



DET PSYKOLOGISKE FAKULTET



An Explorative Study on a Modified Version of the Dissociative Experiences Scale II in a Sample of Substance Abusers.

HOVUDOPPGÅVE

profesjonsstudiet i psykologi

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Vår 2017

Rettleiar:

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Hovudoppgåva er skreve i utvida artikkelformat, og følgjer retningslinjene skrive av psykologisk fakultet og American Psychological Association sin publikasjonsmanual (6. utg.).

Acknowledgements

The process of writing our main thesis has been both challenging and rewarding. It has provided us with newfound respect for the hard work that is put into psychological research and has spurred our own interest in the field. We have gained new and useful knowledge that we will bring with us into our future work as clinicians.

We would like to express our deepest gratitude to our supervisor Dagfinn Winje, and thank him for his invaluable time, guidance, and inspiration throughout this process. We would also like to thank everyone who contributed to our study, especially the respondents at Kalfaret Behandlingscenter, who have shared personal and valuable information about their life experiences. Our hope is that the data collected may be of great value to the field and to many people in the future.

Bergen, 14.05.2017

Abstract

Background. The Dissociative Experiences Scale II (DES-II) is the most widely used and studied measure on dissociative symptoms. Several authors have argued for some necessary improvements of the scale. Accordingly, a modified version of the DES-II was developed, called the Dissociative Experiences Scale II Clinical Version (DES-II-CV).

Objective. This study will explore the DES-II-CV by examining associations between dissociative symptoms and childhood maltreatment trauma, post-traumatic stress symptoms, symptoms of general psychological distress, and substance abuse characteristics in a sample of substance abusers. The hope is that findings may generate new research questions and spur further interest in the DES-II-CV.

Results. There was limited support for a relationship between dissociative symptoms and the variables of interest, and effects sizes were generally small. Emotional abuse and post-traumatic stress symptoms was found to be related to higher levels of non-pathological dissociative experiences.

Conclusion. The lacking support for a dissociation – childhood maltreatment trauma relationship suggest that our sample may use substances to achieve dissociative like states. The relationship found between childhood emotional abuse and non-pathological dissociative symptoms, as well as other finding within this study, may reflect some if the issues of the scale. The hope is that adjustments made to the DES-II-CV can accommodate some of these shortcomings, and contribute to more accurate assessments of dissociative symptoms.

Key words: Dissociative Experiences Scale, modified, dissociative symptoms, childhood maltreatment trauma, post-traumatic stress symptoms, general psychological symptoms, substance abuse

Samandrag

Bakgrunn: Dissociative Experiences Scale II (DES-II) er det mest brukte og studerte kartleggingsskjemaet for dissociative symptom. Fleire forfattarar har foreslått nødvendige forbetringar av skalaen. Følgeleg vart ein modifisert versjon av DES-II utvikla, kalla Dissociative Experiences Scale II Clinical Version (DES-II-CV).

Formål: Denne studien vil utforske DES-II-CV ved å undersøke forholdet mellom dissociative symptom og barndomstraume, post-traumatiske stress-symptom, symptom på generell psykologisk lidning og karakteristikk av stoffmisbruk i eit utval rusmisbrukarar. Håpet er at funn kan generere nye forskings spørsmål og stimulere til ytterligare interesse i DES-II-CV.

Resultat: Det var begrensa støtte for eit forhold mellom dissociative symptom og variablane av interesse, og effekt størrelsane var generelt små. Emosjonell mishandling og post-traumatiske stress-symptom var relatert til høgare nivå av ikkje-patologiske dissociative opplevingar.

Konklusjon: Den manglande støtta for forholdet dissosiasjon – barndomstraume foreslår at utvalget vårt nyttar rusmiddel for å oppnå dissociativliknande tilstandar. Resultata kan gjenspeile eit komplekst forhold mellom barndomstraume og dissociative symptom blant rusmisbrukarar. Forholdet som vart funne mellom barndomstraume og ikkje-patologiske dissociative symptom, i tillegg til andre funn i studien, kan reflektere nokre problem med skalaen. Håpet er at tilpassingane gjort av DES-II-CV kan imøtekomme nokon av desse problema, og bidra til ei meir nøyaktig og enkel administrert vurdering av dissociative symptom.

