission than pre-evaluation. One can ask if the increase is caused by the hospitalization, that will have an impact on the personal and social life of the patient. For example, by reducing the ability to be with family and friends, working and doing other things of interest. The psychiatric hospital lies in a rural district and the patients come from all over Norway, so many patients will be a

long way from home. Additionally, the hospitalization may trigger thoughts of being unsuccessful and opening the patient's eyes to the impact of the ED on their life.

There was no effect on trauma symptoms over time, which may be caused by a variety of reasons. For the non-trauma group, not reporting high levels of symptoms, trauma symptoms are likely to be less in focus and change is not likely to be a goal. For the trauma-group, however, the reported symptoms are seen as high and should receive considerable focus in therapy. It may be that the patients and the therapy do not focus on these symptoms when participating in ED treatment, and rather focus on the ED symptoms. Furthermore, it could be possible that the patients are in need of a longer period of treatment before the trauma symptoms are reduced. The trauma-patients in this sample have experienced trauma early in their life, which can be hard to relieve. So, whether the CBT for EDs is limited in its ability to address trauma symptoms satisfactorily can be questioned.

In addition to reporting high scores of ED symptoms, the patients also scored high on depression. The mean score for the trauma group at admission corresponds to severe depression, while the mean scores of the non-trauma group is equal to moderate depression. The high scores of depressive symptoms are likely to have an effect on the treatment, as it may impact the patient's motivation for treatment as well as memory. This can inhibit the patient's ability to understand and remember elements from the therapy sessions. The high levels of depression can be a possible mechanism explaining why some patients struggle with getting a desirable outcome of the treatment.

Predictors and mediators in treatment

The role of cognitions and alliance were examined separately using a patients' standing relative to other patients (between-patient effect) and a patient's standing in any particular session relative to the expected level for that patient in that session (within-patient effect).

Cognitions. Analyses examining general problematic cognitions (ATQ) and specific ED cognitions (measured as the mean score of the three EDE-Q subscales: Eating Concern, Weight Concern and Shape Concern) showed both a significant between-patient and a non-significant within-patient effect. This means that a high level of problematic cognitions at the beginning of the treatment course predicted high levels of ED symptoms throughout the course, and that a high level of specific ED cognitions predicted higher levels of dietary restraint in each of the weeks in treatment. The non-significant within-patient effect indicate that a reduction in the general problematic cognitions or specific ED cognitions for a specific

patient one week, did not predict a reduction in ED symptoms or dietary restraint the following week.

So, patients with less concern about eating, shape and weight at the beginning of the treatment course will report less dietary restraint at each week of treatment, but a particular patient becoming less concerned about eating, shape and weight one week, does not lead to changes in dietary restriction the following week. The loss of significant results here can be a result of the fact that the subscale 'dietary restraint' measures cognitions or attempts to reduce food intake rather than behaviour. According to Fairburn (2008), cognitions lead to behaviour, and behaviour leads to cognitions. Therefore, behavioural changes will lead to cognitive changes, as well as the opposite. However, this study is based on inpatients that were restricted in their possibility to perform ED related behaviour like vomiting and binge-eating, as a part of the treatment plan. The subscale 'dietary restraint' can be argued to be the one of the cognition-subcales in EDE-Q lying closest to the behaviour scales. Therefore, it was logical to use the subscale 'dietary restraint' as an outcome variable. This, in order to assess if a patient's reduction in concern with shape, weight and figure resulted in a reduction in dietary restraint, as well as the opposite.

Although EDs are seen as 'cognitive disorders' (Fairburn, 2008), there is a lack of studies assessing if changes in cognitions predict changes in ED symptoms. Linardon et al. (2017) emphasise the importance of selecting predictors strongly anchored in theory when conducting predictor analysis of outcome. A study fulfilling this, found that a decrease in dietary restraint mediated the effect of treatment in changing binge eating behaviour for patients receiving CBT-BN (Wilson, Fairburn, Agras, Walsh, & Kraemer, 2002). This lends support to the presented theory. There is, nevertheless, a need for further studies examining the potential relationship. Future research should conduct analyses where behaviour scales from the EDE-Q, like frequency of vomiting or binge-eating, serve as dependent variables and the cognition-subcales (dietary restraint, and concern of eating, weight and shape) serve as predictor variables, as well as the opposite. The opposite direction of that analysis would be especially interesting based on the argument by Fairburn (2008), saying that the most powerful way of achieving cognitive change in patients with EDs is by helping them to make behavioural changes, and further analyse the effects and implications of the changes. Significant within-person effects here, would strengthen the theoretical argumentation for using CBT to treat EDs. This would explain mechanisms that produce symptom change in therapy, which is essential in order to adapt and improve treatment of EDs.

Therapeutic alliance. The results were different for the three subscales measuring alliance as a predictor of ED symptoms. Only the subscale ‘goals’ served as a significant predictor for ED change over time, although the effect of the subscale ‘tasks’ was nearly significant ($p = .052$). So, the quality of agreement on goals of therapy in the beginning of the therapy course predicts outcome in ED symptoms each of the weeks in treatment. A similar tendency is also seen for agreement on tasks. This was, however, not the case for ‘bond’. Furthermore, a change in levels of ‘goals’ and ‘tasks’ for a patient at one week, will predict ED symptoms for that patient the following week. No such predictor effect was found for bond, so a patient’s relative change in ratings on ‘bond’ one week did not predict changes in ED symptoms the subsequent week. The results mean that if the particular patient experiences worse agreement on goals or tasks of therapy one week, the patient is likely to report an increase in ED symptoms the next week.

Alliance as a predictor for weekly change in ED symptoms, as found in this study for the subscales ‘goals’ and ‘tasks’, is in accordance with the findings in an earlier study, although that study used the global score on WAI as the predictor and therefore did not differentiate between subscales (Vrabel et al., 2015). To the best of the author’s knowledge, besides this study and the study by Vrabel et al. (2015), no other studies in the research field of EDs have distinguished between levels of between- and within-patient effects of alliance as a predictor for ED symptom change. However, one study found that the avoidance of affect was positively related to both the formation of the bond and to symptom reduction in cognitive therapy for patients with cluster C PDs (Ulvenes et al., 2012). In contrast, when short-time dynamic psychotherapy was given, avoidance of affect showed an opposite effect in suppressing the relation of ‘bond’ and negatively influenced the symptom reduction. So, there were differences between the treatment orientations. This indicates that one should be careful when considering generalising the results of the alliance subscales found in this study, to other treatment orientations of EDs. The findings in this study can be seen in relation to the manualized CBT, which emphasizes agreement on goals and task for therapy, while the affective bond between the patient and the therapist is less in focus.

The results, focusing on time-specific change, implies the importance of working with agreement on goals and task throughout the therapy, not only in the beginning of the treatment course. When the agreement on goals and task of therapy is particularly strong for a patient one week, the ED symptoms will subsequently decrease. There is no research exploring this for other treatment orientations, so the findings cannot be generalized further. Additionally, the sample in this study had longstanding EDs, high psychiatric comorbidity,

and received inpatient treatment. Therefore, the results may be specific to that group. Nevertheless, the results are valuable as they provide new and important information about the mechanisms of change in an ED group that has, historically, been challenging to treat.

Methodological strengths and limitations

Strengths. This study is a naturalistic study, but is part of a randomized controlled trial comparing two different treatment orientations, CBT and CFT, for patients with longstanding EDs with or without childhood trauma. Hence, adherence to the treatment manual was highly prioritised. All therapists were experienced and trained in delivering CBT. Additionally, the therapists got weekly peer-supervision and the sessions were videotaped. In that way, competence and adherence to the protocol were ensured. Another strength is the diagnostic assessment before inclusion in the study, where all patients were evaluated by a team of independent psychologists and psychiatrists. Furthermore, the study was conducted in a natural setting, where the patients received the standard treatment for EDs given at the hospital.