Nøkkelord: Dissociative Experiences Scale, modifisert, dissociative symptom, barndomstraumer, post-traumatisk stress-symptom, generell psykologisk symptom, rusmisbruk

Introduction

Dissociation

Dissociation can be described as a lack of normal integration of thoughts, feelings and experiences into consciousness and memory (Anstorp & Benum, 2014; E. M. Bernstein & Putnam, 1986; Wright & Loftus, 1999). Pierre Janet was one of the first to investigate the concept of dissociation, relating it to trauma (1907; as cited in Chu, 2011). Sigmund Freud related dissociative symptoms to hysteria, focusing on the relationship between childhood maltreatment traumas, specifically sexual abuse (1896; as cited in Chu, 2011). The current understanding of dissociative phenomena emerged only recently as it was first coded as a disorder in the American Psychiatric Association's Diagnostic and Statistical Manual of Mental Disorders (DSM-III; American Psychiatric Association [APA]) in 1980. Building on the work by Janet (1889, 1891), the diagnosis, treatment, and study of dissociative disorders increased rapidly during the 1980's and has since continued to receive attention within the field of trauma research (Dalenberg et al., 2012; Kluft, 1985, 1987; Lynn et al., 2014; Lynn, Lilienfeld, Merckelbach, Giesbrecht, & van der Kloet, 2012; Putnam, 1989, 1991; Ross, 1989).

Despite being a widely accepted and highly influential psychological phenomenon among many clinicians, the concept of dissociation lacks a precise and globally agreed upon definition (Anstorp & Benum, 2014; Giesbrecht, Lynn, Lilienfeld, & Merckelbach, 2008; Holmes et al., 2005). One of the major issues is that the term has often been used to describe both pathological dissociative symptoms as well as common non-pathological cognitive failures, such as lapses in attention and daydreaming (Bækkelund & Berg, 2014; Holmes et al., 2005; Jakobsen, Benum, & Anstorp, 2006). This contributes to the uncertainty of whether dissociation should be regarded a "normal" or pathological phenomenon (Bækkelund & Berg, 2014; van der Hart, Nijenhuis, & Steele, 2006). Another issue is that in addition to being

described as a disorder, dissociation has also been argued to be a coping mechanism to a potentially traumatic event (PTE; Dell & O'Neil, 2009; Dalenberg et al., 2012; Waller & Ross, 1997). These issues have led some critics to question whether dissociation should be regarded as one unitary concept at all (Briere, Weathers, & Runtz, 2005; Brown, 2006; Hacking, 1995; Holmes et al., 2005; Jueridini, 2003; Olsen, Clapp, Parra, & Beck, 2013).

Dissociation and trauma. Two conflicting theories have been proposed in an attempt to explain the relationship between history of trauma and dissociative symptoms: the trauma model of dissociation and the fantasy model of dissociation (Dalenberg et al. 2012; Lynn et. al. 2014). The trauma model of dissociation describe dissociation as a defense mechanism against overwhelming stress caused by exposure to PTEs (e.g. Bremner & Brett, 1997; Dell & O'Neil, 2009; Putnam, 1991; Ross, 1997; Spiegel, 1984). The idea is that dissociation reduces the impact of traumatic events by compartmentalizing the traumatic experience (e.g., van der Kolk & Fisher, 1995). According to this view, long-term dissociative reactions to traumatic events may contribute to the development of psychopathology by restricting access to critical memories and thus impairing emotional processing (Bennett & Hacker, 2003; Briere, Scott, & Weathers, 2005; Janet, 1907; van der Kolk, van der Hart, & Marmar, 1996; Marmar, Weiss, & Meltzer, 1998; Marmar et al., 1994).

In support of the trauma model, dissociative symptoms have been found to be relatively common in the context of traumatic events, such as nature catastrophes, accidents and aversive childhood experiences (e.g. Cardeña & Spiegel, 1993; Madakasira & O'brien, 1987; Noyes & Kletti, 1976; Freinkel, Koopman, & Spiegel, 1994; Sloan, 1988; Torrie, 1944). Childhood maltreatment trauma, particularly childhood sexual and physical abuse, has often been found to be one of the most important predictors of dissociation (e.g. Chu & Dill, 1990; Chu, Frey, Ganzel, & Mathews, 1999; Engel, Walker, & Katon, 1996; Gershuny & Thayer, 1999; Gleaves, 1996; Körlin, Edman, & Nybäck, 2007; Simeon, Guralnik,

Schmeidler, Sirof, & Knutelska, 2001; Zlotnick et al. 1994; Zlotnick et al., 1996). However, several authors have questioned the link between childhood abuse and dissociation due to a number of reasons, e.g. biases related to self-report.