All measurements used in this study have shown good psychometric properties and have been well used in clinical and research settings. The study included frequent measures. Four times of measurements used to evaluate the course and outcome, and weekly measures for 11 weeks used to measure the treatment process and possible predictors. The weekly measures can be seen as a strength in itself, giving the possibility of measuring weekly changes in dynamic variables such as cognitions and alliance. These weekly measures provide an opportunity to determine within-patient effects, something that is only possible when several assessments exist. In that way, it captures valuable information about the treatment process.

As recommended by Linardon et al. (2017), the predictor variables in this study were selected on a theoretical basis as well as earlier research. They were not a part of a post-hoc test in a study which mainly focuses on describing a sample or evaluating a treatment, which is seen as a weakness of a large portion of the studies examining predictors for outcome in EDs (Linardon et al., 2017).

Limitations. Although this was a transdiagnostic ED sample, the findings of this study cannot be generalized to patients with EDs in general. The facts that the patients in this study have longstanding EDs and nearly half have childhood trauma, are aspects associated with a more complicated treatment process and a non-favourable outcome. The effects of intensive inpatient CBT can neither be generalized to an outpatient CBT or other treatment

orientations. However, the study gives valuable information on the process and outcome for patients with EDs of a long duration with or without childhood trauma.

Even though the study has the advantage of comparing a trauma-group with a no-trauma group and investigates differences between them, the study does not differentiate between various types of childhood trauma. Different types of trauma like emotional abuse, sexual abuse, physical abuse and neglect are all included in one group. It is, however, possible that there are differences between types of childhood trauma when predicting treatment course and outcome for patients with EDs, where some types of childhood trauma serve as a predictor and others do not. As childhood sexual abuse is found to predict the ED course after intensive inpatient treatment, it opens this up for questioning (Vrabel et al., 2010). Furthermore, Rodriguez et al. (2005) report a two times larger probability for no response to treatment for patients exposed to violent acts or victims of repeated sexual abuse. Additionally, the study only includes childhood trauma, and cannot say anything about the impact of other types of trauma on the treatment course and outcome.

A limitation within the analyses is the low participation rate at one year follow-up, and consequently no differentiation between the trauma and no-trauma group at that time. In addition, one year of follow-up is not long for a group of patients struggling with an illness over such a long period of time. It is also important to assess changes at a later point in time. There are indeed plans for a new follow-up at 2 years after discharge. Moreover, in studies like this, missing data is often a limitation, which also is the case in this study. The use of powerful statistical analyses not requiring complete data sets for the prediction analyses, is a strength that compensates for the missing values. The analysis of outcome was focused on completers and does not include the 5 patients that dropped out of the treatment. This can be seen as a limitation of the study, although it also gives valuable information about the outcome of the patients actually completing the treatment course. Analyses focusing on the treatment process, examining predictors for change, included all the patients that participated in the study.

The use of PSS-SR for a sample where most patients did not have a PTSD diagnosis can be seen as limiting. Since it was developed to measure symptoms of PTSD, the questionnaire is not specifically designed to capture the changes in the types of trauma frequent in this sample, such as relational traumas. Furthermore, CSC for trauma was not assessed. Therefore, some changes that are clinically meaningful could be missed. Additionally, the patients' scores on PSS-SR were significantly different from a normal distribution, which can have affected the results.

One limitation of using the EDE-Q in an inpatient setting is related to the fact that the rules at the hospital and support from the staff could reduce ED related behaviour like vomiting, binge-eating and excessive exercise. This can result in a lower score, compared to when the questionnaire is rated by outpatients, even the inpatients experience a serious ED.

Clinical implications

This study supports the use of transdiagnostic CBT in the treatment of longstanding EDs, even in more complex cases where the patient experienced childhood trauma as well. Longstanding EDs are often seen as ‘chronic’ and impossible to treat. However, results from this study support improvement or recovery in patients with EDs of long duration. Along with other studies on outcome, the study disproves the view of longstanding EDs as impossible to treat (Steinhausen, 2002; Vrabel, 2009). Inpatient CBT showed significant reductions in ED symptoms, depression and psychosocial impairment in this study. The treatment did, however, not show reduction in the trauma symptoms reported by the patients. So, based on these findings, when using CBT for EDs one can expect to treat the ED symptoms but not the trauma symptoms. The trauma group appears to be in need of more focused work on trauma symptoms than done in CBT for EDs. How to better address the trauma symptoms in the treatment is a clinical challenge.

The study has pointed to general problematic cognitions as a predictor for ED symptoms over time, and the concern about eating, shape and weight as a predictor for dietary restraint throughout the treatment course. Thus, the significant between-patient effects gave interesting information about mechanisms predicting high levels of ED symptoms every week of treatment. There is, however, not possible to control the patients’ baseline level at different variables, like the initial level of symptoms. If one could say something about how changes in one variable in therapy will affect another, it would be even more useful. Therefore, a significant within-patient effect is particularly interesting, actually giving information about how specific changes for a particular patient will affect other variables. So, the most interesting predictor found in this study, is the significant within-patient effect found in the alliance subscales ‘goals’ and ‘tasks’. This effect means that a, higher than usual, reported agreement on goals or tasks for a particular patient, one week, will lead to a reduction in ED symptoms the following week. This serves as an important clinical implication, meaning that the therapist and the patient should prioritize working with agreement of goals and tasks throughout the treatment. The affective bond between the patient and the therapist was not shown to be a predictor for change in ED symptoms, and is therefore of less importance.

Future directions

There is a need for more long-term studies examining the effect of CBT for longstanding EDs, also including a longer follow-up than one year. Furthermore, it will be important to study the treatment of patients with and without trauma, with an aim to better capture and treat the patients with complex psychopathologies. Perhaps it will be necessary to add elements to the CBT in order to work more effectively with the trauma symptoms, or maybe the trauma patients will benefit better from another treatment orientation that better takes the trauma symptoms into account. Here, randomized controlled trials comparing different treatments, will be especially meaningful.

Furthermore, there is a serious need for studies designed to examine predictors, moderators and mediators of treatment outcome (Linardon et al., 2017). This will contribute to a better understanding of under what circumstances and for who treatment will be most effective. Additionally, it would provide information regarding mechanisms that lead to change, further bolstering our knowledge of why some patients benefit from treatment and others do not.

Conclusion

The present study of adults with longstanding EDs with or without childhood trauma supports the use of CBT as the treatment of choice. The treatment showed significant reduction in symptoms of ED, depression and psychosocial impairment due to the ED. However, the treatment showed no effect in reducing the trauma symptoms. Results demonstrated higher levels of symptoms in the trauma group compared to the non-trauma group, although the only significant difference was in depression symptoms. The study yielded no evidence of different treatment course between the groups.

The study pointed to several predictors for a higher level of ED symptoms throughout the treatment. Both general problematic cognitions and more specific ED cognitions were found to predict ED symptoms and dietary restraint over the course of the treatment. Additionally, agreement on goals showed to predict levels of ED symptoms throughout the treatment. Agreement on tasks displayed similar predictor trends. Most interestingly, changes in agreement on goals and tasks of therapy for a particular patient in one week, predicted change in ED symptoms the following week.

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Table 3

Participant characteristics of the trauma group, the no-trauma group and the overall group

Characteristic	<i>Trauma (N=20)</i>				<i>No trauma (N=28)</i>				<i>Total (N=48)</i>			
	<i>Min.</i>	<i>Max.</i>	<i>M</i>	<i>SD</i>	<i>Min.</i>	<i>Max.</i>	<i>M</i>	<i>SD</i>	<i>Min.</i>	<i>Max.</i>	<i>M</i>	<i>SD</i>
Age when admitted	19	48	30.95	9.34	18	58	28.71	8.08	18	58	29.65	8.61
Age of onset	7	20	13.40	3.15	9	36	15.11	5.78	7	36	14.40	4.89
Duration of ED (years)	5	39	17.55	10.54	3	48	13.61	9.25	3	48	15.25	9.89
Earlier treatment (months)	9	240	65.55	64.76	5	108	45.14	29.87	5	240	53.65	48.08
Number of earlier hospitalizations	0	33	4.8	8.13	0	13	2.46	3.46	0	33	3.44	5.91

Note. Min.= Minimum; Max. = Maximum; M = Mean; SD = Standard deviation.