The fantasy model of dissociation posits out that dissociative individuals are prone to fantasy, suggestibility and cognitive failures making them more likely to report false memories (Loftus & Ketcham, 1994; Lynn et al., 2014; Lynn et al., 2012; McNally, 2003). In support of the fantasy model, several authors have pointed out that most studies providing evidence for the trauma model rely on measures found to be related to personality features of suggestibility and fantasy proneness (Giesbrecht et al., 2008; Merckelbach, Muris, Horselenberg, & Stougie, 2000). Several studies of both clinical and non-clinical samples have established a link between fantasy proneness and dissociative symptoms (e.g. Merckelbach, Campo, Hardy, & Giesbrecht, 2005; Pekala et al., 1999-2000; Rauschenberger & Lynn, 1995). Fantasy proneness may compromise the validity of retrospective self-report questionnaires by leading respondents to confuse factual and imagined events or it may cause respondents to adopt a more liberal approach to reporting positive responses. This may undermine the accuracy of self-reported trauma as well as post-traumatic symptomatology by creating false positives (van den Hout, Merckelbach, & Pool, 1996; Merckelbach & Muris, 2001; Merckelbach et al., 2000; Sandberg & Lynn, 1992).

Dissociative symptoms and trauma among substance abusers. In later years, an increased interest has emerged for research on the clinical consequences of trauma within samples of substance users. These studies have found high prevalence's of a number of different forms of trauma, including childhood emotional, physical and sexual abuse or neglect, childhood home dysfunction, and other forms of Aversive Childhood Events or PTE's (Cohen & Densen-Gerber, 1982; Dube et. al. 2003; Medrano, Zule, Hatch & Desmond, 1999; Simpson & Miller, 2002; Wu, Schairer, Dellor, & Grella, 2009). This indicates that

childhood abuse is especially common among these populations (Abueg & Fairbank, 1992; van Hasselt, Ammerman, Glancy, & Bukstein, 1992; Lisak, 1993). Many researchers have attempted to find possible explanations for these high levels of trauma among substance users. One of the most prominent theories that have been put forward, is the *self-medication theory*, posing that an individual may use substances to cope with intolerable affective states or traumatic events (e.g. Weiss, Griffin & Mirin, 2009; Brady, Back, & Coffey, 2004; Souze & Spates, 2008).

The high prevalence of childhood maltreatment trauma found among substance abusing patients should result in elevated levels of dissociative symptoms. Several studies have indeed found high prevalence of self-reported dissociative symptoms among substance users (e.g. Dunn, Paolo, Ryan, & Van Fleet, 1993; Evren & Evren, 2005; Ross et al., 1992; Somer, Altus & Ginzburg, 2010; Wenzel et al., 1996). For example, Chu and Dill (1990) found a significant relationship between histories of childhood sexual and physical abuse and dissociative symptoms. Similarly, Zlotnick (1997) reported that substance abusers with histories of trauma were more likely to display elevated levels of dissociative symptoms. However, several studies investigating the trauma – dissociation relationship among patients with SUD show inconsistent results. For example, some studies report quite low levels of dissociation within these populations, particularly among alcohol users (Langeland, Draijer, & van der Brink, 2004; Schäfer et al., 2007) and fail to document a trauma – dissociation relationship. Ross et al. (1992) found no relationship between childhood physical or sexual abuse and dissociative symptoms among a sample of substance dependent patients. Dunn and colleagues (Dunn et al., 1993; Dunn, Rayn, & Dunn, 1994; Dunn, Ryan, Paolo, & Van Fleet, 1995) conducted three studies but found no relationship between dissociative symptoms and childhood emotional, physical or sexual abuse within a sample of male veterans being treated for alcohol and other drug problems.

Some studies suggest that the absence of a trauma – dissociation relationship among substance abusers is caused by underreports of childhood maltreatment trauma. Studies that fail to report such a link among substance abusers frequently use less specific methods to assess childhood maltreatment trauma, compared to studies of other populations (Draijer & Langeland, 1999; Langeland, Draijer, & van der Brink, 2002). Schäfer et al. (2009) pointed out that strict definitions of childhood maltreatment trauma that only include physical and sexual abuse, may explain why some studies fail to report a trauma – dissociation relationship among substance abusers (van der Bosch et al., 2003; Langeland et al., 2002; Ross et al., 1992). In support of this assumption, Schäfer et al. investigated the relationship between levels of dissociative symptoms and histories of childhood sexual abuse, physical abuse, emotional abuse and physical neglect within a sample of alcohol and drug dependent patients. They found that severity of childhood maltreatment trauma was strongly related to dissociative symptoms and that the relationship was particularly strong for emotional abuse. Najavits & Walsh (2012) examined the relationship between dissociation and childhood sexual abuse, physical abuse, emotional abuse, emotional neglect and physical neglect within a sample of substance abusers with comorbid post-traumatic stress disorder (PTSD). They found significant associations between emotional abuse as well as physical neglect, but no relationship was found for the other three variables of childhood maltreatment trauma. Similarly, Tamar-Gurol, Sar, Karadag, Evren, & Karagoz (2008) investigated childhood emotional abuse and dissociation among suicidal patients with drug dependency and found that dissociative symptoms were strongly correlated with emotional abuse whereas no such relationship was found for neglect, physical abuse or sexual abuse.

Another explanation for the lack of a trauma – dissociation relationship among substance abusers is by some studies suggested to be explained by the *chemical dissociation hypothesis* (Langland et al. 2002; Roesler & Dafler, 1993; Somer et al, 2010). In line with the

self-medicating hypothesis, this hypothesis suggests that some individuals with limited capacity to psychologically dissociate may use substances as a way to achieve dissociative like states to cope with traumatic experiences. For example, blackout symptoms of alcohol may dampen intrusive PTSD-symptoms, Marijuana has been found to cause symptoms of memory loss and derealisation, and Opiates can mute emotional distress and create symptoms similar to depersonalisation (Blum, 1984; Landry, 1994; Keane, Gerald, Lyons, & Wolfe, 1988; van der Kolk, 1996; Valliant, 1983). The similarities between chemically and psychologically induced symptoms of dissociation require that the assessment of dissociative symptoms includes instructions to not confirm experiences that occurred while under the influence of alcohol or drugs (e.g. Carlson & Putnam, 1993). If the *chemical dissociation hypothesis* is true, this would lead to lower levels of dissociative scores among substance abusers.

Assessing dissociation

The International Classification of Diseases and Related Health Problems (ICD-10; World Health Organization, 1992) and the DSM-5 (APA, 2013) describe dissociative disorders as a disturbance in the normal integration of conscious awareness and control of mental processes (Spiegel et al., 2011). Both manuals further relate the occurrence of dissociative symptoms to PTEs, stating that individuals may not be in control over symptoms, and that the symptoms can lead to impairment of daily functioning and suffering.

There are, however, differences regarding the classifications and definitions of dissociative disorders within the two manuals. In the DSM-5, Dissociative disorders are classified as a separate class of disorders. The DSM-IV further suggests that dissociative disorders involve a combination of the five core symptoms amnesia, depersonalization, derealization, identity confusion, and identity alteration (Steinberg, 1994). In ICD-10, dissociation is classified as a Conversion disorder, containing a range of problems not

included in description of dissociative disorders in the DSM-5 (e.g. loss of sensory information and paralyses). Moreover, the description of dissociation in ICD-10 is unprecise and gives the impression that dissociation is pseudo-neurological experiences (Holmes, et al. 2005; Jakobsen et al., 2006). These inconsistencies between the DSM and the ICD reflect the ongoing discussion in the field. Moreover, in both the manuals, dissociation is defined more broadly and less clearly than other diagnoses which may reflect the uncertainty of how to define and diagnose dissociative disorders. The contradicting and ambiguous descriptions of dissociation in the DSM and ICD will contribute to the inconsistent understanding of dissociation found in the literature.