Table 5

Descriptives and Mixed-model ANOVA results for eating disorder symptoms in the trauma and no-trauma group

	<i>n</i>	Pre-evaluation		Admission		Discharge		Between groups			Within-group		
		<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>F</i>	ηp^2	<i>d</i>	<i>MD</i>	<i>SE</i>	<i>d</i>
EDI-2													
Trauma	13	121.23	34.16	113.00	35.58	83.85	37.85	2.77	.11	0.54	₁ 8.23	5.67	0.24
											₂ 29.15*	7.28	0.79
											₃ 37.39*	8.87	1.04
No trauma	25	102.44	34.70	92.24	37.47	71.80	36.45				₁ 10.20	4.58	0.28
											₂ 20.44***	4.40	0.55
											₃ 30.64***	16.41	0.86
Overall	38	108.87	35.23	99.34	37.69	75.92	36.88				₁ 9.215	4.10	0.26
											₂ 24.80***	4.02	0.63
											₃ 34.01***	3.78	0.91

Note. MD = Mean difference; SE = Standard error; ηp^2 = partial eta-squared; *d* = Cohen's *d*; ₁ = pairwise comparisons of pre-evaluation and admission, ₂ = pairwise comparisons of admission and discharge, ₃ = pairwise comparisons of pre-evaluation and discharge.

* = $p < .05$, ** = $p < .01$, *** $p < .001$.

Table 6

Descriptives and Mixed-model ANOVA results for depressive symptoms in trauma and no-trauma group, respectively

	<i>n</i>	Pre-evaluation		Admission		Discharge		Between groups			Within-group		
		<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>F</i>	ηp^2	<i>d</i>	<i>MD</i>	<i>SE</i>	<i>d</i>
BDI-II													
Trauma	16	35.06	12.30	32.50	9.06	22.94	10.73	4.81*	.12	0.71	₁ 2.56	1.87	0.24
											₂ 9.56**	2.32	0.96
											₃ 12.13	3.25	1.05
No trauma	23	28.74	11.04	24.70	11.88	16.43	11.51				₁ 4.04	1.91	0.35
											₂ 8.26***	1.82	0.71
											₃ 12.30***	2.33	1.09
Overall	39	31.33	11.84	27.90	11.36	19.10	11.52				₁ 3.30	1.38	0.30
											₂ 8.91***	1.46	0.77
											₃ 12.22***	1.95	1.05

Note. MD = Mean difference; SE = Standard error; ηp^2 = partial eta-squared; *d* = Cohen's *d*; ₁ = pairwise comparisons of pre-evaluation and admission, ₂ = pairwise comparisons of admission and discharge, ₃ = pairwise comparisons of pre-evaluation and discharge.

* = $p < .05$, ** = $p < .01$., *** $p < .001$.

Table 7

Descriptives and Mixed-model ANOVA results for psychosocial impairment in trauma and no-trauma group, respectively

	<i>n</i>	Pre-evaluation		Admission		Discharge		Between groups			Within-group		
		<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>F</i>	ηp^2	<i>d</i>	<i>MD</i>	<i>SE</i>	<i>d</i>
CIA													
Trauma	15	27.47	14.74	38.13	6.06	23.33	10.49	0.81	.02	0.30	₁ -10.67*	3.01	0.95
											₂ 14.80***	2.88	1.73
											₃ 4.13	4.90	0.32
No trauma	23	25.47	15.80	33.26	9.70	21.65	11.38				₁ -7.48	2.90	0.59
											₂ 11.61***	1.85	0.28
											₃ 4.13	2.93	1.09
Overall	38	26.45	15.21	35.18	8.70	22.32	10.92				₁ -9.07**	2.17	0.70
											₂ 13.20***	1.63	1.30
											₃ 4.13	2.68	0.31

Note. MD = Mean difference; SE = Standard error; ηp^2 = partial eta-squared; *d* = Cohen's *d*; ₁ = pairwise comparisons of pre-evaluation and admission, ₂ = pairwise comparisons of admission and discharge, ₃ = pairwise comparisons of pre-evaluation and discharge.

* = $p < .05$, ** = $p < .01$., *** $p < .001$.

Table 8

Descriptives and Mixed-model ANOVA results for trauma symptoms in trauma and no-trauma group, respectively

	<i>n</i>	Pre-evaluation		Admission		Discharge		Between groups			Within-group		
		<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>F</i>	ηp^2	<i>d</i>	<i>MD</i>	<i>SE</i>	<i>d</i>
PSS-SR													
Trauma	15	22.47	11.83	21.33	14.18	18.80	14.37	22.59***	.42	1.68	1.13	2.26	0.09
											2.53	3.82	0.18
											3.67	4.08	0.28
No trauma	18	7.39	8.38	6.22	8.07	4.67	7.00				1.17	1.67	1.14
											1.56	1.47	0.21
											2.72	1.96	0.35
Overall	33	14.24	12.51	13.09	13.45	11.09	12.94				1.15	1.38	0.09
											2.04	1.92	0.15
											3.19	2.15	0.25

Note. MD = Mean difference; SE = Standard error; ηp^2 = partial eta-squared; *d* = Cohen's *d*; ₁ = pairwise comparisons of pre-evaluation and admission, ₂ = pairwise comparisons of admission and discharge, ₃ = pairwise comparisons of pre-evaluation and discharge.

* = $p < .05$, ** = $p < .01$., *** $p < .001$.

Table 9

Descriptives and pairwise comparisons of the patients with BMI <20 at pre-evaluation

<i>Time</i>	<i>M</i>	<i>SD</i>	<i>N</i>	<i>F</i>	ηp^2	<i>d</i>	<i>MD</i>	<i>SE</i>	<i>d</i>
BMI									
Pre-evaluation	17.91	1.22	22	69.332**	.763	3.63			
Admission	18.77	1.56	22						
Discharge	20.92	1.39	22						
1-2							2.15	1.60	0.88
2-3							7.45*	2.00	2.93
1-3							9.60*	2.11	3.69

Note. 1-2 = Pairwise comparisons of pre-evaluation and admission; 2-3 = pairwise comparisons of admission and discharge; 1-3 = pairwise comparisons of pre-evaluation and discharge.

* = $p < .05$, ** = $p < .01$.

Table 10

Overall change of depression symptoms, eating disorder symptoms, trauma symptoms and psychosocial impairment of patients measured at four times of measurement

	Pre-evaluation			Admission		Discharge		One year follow-up		Within-subjects		
	<i>n</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>F</i>	ηp^2	<i>d</i>
BDI-II	17	35.24	11.27	32.24	8.59	20.00	10.05	24.71	15.57	10.72**	.40	1.64
EDI-II	18	116.61	34.95	108.89	35.74	80.72	34.35	79.67	34.37	19.47**	.53	2.14
CIA	17	36.76	8.98	37.06	8.53	24.53	11.08	25.82	13.19	12.61**	.44	1.72
PSS-SR	15	15.93	12.57	16.67	12.99	13.67	12.23	11.47	12.57	1.13	.75	0.57

Note. * = $p < .05$, ** = $p < .01$.

Table 11

Fixed effects estimates and random effects (variance – covariance) estimates of eating disorder symptoms over time (weeks of therapy)

<i>Parameters</i>	<i>EDE-Q</i>	<i>Dietary restraint</i>
-2 log likelihood	1068.977	1443.663
Fixed effects		
Intercept	3.689*** (0.171)	2.884*** (0.182)
Time	-0.093 *** (0.016)	-0.090*** (0.020)
Random effects		
Residual	0.336***(0.024)	0.965*** (0.071)
Intercept	1.276*** (0.297)	1.099** (0.329)
Time	0.009** (0.003)	0.008* (0.004)
Intercept*time	-0.016 (0.021)	0.003 (0.027)

Note: EDE-Q: eating disorder examination questionnaire; Dietary restraint: The EDE-Q subscale ‘dietary restraint’.