In addition to semi structured interviews such as the Structured Clinical Interview for DSM-IV Dissociative Disorders (SCID-D-R; Steinberg, Hall, Lareau, & Cicchetti, 2000), self-report instruments are often used to measure dissociative symptoms. An advantage of self-report instruments is that they may provide valuable information on events and experiences that may be difficult for an individual to talk about and that may not be reported if not asked directly (Bækkelund & Berg, 2014; Read, Bollinger, & Sharansky, 2002). There exist several self-report measures to assess dissociative symptoms, e.g. the Somatoform Dissociation Questionnaire, the Multidimensional Inventory of Dissociation (Dell, 2006), and the Dissociative Experiences Scale II (DES-II; E. M. Bernstein & Putnam, 1986; Bernstein-Carlson & Putnam, 1993). The DES-II is the most widely used and studied assessment measure of dissociation both internationally (Condon & Lynn, 2014; Lipsanen, Saarijärvi, & Lauerma, 2003; Ross, 1997) and in Norway (Bækkelund & Berg, 2014).

The Dissociative Experiences Scale II. The DES-II is a 28 item self-report measure of a variety of dissociative experiences scored on a eleven point Likert scale (0%, 10%, ..., 100%). Rather than using a dichotomous yes/no format, the response format used in the DES-II is intended to make the scores reflect a wide range of dissociative symptoms (Carlson &

Putnam, 1993). Frequency is defined as “percentage of the time you have the experience”. In order to make questions more comprehensible and reduce the likelihood of response biases, e.g. answering based on social undesirability (Carlson & Putnam, 1993), the developers framed the questions in a normative way (e.g. “Some people have the experience of finding new things among their belongings that they do not remember buying. Circle the number to show what percentage of the time this happens to you”).

Items are organized into three symptom subscales: *Amnesia* (e.g. “not knowing how you got somewhere” or “not recognizing friends or family members”), *Absorption* (e.g. “realizing that you did not hear part or all of what was said by another” or “becoming so involved in a fantasy or daydream that it feels as though it were really happening to you”), and *Depersonalization/Derealization* (e.g. “feeling that you are standing next to yourself or watching yourself do something” or “feeling that other people, objects, and the world around you is not real”). The scale also includes a subscale of *uncategorized* items comprising normal experiences of dissociation (e.g. “driving or riding in a car or bus or subway and suddenly realizing that they don’t remember what has happened during all or part of that time” or “are approached by people they do not know, who call them by another name or insist that they have met them before”).

Amnesia involves difficulty with memory that is more severe than normal forgetfulness, e.g. forgetting important life events, and that is not explained by injury to the head, illness or substance use (Bækkelund & Berg, 2014; Maldonado et al., 2002; Steinberg & Steinberg, 1995). Absorption involves a temporary lack of reflective consciousness, narrowing the individual’s span of attention so that they are disconnected from their surroundings, leaving some confused with the distinction between fantasy and reality (Butler, 2006; Waller, Putnam, & Carlson, 1996). Depersonalization and Derealization can be described as a sense of unfamiliarity, a feeling of detachment or separation from one self or the

surroundings, and a feeling that the world is not real (Bryant, 2007; Bækkelund & Berg, 2014; Maldonado et al., 2002; Steinberg & Steinberg, 1995).

The developers of the DES-II report over all adequate psychometrics properties of the scale regarding construct validity, internal consistency and temporal stability, convergent validity with other measures on dissociation, predictive validity, inter-rater reliability and test-retest reliability (E. M. Bernstein & Putnam, 1986; Carlson & Putnam, 1993). Later studies have supported these original findings in samples of both college students and different groups of psychiatric patients (schizophrenic, multiple personality disorder, and dissociative disorders not otherwise specified; Frischholz et al., 1990; Oh, Kim, & Kim, 2015). A meta-study by van Ijzendoorn & Schuengel (1996) summarized findings supporting the validity of the DES-II, but found limited evidence for discriminant validity.