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

Table 12

Fixed and random effects estimates for general and specific cognitions predicting ED symptoms

Parameters	<i>Predictor: General cognitions</i>		<i>Predictor: Specific cognitions</i>	
	<i>Model 3</i>	<i>Model 4</i>	<i>Model 5</i>	<i>Model 6</i>
Fixed effects				
Intercept	2.018*** (.0471)	2.015*** (0.471)	-0.060 (0.479)	-0.054 (0.481)
Between patient	0.321* (0.147)	0.321* (0.147)	0.601*** (0.117)	-0.600*** (0.117)
Within patient	0.100 (0.082)	-0.031 (0.229)	-0.085 (0.089)	-0.022 (0.406)
Within*between		0.046 (0.075)		-0.016 (0.102)
Random effects				
Residual	0.276***(0.028)	0.277*** (0.028)	0.698***(0.058)	0.700*** (0.058)
Intercept	1.418** (0.464)	1.419** (0.464)	.897(0.324)	0.899 (0.325)
Time	0.013 (0.005)	0.013 (0.005)	0.015(0.006)	0.015 (0.006)
Intercept*time	-0.048 (0.038)	-0.048 (0.038)	-0.048(0.036)	-0.048 (0.036)
-2 log likelihood	527.040	529.996	1110.641	1113.350

Note. General cognitions = total score on ATQ questionnaire; specific cognitions = the mean score of the three EDE-Q subscales Eating-Concern, Weight-Concern and Shape-Concern.

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

Table 13

Fixed and random effects estimates of the three WAI subscales predicting ED symptoms

Parameters	<i>Predictor: WAI goals</i>		<i>Predictor: WAI tasks</i>		<i>Predictor: WAI bond</i>	
	<i>Model 7</i>	<i>Model 8</i>	<i>Model 9</i>	<i>Model 10</i>	<i>Model 11</i>	<i>Model 12</i>
	<i>b (SE_b)</i>					
Fixed effects						
Intercept	1.875** (0.621)	1.837** (0.622)	2.078** (0.582)	2.082** (0.593)	2.724*** (0.512)	2.728*** (0.512)
Between patient	0.254* (0.115)	0.260* (0.115)	0.234 (0.117)	0.232 (0.117)	0.902 (0.09)	0.091 (0.095)
Within patient	-0.136* (0.059)	-0.0552* (0.251)	-0.209*** (0.054)	-0.382* (0.173)	-0.030 (0.075)	0.150 (0.216)
Within*between		0.085 (0.050)		0.039 (0.037)		-0.038 (0.043)
Random effects						
Residual	0.256*** (0.027)	0.255*** (0.027)	0.249*** (0.027)	0.249*** (0.027)	0.274*** (0.028)	0.274*** (0.028)
Intercept	1.500** (0.462)	1.478** (0.454)	1.374** (0.430)	1.389** (0.434)	1.444** (0.432)	1.448** (0.432)
Time	0.016** (0.006)	0.015** (0.005)	0.016* (0.006)	0.016* (0.006)	0.015 (0.005)	0.015 (0.006)
Intercept*time	-0.066 (0.042)	-0.062 (0.042)	-0.053 (0.041)	-0.054 (0.041)	-0.051 (0.040)	-0.052 (0.040)
-2 log likelihood	597.110	598.399	557.675	581.299	634.096	637.763

Note. * $p < .05$, ** $p < .01$, *** $p < .001$.

Appendix

Appendix A: Approval from the Regional Committee for Medical and Health Ethics (REK)



Region: REK sør-øst	Saksbehandler: Gjøril Bergva	Telefon: 22845529	Vår dato: 08.09.2014	Vår referanse: 2014/836/REK sør-øst D
			Deres dato: 15.08.2014	Deres referanse:

Vår referanse må oppgis ved alle henvendelser

KariAnne Vrabel

Badeveien
3371 Vikersund

2014/836 Sammeligne to ulike behandlingsmodeller for pasienter med spiseforstyrrelser, med og uten barndomstraumer

Vi viser til tilbakemelding fra prosjektleder, mottatt 15.08.2014, i forbindelse med ovennevnte søknad. Tilbakemeldingen er behandlet av komiteens leder på delegert fullmakt.

Forskningsansvarlig: Modum Bad
Prosjektleder: KariAnne Vrabel

Prosjektomtale

Formålet med studien er å undersøke effekten av to behandlingsmetoder som gis ved Modum bad, medfølelsesfokusert terapi (compassion-focused therapy) og kognitiv atferdsterapi, med to grupper pasienter med spiseforstyrrelser, med og uten barndomstraumer, på spiseforstyrrelsen, traumesymptomer og livskvalitet. I studien skal 80 nyhenviste pasienter bli randomisert til de to behandlingene. Halvparten i hver skal ha opplevd traumer i tidlig barndom. Opplysninger samles inn ved hjelp av spørreskjemaer og intervjuer.

Saksgang

Søknaden ble første gang behandlet i møtet 11.06.2014, hvor komiteen utsatte å fatte vedtak.

Komiteen ba prosjektleder redegjøre for studiens primære endepunkt og for styrkeberegningen. Komiteen ba også om klargjøring av hva som er standardbehandling, samt hvordan forskergruppen vil håndtere at pasienter kan bli i tvil om den behandlingen de får ifølge randomiseringen, er den rette for dem. Komiteen var også bekymret for at pasientene kan føle seg forpliktet til deltagelse, all den tid rekruttering skjer ca 20 uker før studien starter. I tillegg hadde komiteen en rekke kommentarer til informasjonsskrivet.

Vurdering

Ifølge prosjektleder er spiseforstyrrelsesdiagnose og grad av spiseforstyrret symptomatologi studiens primære endepunkt. Styrkeberegning er basert på sammeligning av to grupper. Dette fordi pasienter med spiseforstyrrelser m/traume sammenlignes i forhold til ulik type behandling. Tilsvarende sammenlignes pasienter med spiseforstyrrelser u/traume i forhold til ulik type behandling. Behandlingen ved avdelingen og behandlingen ved forskningsprosjektet er sammenfallende, dvs at de tilbys to likeverdige tilbud for behandling av spiseforstyrrelser.

Proseduren for rekruttering er også sammenfallende med avdelingens praksis, men for å ivareta pasientens

Besøksadresse:
Gullhaugveien 1-3, 0484 Oslo

Telefon: 22845511
E-post: post@helseforskning.etikkom.no
Web: <http://helseforskning.etikkom.no/>

All post og e-post som inngår i saksbehandlingen, bes adressert til REK sør-øst og ikke til enkelte personer

Kindly address all mail and e-mails to the Regional Ethics Committee, REK sør-øst, not to individual staff

frivillighet og redusere følelsen av forpliktelse, vil imidlertid pasienten bli forespurt på nytt om de fremdeles ønsker å delta når studiestart nærmer seg. Hvis pasienter ønsker seg den andre type behandlingen enn den de er randomisert til, må de trekke seg fra studien, og de vil få behandlingen de ønsker. Informasjonsskrivet er revidert i tråd med komiteens kommentarer.

Komiteen finner tilbakemeldingen tilfredsstillende og har ingen innvendinger til at prosjektet gjennomføres som bekrevet i søknad, protokoll og tilbakemelding fra prosjektleder.

Prosjektleder ønsker å oppbevare data aidentifisert etter prosjektslutt, da det kan være aktuelt med en oppfølgingsstudie. Komiteen tillater oppbevaring inntil 31.12.2022. Blir det aktuelt med forlengelse utover dette, må det søkes REK.

Vedtak

Med hjemmel i helseforskningsloven § 9 jf. 33 godkjenner komiteen at prosjektet gjennomføres.

Godkjenningen er gitt under forutsetning av at prosjektet gjennomføres slik det er beskrevet i søknad, protokoll og tilbakemelding fra prosjektleder, og de bestemmelser som følger av helseforskningsloven med forskrifter.

Tillatelsen gjelder til 31.12.2017. Av dokumentasjonshensyn skal opplysningene likevel bevares inntil 31.12.2022. Forskningsfilen skal oppbevares aidentifisert, dvs. atskilt i en nøkkel- og en opplysningsfil. Opplysningene skal deretter slettes eller anonymiseres, senest innen et halvt år fra denne dato.

Forskningsprosjektets data skal oppbevares forsvarlig, se personopplysningsforskriften kapittel 2, og Helseinspektoratets veileder for «Personvern og informasjonssikkerhet i forskningsprosjekter innenfor helse og omsorgssektoren».

Dersom det skal gjøres vesentlige endringer i prosjektet i forhold til de opplysninger som er gitt i søknaden, må prosjektleder sende endringsmelding til REK.

Prosjektet skal sende sluttmelding på eget skjema, senest et halvt år etter prosjektslutt.

Du kan klage på komiteens vedtak, jf. forvaltningslovens § 28 flg. Klagen sendes til REK sør-øst D. Klagefristen er tre uker fra du mottar dette brevet. Dersom vedtaket opprettholdes av REK sør-øst D, sendes klagen videre til Den nasjonale forskningsetiske komité for medisin og helsefag for endelig vurdering.

Vi ber om at alle henvendelser sendes inn på korrekt skjema via vår saksportal: <http://helseforskning.etikkom.no>. Dersom det ikke finnes passende skjema kan henvendelsen rettes på e-post til: post@helseforskning.etikkom.no.

Vennligst oppgi vårt referansenummer i korrespondansen.

Med vennlig hilsen

Finn Wisløff
Professor em. dr. med.
Leder

Gjøril Bergva
Rådgiver

Kopi til:

Modum Bad ved øverste administrative ledelse: post@modum-bad.no
karianne.vrabel@modum-bad.no

Appendix B: Eating Disorder Inventory-2 (EDI-2) – The Norwegian version used in the study

EDI-2 - Eating Disorder Inventory

NAVN: _____ DATO: _____

EDI-2

I punktene nedenfor og på de neste sidene spørres det om dine holdninger, følelser og adferd. Noen av punktene handler om mat og spising. Andre punkter dreier seg om dine følelser i forhold til deg selv. Du skal ved hvert punkt bestemme deg for i hvilken grad utsagnet passer på deg: ALLTID, VANLIGVIS, OFTE, IBLANT, SJELDEN eller ALDRI. Hvis du f.eks. mener at ditt svar på et utsagn er ofte, merk da av i ruten i kolonnen under OFTE for det gjeldende utsagn.

Svar på alle punktene idet du forvisser deg om at du trykker i den ruten som best gjenspeiler hvordan du føler det NÅ FOR TIDEN.

	Alltid	Vanligvis	Ofte	Iblant	Sjelden	Aldri
1. Jeg spiser søtsaker og kullhydrater uten å føle meg nervøs.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2. Jeg mener magen min er for stor.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3. Jeg ønsker jeg kunne vende tilbake til barndommens trygghet.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4. Jeg spiser når jeg blir opprørt.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
5. Jeg stapper i meg mat.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
6. Jeg skulle ønske jeg var yngre.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
7. Jeg tenker på slanking.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
8. Jeg blir redd når følelsene mine blir for sterke.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
9. Jeg synes at lårene mine er for tykke.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
10. Jeg kjenner meg udugelig som person.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
11. Jeg får dårlig samvittighet når jeg har spist for mye.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
12. Jeg mener at magen min er passe stor.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
13. Bare topp prestasjoner er gode nok i min familie.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
14. Barndommen er den lykkeligste tiden i livet.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
15. Jeg er åpen når det gjelder følelsene mine.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
16. Jeg er livredd for å legge på meg.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Denne kartleggingen kan være rettighetsbeskyttet. Skal bare benyttes i forbindelse med bruk av CheckWare kartleggingsverktøy. Side 1 av 6

	Alltid	Vanligvis	Oft	Iblant	Sjelden	Aldri
17 . Jeg stoler på andre.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
18 . Jeg føler meg alene i verden.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
19 . Jeg er fornøyd med figuren min.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
20 . Jeg har stort sett kontroll over livet mitt.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
21 . Jeg blir forvirret og usikker på hva jeg føler.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
22 . Jeg ville heller være voksen enn barn.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
23 . Jeg har lett for å snakke med andre.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
24 . Jeg ønsker at jeg var en annen.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
25 . Jeg overvurderer vektens betydning.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
26 . Jeg vet hva jeg føler.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
27 . Jeg føler meg utilstrekkelig.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
28 . Jeg har hatt spiseorgier hvor jeg har følt at jeg ikke har kunne slutte.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
29 . Som barn anstrengte jeg meg mye for ikke å skuffe foreldrene eller lærerene mine.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
30 . Jeg har nære venner.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
31 . Jeg liker fasongen på rumpen min.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
32 . Jeg er svært opptatt av å bli tynnere.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Denne kartleggingen kan være rettighetsbeskyttet. Skal bare benyttes i forbindelse med bruk av CheckWare kartleggingsverktøy. Side 2 av 6

	Alltid	Vanligvis	Oft	Iblant	Sjelden	Aldri
33 . Jeg vet ikke hva som foregår inni meg.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
34 . Jeg har vansker med å uttrykke følelsene mine overfor andre.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
35 . Det kreves for mye av voksne.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
36 . Jeg avskyr ikke å være best.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
37 . Jeg føler meg trygg på meg selv.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
38 . Jeg tenker på det å overspise.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
39 . Jeg er glad for at jeg ikke er et barn lengre.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
40 . Jeg kan bli forvirret på om jeg er sulten eller ikke.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
41 . Jeg har lave tanker om meg selv.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
42 . Jeg føler at jeg kan nå målene mine.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
43 . Foreldrene mine har krevd topp- prestasjoner av meg.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
44 . Jeg er bekymret for å miste kontrollen over følelsene mine.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
45 . Jeg mener at hoftene mine er for brede.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
46 . Sammen med andre spiser jeg moderat, og stapper i meg når jeg er alene.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
47 . Jeg føler meg oppblåst etter et vanlig måltid.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
48 . Jeg føler at folk er mest lykkelige når de er barn.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Denne kartleggingen kan være rettighetsbeskyttet. Skal bare benyttes i forbindelse med bruk av CheckWare kartleggingsverktøy. Side 3 av 6

	Alltid	Vanligvis	Oft	Iblant	Sjelden	Aldri
49 . Hvis jeg går opp noen hundre gram i vekt er jeg redd for at jeg vil fortsette å gå opp.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
50 . Jeg føler meg som et verdifullt menneske.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
51 . Når jeg er opprørt vet jeg ikke om jeg er trist, redd eller sint.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
52 . Jeg føler at jeg må gjøre saker og ting perfekt ellers får det være.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
53 . Jeg kan få det for meg at jeg skal kaste opp for å gå ned i vekt.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
54 . Jeg har behov for å holde folk på en viss avstand, og føler meg uvel hvis noen vil komme innpå meg.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
55 . Jeg føler at lårene mine er passe store.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
56 . Følelsesmessig er jeg helt tom innvendig.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
57 . Jeg kan snakke om mine personlige tanker og følelser.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
58 . Den beste tiden er når du blir voksen.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
59 . Jeg mener at rumpen min er for stor.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
60 . Jeg har følelser som jeg ikke helt kan gjenkjenne.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
61 . Jeg spiser eller drikker i hemmelighet.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
62 . Jeg mener at hoftene mine er akkurat passe brede.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
63 . Jeg setter meg svært høye mål.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
64 . Når jeg er opprørt er jeg redd for at jeg skal begynne å spise.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Denne kartleggingen kan være rettighetsbeskyttet. Skal bare benyttes i forbindelse med bruk av CheckWare kartleggingsverktøy. Side 4 av 6