Issues on the Dissociative Experiences Scale II. The DES-II has been criticized on some key points. First, the lack of agreement on the definition of dissociation makes the actual phenomenon measured by the scale unclear. Similarly, the symptom subscales Amnesia, Absorption, and Depersonalization/Derealization are not consistently operationalized, arguing against reports of good construct validity. Despite being presented as a symptoms subscale in the DES-II, Absorption is by many considered a normal phenomenon (I. H. Bernstein, Ellason, Ross, & Vanderlinden, 2001; Frischholz et al., 2014; Kihlstrom, 2005; Körlin et al., 2007; Waller et al., 1996). This has led some scholar to suggest that Amnesia and Depersonalization/Derealization should be considered the primary pathological dissociative symptoms (Frischholz et al., 2014; Körlin et al., 2007). In line with this assumption, the developers of the DES-II (E. M. Bernstein & Putnam, 1986; Bernstein-Carlson & Putnam, 1993) have argued that the DES-II is a measure of both normal experiences and pathological dissociative symptoms. In an attempt to assess particularly pathological dissociative symptoms a subset scale named the Dissociative Experiences Scale

Taxon (DES-T) has been developed (Waller et al., 1996; Waller & Ross, 1997). This scale included 8 specific items from the DES-II that are most frequently endorsed by respondents with pathological dissociation. However, research on the DES-T is limited and results are mixed (Leavitt, 1999; Watson, 2003).

Second, the number of factors is not agreed upon and is inconsistently reported across different studies. E. M. Bernstein and Putnam (1986; Bernstein-Carlson and Putnam, 1993) reported evidence for a three factor structure based on samples of different groups of both psychiatric patients and non-clinical subjects, resulting in the theoretical categories Amnesia, Absorption and Depersonalization/Derealization. These three factors have received support from later studies replicating the original findings among patients with dissociative identity disorder, and samples of undergraduate students as well as the general population (Frischholz et al., 2014; Ross, Joshi, & Currie, 1991; Ross, Ellason, Anderson, 1995; Schwartz & Frischholz, Schwartz, Braun, & Sachs, 1991). However, several authors disagree on this number of factors, most arguing for only one general factor (I. H. Bernstein et al., 2001; Körlin et al. 2007; Lipsanen et al., 2003; Fisher & Elinsky, 1990; Wright & Lofthus, 1999) underlying the scale. Olsen et al. (2013) claim that the original scale included items with ambiguous associations with the dissociative dimension underlying it. Both Olsen et al. and Holmes et al. (2005) criticize the inconsistent selection of items to the scale, e.g. that conversion symptoms are not included. Furthermore, there is disagreement on whether the DES-II is continuous or multidimensional (Bækkelund & Berg, 2014; Holmes et al., 2005; Kimerling, Prins, Westrum, & Lee, 2004). Holmes et al. (2005) argue for a qualitative distinction between two dissociative phenomena called detachment and compartmentalization, contradicting the more common assumption of a continuum. I. H. Bernstein et al. suggest that a form of range restriction can arise because some symptoms are more common than others.

Concerning the structure, or the metrics, of the DES-II, the literature show issues related to biases of self-report, biased wording of the items, issues on the response format and framing of time span, unclear scoring procedures, and unclear cutoff values (e.g. Espírito Santo & Abreu, 2009). In an influential article examining the DES-II in a sample of first year students, Wright and Loftus (1999) point out that the use of percentages to report the frequency of dissociative experiences is inappropriate. The timeframe of the DES-II is defined as “in your daily life”, which is a broad and quite unspecific framing that may confuse respondents. Estimating the percentage of how often an event has occurred during an unspecified period of time is cognitively challenging and may lead to inaccurate responses (Wright and Loftus 1999). Jepsen, Langeland, Sexton, & Heir (2014) suggested that the timeframe needs to be regulated in a better way to avoid this issue. Furthermore, Wright and Loftus found that respondents in their study reported being confused about how to use the percentages in the response format e.g. whether it is the percentage of the total time of a day or the time while awake. Assuming that a person can only have one dissociative experience at any given time, a respondent reporting 4% or more on the DES-II total sum would constantly be dissociating according to Wright and Loftus. They found that a large majority of their respondents scored above this 4% level, and concluded that the respondents did not appear to interpret the response alternatives as percentages. Furthermore, they argued that the wording of the questions “some people” is biased in the way that respondents may believe that the experiences are more common than they really are.