	Alltid	Vanligvis	Ofte	Iblant	Sjelden	Aldri
65 . Mennesker som jeg liker godt skuffer meg alltid.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
66 . Jeg skammer meg over mine menneskelige svakheter.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
67 . Andre mennesker vil si at jeg er følelsesmessig ustabil.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
68 . Jeg ville gjerne ha full kontroll over mine legemlige drifter.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
69 . Jeg føler meg avslappet i de fleste gruppesituasjoner.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
70 . Jeg sier ting impulsivt, som jeg etterpå angrer at jeg har sagt.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
71 . Jeg anstrenger meg mye for å oppleve nytelse.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
72 . Jeg må være forsiktig med min tendens til å misbruke stoffer.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
73 . Jeg er utadvendt i forhold til de fleste mennesker.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
74 . Jeg føler meg fanget i faste forhold.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
75 . Selvfornektelse får meg til å føle meg sterkere åndelig.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
76 . Folk forstår alvoret i problemene mine.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
77 . Jeg får ikke merkelige tanker ut av hodet mitt.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
78 . Å spise for fornøyelsens skyld er tegn på moralsk svakhet.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
79 . Jeg kan ha sinne eller raseriutbrudd.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
80 . Jeg mener folk gir meg den anerkjennelse jeg fortjener.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Denne kartleggingen kan være rettighetsbeskyttet. Skal bare benyttes i forbindelse med bruk av CheckWare kartleggingsverktøy. Side 5 av 6

	Alltid	Vanligvis	Oft	Iblant	Sjelden	Aldri
81 . Jeg må være på vakt over min tendens til å misbruke alkohol.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
82 . Avslapning er simpelthen bortkastet tid.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
83 . Andre vil si at jeg lett blir irritert.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
84 . Det føles som om jeg alltid kommer til kort.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
85 . Jeg opplever markante humørsvingninger.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
86 . Jeg er flau over mine legemlige drifter.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
87 . Jeg vil heller tilbringe tid alene enn med andre.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
88 . Å lide gjør deg til et bedre menneske.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
89 . Jeg vet at andre mennesker elsker meg.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
90 . Jeg føler at jeg må såre meg selv eller andre.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
91 . Jeg føler jeg vet hvem jeg virkelig er.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Denne kartleggingen kan være rettighetsbeskyttet. Skal bare benyttes i forbindelse med bruk av CheckWare kartleggingsverktøy. Side 6 av 6

Appendix C: Beck Depression Inventory-II (BDI-II) – The Norwegian version used in the study.

BDI-II - Beck Depression Inventory - II

NAVN: _____ DATO: _____

BDI-II

INSTRUKSJON: Dette skjemaet består av 21 grupper av utsagn. Les nøye gjennom hvert utsagn, og velg det utsagnet i hver gruppe som best beskriver hvordan du har følt deg i løpet av de siste to ukene, medregnet i dag.

Kryss av foran det utsagnet du velger. Hvis flere utsagn innen en gruppe passer like bra, velger du utsagnet som ligger nederst av disse utsagnene.

1 . Tristhet

- Jeg føler meg ikke trist
- Jeg føler meg trist store deler av tiden
- Jeg føler meg trist hele tiden
- Jeg er så trist eller ulykkelig at jeg ikke holder det ut

2 . Pessimisme

- Jeg er ikke motløs med tanke på fremtiden
- Jeg er mer motløs med tanke på fremtiden enn jeg var før
- Jeg forventer at ting ikke vil gå i orden for meg
- Jeg føler at fremtiden min er håpløs, og at alt bare vil bli verre

3 . Mislykkethet

- Jeg føler meg ikke mislykket
- Jeg har mislyktes mer enn jeg burde
- Når jeg ser tilbake, ser jeg mange nederlag
- Jeg føler meg som en fullstendig mislykket person

4 . Tap av glede

- Jeg får like mye glede ut av ting jeg liker som før
- Jeg får ikke like mye glede ut av ting som før
- Jeg får svært liten glede ut av de tingene som jeg pleide å like
- Jeg får ingen glede ut av de tingene som jeg pleide å like

5 . Skyldfølelse

- Jeg føler ikke særlig mye skyld
- Jeg føler skyld for mange ting jeg har gjort eller burde gjøre
- Jeg føler skyld mesteparten av tiden
- Jeg føler skyld hele tiden

Denne kartleggingen kan være rettighetsbeskyttet. Skal bare benyttes i forbindelse med bruk av CheckWare kartleggingsverktøy. Side 1 av 4

- 6 . Følelse av å bli straffet**
- Jeg føler ikke at jeg blir straffet
 - Jeg føler det som om jeg kan bli straffet
 - Jeg forventer å bli straffet
 - Jeg føler det som om jeg blir straffet
- 7 . Mislike seg selv**
- Mitt selvbilde er uforandret
 - Jeg har fått mindre selvtillit
 - Jeg er skuffet over meg selv
 - Jeg misliker meg selv
- 8 . Selvkritiskhet**
- Jeg kritiserer eller bebreider ikke meg selv mer enn vanlig
 - Jeg kritiserer meg selv mer enn jeg pleide
 - Jeg kritiserer meg selv for alle mine feil
 - Jeg klandrer meg selv for alt leit som skjer
- 9 . Selvmordstanker**
- Jeg har ingen tanker om å ta livet mitt
 - Jeg har tanker om å ta livet mitt, men har ingen planer om å gjøre det
 - Jeg ønsker å ta livet mitt
 - Jeg ville tatt livet mitt dersom jeg fikk mulighet til det
- 10 . Gråt**
- Jeg gråter ikke mer enn før
 - Jeg gråter mer enn før
 - Jeg gråter for hver minste ting
 - Jeg ønsker å gråte, men klarer det ikke
- 11 . Rastløshet**
- Jeg er ikke mer rastløs eller urolig enn vanlig
 - Jeg føler meg mer rastløs eller urolig enn vanlig
 - Jeg er så rastløs og urolig at det er vanskelig å være i ro
 - Jeg er så rastløs og urolig at jeg må bevege meg eller gjøre noe hele tiden
- 12 . Tap av interesse**
- Jeg har ikke mistet interessen for andre mennesker eller aktiviteter
 - Jeg er mindre interessert i andre mennesker eller ting enn tidligere
 - Jeg har mistet det meste av min interesse for mennesker eller ting
 - Det er vanskelig å bli interessert i noe som helst

Denne kartleggingen kan være rettighetsbeskyttet. Skal bare benyttes i forbindelse med bruk av CheckWare kartleggingsverktøy. Side 2 av 4

- 13 . Ubesluttsomhet**
- Jeg tar beslutninger like lett som før
 - Jeg synes det er vanskeligere å ta beslutninger nå enn før
 - Jeg har mye større vanskeligheter med å ta beslutninger nå enn før
 - Jeg har vanskeligheter med å ta enhver beslutning
- 14 . Verdiløshet**
- Jeg føler meg ikke verdiløs
 - Jeg opplever meg ikke like verdifull og nyttig som før
 - Jeg føler meg mer verdiløs enn andre mennesker
 - Jeg føler meg fullstendig verdiløs
- 15 . Tap av energi**
- Jeg har like mye energi som før
 - Jeg har mindre energi enn jeg pleide
 - Jeg har ikke nok energi til å gjøre særlig mye
 - Jeg har ikke nok energi til å gjøre noe som helst
- 16 . Endringer i søvnmønster**
- Jeg har ikke merket noen endringer med søvnen min
 - Jeg sover litt mer enn vanlig
 - Jeg sover litt mindre enn vanlig
 - Jeg sover mye mer enn vanlig
 - Jeg sover mye mindre enn vanlig
 - Jeg sover mesteparten av døgnet
 - Jeg våkner opp 1-2 timer for tidlig, og får ikke sove igjen
- 17 . Irritabilitet**
- Jeg er ikke mer irritabel enn vanlig
 - Jeg er mer irritabel enn vanlig
 - Jeg er mye mer irritabel enn vanlig
 - Jeg er irritabel hele tiden
- 18 . Endringer i matlysten**
- Jeg har ikke merket noen endringer i min matlyst
 - Min matlyst er litt mindre enn vanlig
 - Min matlyst er litt større enn vanlig
 - Min matlyst er mye mindre enn vanlig
 - Min matlyst er mye større enn vanlig
 - Jeg har ingen matlyst i det hele tatt
 - Jeg føler trang til å spise hele tiden

Denne kartleggingen kan være rettighetsbeskyttet. Skal bare benyttes i forbindelse med bruk av CheckWare kartleggingsverktøy. Side 3 av 4

19 . Konsentrasjonsvansker

- Jeg kan konsentrere meg like bra som før
- Jeg kan ikke konsentrere meg like godt som vanlig
- Det er vanskelig for meg å konsentrere meg om noe som helst særlig lenge
- Jeg merker at jeg ikke kan konsentrere meg om noe som helst

20 . Tretthet og utmattelse

- Jeg er ikke mer trøtt eller utmattet enn jeg pleier
- Jeg blir forttere trøtt eller utmattet enn jeg pleier
- Jeg er for trøtt eller utmattet til å gjøre mange av de tingene jeg pleide å gjøre
- Jeg er for trøtt eller utmattet til å gjøre mesteparten av de tingene jeg pleide å gjøre

21 . Tap av seksuell interesse

- Jeg har ikke merket noen endring i min interesse for sex i det siste
- Jeg er mindre interessert i sex enn jeg pleide å være
- Jeg er mye mindre interessert i sex nå
- Jeg har mistet all interesse for sex

Denne kartleggingen kan være rettighetsbeskyttet. Skal bare benyttes i forbindelse med bruk av CheckWare kartleggingsverktøy. Side 4 av 4

Appendix D: The Clinical Impairment Assessment Questionnaire (CIA) – The Norwegian version used in the study.