Alternative metrics. Being one of the most used scales for measuring dissociative symptoms, the critique of the DES-II has led several authors to discuss ways to change the scale, leading to the exploration of modified versions. Wright and Loftus (1999) suggested an alternative structure of the scale, replacing percentages with a more easily understood format. They explored the use of *verbal quantifiers* (DES-VQ; “never”, “occasionally”, “fairly often”,

“very often”, “always”) and *comparison* (DES-C; “much less than others”, “about the same as others”, “much more than others”), both measures are scored on an eleven point Likert scale as in the original version. However, Wright and Loftus argued that an issue with comparison scores is that it requires the respondent to either have knowledge or make assumption about other people’s dissociative experiences. This can create group differences as groups will have different knowledge on the topic, e.g. cultural differences in the interpretation of dissociation or reports of dissociation through media. Most of the time, people do not know how often other people dissociate (Wright & Loftus, 1999). The DES-C specifically asks the respondents to make comparisons to other people, something that can amplify the group tendency (Wright & Livingston-Raper, 2002). The DES-C has received critique for the comparison format and a supposedly weak correlation with the DES-II (Dalenberg et al., 2014). Moreover, Larøi, Billieux, Defeldre, Ceschi, & van der Linden (2013) suggest that the DES-II and the DES-C measures different aspects of dissociation.

The Dissociative Experiences Scale – Reformatted (DES-R) is a revision (E. B. Carlson, 2014; as cited in Bækkelund & Berg, 2014) of the DES-II. C. J. Dalenberg and E. B. Carlson (personal communication, 2010; as cited in Holden, 2012) recommended a change in the format of the DES-II to include a scale with verbal quantifiers from 0 (“never”) to 7 (“daily or more often”). There is however limited information on the DES-R as the scale was presented at a conference but have no publication.

The Norwegian translation of the Dissociative Experiences Scale II. The authors of the DES-II have made some suggestions on how to proceed when translating the scale to other languages (Carlson & Putnam, 1993). They pointed out that when interpreting results from a translated DES-scale one needs to be aware that the psychometric properties may not be similar to the English version. They’ve further advised that the items should be translated conceptually and not literally to ensure that manners of expressions are specific to the

language or culture in question, and also that specifications in the items need to be removed or added depending on their relevance in the language or culture. According to the Sidran Institute, the DES-II has been translated to nineteen languages (2017), e.g. Mandarin (Kleindorfer, 2006), Korean (Park et al., 1995; as cited in Oh et al., 2015), Swedish (Körlin et al. 2007), French (Larøi et al., 2013), Finish (Lipsanen et al., 2003), Portuguese (Espírito et al., 2009), and Norwegian (Bøe, Haslerud, & Knudsen, 1992). The aim of translation is that the scale will be more sensitive to cultural variations and linguistic nuances, and some studies argue for the stability of the DES-II across cultures (Espírito et al., 2009; Oh et al., 2015).

The Dissociative Experiences Scale II Clinical Version. The Dissociative Experiences Scale II Clinical Version (DES-II-CV) is a modified (Winje, 2015, unpublished) Norwegian version (Bøe et al., 1992) of the DES-II. Comprising the original 28 items from the DES-II, items in the DES-II-CV are also organized into the three symptom subscales Amnesia, Absorption and Depersonalization/Derealization, and one subscale of *uncategorized* items reflecting normal dissociative experiences. Modifications made to the response format of the DES-II-CV are inspired by the recommendations made by Wright and Loftus (1999), modifying the rating scale to “verbal quantifiers”. The response format has been changed to a five point Likert scale with verbal quantifiers (0 = “never”, 1 = “rarely”, 2 = “sometimes”, 3 = “often”, and 4 = “very often”). The time frame has been changed to include symptoms within the last 7 days. These modifications make the DES-II-CV correspond to instruments widely used in assessment of adult PTSD such as the Impact of Event Scale – Revised and the Symptom Checklist 90 – Revised (Weiss, 2004). Moreover, based on the assumption that an uncertain framing of time can make the respondent confused when scoring the items (Jepsen et al., 2014; Wright & Loftus, 1999), a shorter timeframe will hopefully lead to more accurate recall of memory for dissociative symptoms. The authors of the present study have attempted to contact Loftus and Wright in order to gain more in depth information on the underlying

arguments for the suggested modifications of the DES-II, but unfortunately they were not able to be reached. Since the modifications on the DES-II-CV were recently made, the scale has not yet been validated.