CIA 3.0 - Clinical Impairment Assessment Questionnaire

NAVN: _____ DATO: _____

CIA 3.0

Angi i kolonnen som best beskriver hvordan dine spisevaner, trening eller følelser knyttet til din spising, figur eller vekt har påvirket livet ditt i løpet av DE SISTE 28 DAGER.

I løpet av de siste 28 dager, i hvilken grad har dine spisevaner, trening eller følelser knyttet til din spising, figur eller vekt...

	Ikke i det hele tatt	Litt	En god del	Mye
1. ...gjort det vanskelig å konsentrere deg?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2. ...gjort at du har følt deg kritisk til deg selv?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3. ...hindret deg i å gå ut sammen med andre?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4. ...påvirket din prestasjon i jobb eller utdanning (hvis aktuelt)?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
5. ...gjort deg glemsk?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
6. ...påvirket din evne til å ta beslutninger i hverdagen?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
7. ...skapt vansker ved måltider med familie og venner?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
8. ...gjort deg opprørt?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
9. ...gjort at du skammet deg over deg selv?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
10. ...gjort det vanskelig å spise ute med andre?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
11. ...gitt deg skyldfølelse?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
12. ...vanskeliggjort eller hindret deg i å gjøre ting du pleide å ha glede av?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
13. ...gjort deg distré/årsfraværende	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
14. ...fått deg til å føle deg mislykket?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
15. ...hatt negativ innvirkning på ditt forhold til andre?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
16. ...gjort deg bekymret?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Denne kartleggingen kan være rettighetsbeskyttet. Skal bare benyttes i forbindelse med bruk av CheckWare kartleggingsverktøy. Side 1 av 1

Appendix E: PTSD Symptom Scale – Self Report (PSS-SR) – The Norwegian version used in the study.

PSS-SR - PTSD Symptom Scale - Self Report

NAVN: _____ DATO: _____

PSS-SR

Nedenfor er en liste med problemer som personer noen ganger kan ha etter å ha opplevd en traumatisk hendelse. Les hver og en og marker for det tallet som best beskriver hvor ofte den traumatiske hendelsen plaget deg mest.

0 = Ikke i det hele tatt eller kun en gang

1 = En gang i uken eller sjeldnere/en gang i blant

2 = To eller fire ganger i uken/halvparten av tiden

3 = Fem eller flere ganger i uken/nesten hele tiden

	0	1	2	3
1. Har opprørende tanker eller bilder om den traumatiske hendelsen som frem kalles i hodet når du ikke ville at de skulle det	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2. Har fæle drømmer eller mareritt om den traumatiske hendelsen	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3. Gjenopplever den traumatiske hendelsen, handler eller føler som om det skjer igjen	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4. Er følelsesmessig opprørt når du påminnes den traumatiske hendelsen (f.eks. svettetokt, hjertebank o.l.)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
5. Erfarer fysiske reaksjoner når du påminnes den traumatiske hendelsen (f.eks. svettetokt, hjertebank o.l.)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
6. Prøver å ikke tenke på det, snakke om det eller ha følelser i forbindelse med den traumatiske hendelsen	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
7. Prøver å unngå aktiviteter, personer eller steder som minner deg om den traumatiske hendelsen	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
8. Er ute av stand til å huske viktige aktiviteter, personer eller steder som minner deg om den traumatiske hendelsen	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
9. Har mye mindre interesse eller deltar mye sjeldnere i viktige aktiviteter	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
10. Er distansert eller avskåret fra personer rundt deg	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
11. Er følelsesmessig nummen (f.eks. ute av stand til å gråte eller føle kjærlighet og sorg)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
12. Føler det som om dine fremtidige planer eller håp ikke vil komme til å skje (f.eks. at du ikke kommer til å ha noen karriere, ekteskap, barn eller et langt liv)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
13. Har vansker med å falle i søvn eller med å holde seg i søvn	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
14. Føler seg irritabel eller har plutselige sinneutbrudd	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
15. Har konsentrasjonsvansker (f.eks. faller ut og inn av samtaler, mister tråden i historier på fjernsyn, glemmer hva du har lest)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
16. Er overdrevent på vakt (f.eks. sjekker for å se hvem som befinner seg rundt deg er ukomfortabel med ryggen til døren o.l.)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
17. Er skvetten eller lettskremt (f.eks. når noen nærmer seg bakfra)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Denne kartleggingen kan være rettighetsbeskyttet. Skal bare benyttes i forbindelse med bruk av CheckWare kartleggingsverktøy. Side 1 av 1

Appendix F: The Eating Disorder Questionnaire (EDE-Q) – The Norwegian version
used for the weekly measures

Eating Disorder Examination Questionnaire (EDE-Q 6.0)

From "*Cognitive Behavior Therapy
and Eating Disorders*"

by Christopher G. Fairburn

Copyright 2008 by Kristin Bohn and Christopher Fairburn

Original English version is available online at:

www.psych.ox.ac.uk/credo/cbt_and_eating_disorders

Norsk godkjent oversettelse

v/ D. L. Reas og Ø. Rø

September 2008 EDE-Q 6.0

DATO: _____

NPRID: _____

Instruksjoner: Dette spørreskjema handler kun om den siste uka (7 dager). Les hvert spørsmål nøye. Svar på alle spørsmålene.

Spørsmål 1 til 12: Tegn en sirkel rundt det tallet til høyre som du synes passer best. Husk at spørsmålene kun handler om den siste uka (7 dagene).

På hvor mange av de siste 7 dagene	Ingen dager	1 dag	2 dager	3 dager	4 dager	5 dager	6-7 dager
1 Har du bevisst prøvd å begrense mengden mat du spiser for å påvirke din figur eller vekt (uavhengig av om du har klart det eller ikke)?	0	1	2	3	4	5	6
2 Har du i lengre perioder (8 våkne timer eller mer) ikke spist noe i det hele tatt for å påvirke din figur eller vekt?	0	1	2	3	4	5	6
3 Har du prøvd å utelukke noen typer mat du liker, for å påvirke din figur eller vekt (uavhengig av om du har klart det eller ikke)?	0	1	2	3	4	5	6
4 Har du prøvd å følge bestemte regler for hva eller hvordan du spiser (f.eks. en kalorigrense) for å påvirke din figur eller vekt (uavhengig av om du har klart det eller ikke)?	0	1	2	3	4	5	6
5 Har du hatt et klart ønske om å ha <u>tom</u> mage for å påvirke din figur eller vekt?	0	1	2	3	4	5	6
6 Har du hatt et klart ønske om å ha en <u>helt flat</u> mage?	0	1	2	3	4	5	6
7 Har du opplevd at tanker om <u>mat</u> , spising eller <u>kalorier</u> har gjort det veldig vanskelig å konsentrere deg om ting du er interessert i (f.eks. å arbeide, følge en samtale eller lese)?	0	1	2	3	4	5	6
8 Har du opplevd at tanker om <u>figur eller vekt</u> har gjort det veldig vanskelig å konsentrere deg om ting du er interessert i (f.eks. å arbeide, følge en samtale eller lese)?	0	1	2	3	4	5	6
9 Har du hatt en klar frykt for å miste kontroll over spisingen din?	0	1	2	3	4	5	6
10 Har du hatt en klar frykt for at du kan gå opp i vekt?	0	1	2	3	4	5	6
11 Har du følt deg tykk?	0	1	2	3	4	5	6
12 Har du hatt et sterkt ønske om å gå ned i vekt?	0	1	2	3	4	5	6

Spørsmål 13 til 18: Fyll inn passende antall i boksene til høyre. Husk at spørsmålene kun handler om den siste uka (7 dagene).

I løpet av den siste uka (7 dagene)...

13	Hvor mange ganger har du spist det andre ville betrakte som en <u>uvanlig stor mengde mat</u> (omstendighetene tatt i betraktning)?
14	Ved hvor mange av disse episodene hadde du en følelse av å ha mistet kontrollen over spisingen din (mens du spiste)?
15	I løpet av de siste 7 dagene, hvor mange <u>DAGER</u> har slike episoder med overspising forekommet (dvs. der du har spist uvanlig store mengder mat og hatt en følelse av å miste kontrollen mens du spiste)?
16	I løpet av de siste 7 dagene, hvor mange <u>ganger</u> har du kastet opp for å kontrollere din figur eller vekt?
17	I løpet av de siste 7 dagene, hvor mange <u>ganger</u> har du brukt avføringsmidler for å kontrollere din figur eller vekt?
18 A	I løpet av de siste 7 dagene, hvor mange <u>timer</u> har du drevet fysisk aktivitet (utenom felles fysisk aktivitet som står på timeplanen v/Modum Bad)
18 B	I løpet av de siste 7 dagene, hvor mange <u>timer</u> har du drevet fysisk aktivitet fordi du har følt deg drevet eller tvunget til det for å kontrollere din vekt, figur eller fettmengde, eller for å forbrenne kalorier?
18 C	I løpet av de siste 7 dagene, hvor mange <u>timer</u> har du drevet fysisk aktivitet for å endre følelser/humør (som for eksempel sinne, tristhet, "uro", "stress", "frustrasjon").
Spørsmål 19 til 21: Tegn en sirkel rundt det tallet som du synes passer best. <u>Vær oppmerksom på at i disse spørsmålene brukes begrepet "overspisingsepisode" om å spise det andre ville synes var en uvanlig stor mengde mat i den situasjonen du var i, samtidig med en følelse av å ha mistet kontroll over spisingen.</u>		
19	I løpet av de siste 7 dagene, hvor mange dager har du spist i hemmelighet (i skjul)? ...tell ikke med overspisingsepisoder.	0 dager 1 dag 2 dager 3 dager 4 dager 5 dager 6-7 dager
20	Hvor mange av de gangene du har spist, har du hatt skyldfølelse (følt at du har gjort noe galt) fordi det kan påvirke din figur eller vekt? ...tell ikke med overspisingsepisoder.	Ingen av gangene Noen få ganger Færre enn halvparten Halvparten Mer enn halvparten De fleste gangene Hver gang 0 1 2 3 4 5 6

21	I løpet av de siste 7 dagene, hvor bekymret har du vært for at andre mennesker ser deg spise? ...tell ikke med overspisingsepisoder.	Ikke i det hele tatt	Litt		Ganske mye			Veldig mye
		0	1	2	3	4	5	6

Spørsmål 22 til 28: Tegn en sirkel rundt det tallet til høyre som du synes passer best. Husk at spørsmålene kun handler den siste uka (7 dagene).

I LØPET AV DE SISTE 7 DAGENE

22	Har <u>vekten</u> din påvirket hvordan du tenker om (bedømmer) deg selv som person?	Ikke i det hele tatt		Litt		Ganske mye		Veldig mye
		0	1	2	3	4	5	6
23	Har <u>figuren</u> din påvirket hvordan du tenker om (bedømmer) deg selv som person?	0	1	2	3	4	5	6
24	Hvor opprørt ville du bli hvis du ble bedt om å veie deg en gang i uken (ikke mer, ikke mindre) de neste fire ukene?	0	1	2	3	4	5	6
25	Hvor misfornøyd har du vært med <u>vekten</u> din?	0	1	2	3	4	5	6
26	Hvor misfornøyd har du vært med <u>figuren</u> din?	0	1	2	3	4	5	6
27	Hvor mye ubehag har du følt ved å se kroppen din (f.eks. når du ser figuren din i speilet, reflektert i et butikkvindu, ved klesskift, eller når du bader eller dusjer)?	0	1	2	3	4	5	6
28	Hvor mye ubehag har du følt ved at <u>andre</u> ser figuren din (f.eks. i offentlige omklede rom, når du svømmer, eller når du har på deg trange klær)?	0	1	2	3	4	5	6

TAKK!

Appendix G: Working Alliance Inventory-Short Revised (WAI-SR). The Norwegian version used in this study.

WAI-C-S (Individualterapeut)

NAVN: _____ DATO: _____

Spørreskjema til klient om samarbeidet (WAI)

Nedenfor finner du 12 utsagn som beskriver noen av de tanker og følelser som man kan ha i forhold til sin **individualterapeut**. Til høyre for hvert utsagn er det en 7 punkts skala. Denne angir i hvilken grad utsagnet gjelder for deg. For eksempel hvis det aldri gjelder for deg, klikker du av under "Aldri" (1). Hvis det derimot alltid gjelder for deg, klikker du av under "Alltid" (7). Er det et sted mellom disse to ytterpunktene, klikker du av de andre tallene som du synes passer best. Vi vil be deg svare mest mulig åpent om hvordan du opplever din **individualterapeut** og de samtale du har hatt med han eller henne. Når du leser setningene, så tenk deg at du setter inn navnet på din **individualterapeut** der det står _____ i teksten.

Arbeid hurtig, dine første inntrykk er ofte de beste

	Aldri 1	Sjelden 2	Av og til 3	En del ganger 4	Ofte 5	Veldig ofte 6	Alltid 7
1. _____ og jeg samarbeider om å sette mål for min terapi	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2. Jeg føler at _____ setter pris på meg	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3. Vi er enige om hva som er viktig for meg å arbeide med	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4. Jeg mener at det jeg gjør i terapi vil hjelpe meg til å oppnå de forandringene jeg ønsker	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
5. Det jeg gjør i terapi gir meg nye måter å se problemene mine på	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
6. _____ og jeg respekterer hverandre	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
7. _____ og jeg arbeider mot mål som vi er blitt enige om	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
8. Jeg tror _____ liker meg	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
9. Vi har kommet frem til en god forståelse av hva slags forandringer som vil være bra for meg	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
10. Jeg tror at den måten vi arbeider med problemene mine på er bra for meg	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
11. Et resultat av disse timene er at jeg er mer klar over hvordan jeg kan forandre meg	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
12. Jeg føler at _____ bryr seg om meg selv når jeg gjør ting som han/hun ikke liker	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Denne kartleggingen kan være rettighetsbeskyttet. Skal bare benyttes i forbindelse med bruk av CheckWare kartleggingsverktøy. Side 1 av 1

Appendix H: Automatic Thought Questionnaire (ATQ) – The 10 items of the Norwegian version used in this study.

Automatic Thought Questionnaire (ATQ; Hollon & Kendall, 1980), 10 av leddene

29. Jeg kommer aldri til å bli så flink og dyktig som andre er.
30. Jeg er ikke verdt andres oppmerksomhet og kjærlighet.
31. Jeg er verdiløs.
32. Verden er et farlig sted.
33. Det er noe ved meg som får fæle hendelser til å skje / gjør at det skjer fæle ting.
34. Jeg er en svak person.
35. Jeg kommer plutselig til å syk og dø.
36. Jeg kommer til å bli gal eller gjøre noe helt ukontrollert.
37. Jeg vil opptre klønete foran andre mennesker.
38. Noe forferdelig kommer til å skje.