The present study

Dissociation has been reported as a significant clinical phenomenon since the late nineteenth century. The increasing interest in psychological effects of trauma exposure and post-trauma mental health problems has brought dissociation renewed attention. However, as noted, dissociation is a complex phenomenon not fully understood and agreed upon, and much remains in order to establish more common theoretical understandings, evidence-based assessment methods as well as evidence-based helping interventions. The consequence is that clients will be at risk for receiving less-than-optimal services when clinicians fail to follow a science-based approach to clinical assessment. Time constraints and the lack of formal training may leave many clinicians disinclined to use complex assessment methods like semi-structured clinical interviews (Haynes, Smith & Hunsley, 2011). Using brief screening instruments to assess traumatic exposures may be useful to initiate a dialogue with the patient on case formulations and treatment planning. For clinicians, information about assessment possibilities, gaps in supporting scientific evidence for available instruments, and the most essential psychometric properties may be helpful guides in clinician's work (Haynes et al., 2011).

The Norwegian translation of the DES-II is the most widely used measure of dissociative symptoms in Norwegian clinical practice despite the lack of research on the scale. With the recent modification, the DES-II-CV needs to be examined to determine whether the scale could contribute to a more precise measure of self-reported dissociative symptoms.

Substance abusing populations are assumed of having elevated risk of exposure to childhood maltreatment trauma, high prevalence of comorbid conditions, and dissociative

symptoms. Their poor level of daily functioning should motivate clinical researchers to initiate studies of this population. Using a group of informants from a substance abusing population will make it possible to investigate the associations between some central dissociative phenomena and types of childhood maltreatment trauma, specific post-traumatic stress symptoms and symptoms of general psychological distress, and drug abuse characteristics. The hope is that findings from this study may generate new research questions and spur further interest in the DES-II-CV.

Research questions for the present study: How are dissociative symptoms related to (a) types of childhood maltreatment trauma, (b) specific post-traumatic stress symptoms and symptoms of general psychological distress, and (c) different characteristics of substance abuse?

Method

Participants

The present study is part of the research project “Trauma and Mental Health” run by the Trauma Psychology Research Group at the Department of Clinical Psychology, University of Bergen. The sample in this larger project comprises different groups with assumed high risk of having been exposed to potentially traumatic events including current and former foster care clients, in- and outpatients with dual diagnosis at drug abuse treatment facilities, in- and outpatients receiving mental health services, and prison inmates (Dovran et al., 2016). The project has been approved by the Regional Committee for Medical and Health Research Ethics (REC West; reference number: 2009/1133) as well as the authorities representing child protective services, prisons, mental health, and substance abuse treatment facilities. All the respondents received oral and written information of the project and signed a consent form before participation. The respondents received no compensation. Use of self-report instruments requires good rapport with the participants and exclusion criteria included

psychosis, intoxication or withdrawal symptoms during screening, and insufficient comprehension of Norwegian.

This present study includes 27 inpatients at Kalfaret Behandlingscenter (Kalfaret Treatment Centre) admitted for severe and long term substance abuse. Kalfaret Behandlingscenter is run by the Social service of the Church, working on behalf of The Western Regional Health Organization (Helse Vest Regionalt Helseforetak) as part of the public health care within Interdisciplinary Specialized Treatment Services (Tverrfaglig spesialisert behandlingstjeneste) for drug addicts. Nineteen males (70.4%) and 8 females (29.6%) participated in the study. Age ranged from 19 to 34 years ($M = 24.96$, $SD = 4.17$).

Nineteen participants (70.4%) reported debuting with only one drug (mono substance debut), the most common substance of debut being alcohol ($n = 14$, 51.9%). The majority debuted at a young age ($M = 13.44$, $SD = 3.53$, range 7-26 years old). At the time of screening, 22 participants (81.5%) reported using more than one drug within the past six months (poly current substance use). Twenty-four (88.9%) were unmarried, 14 (51.9%) reported high school as their highest level of education, and 18 (66.7%) were currently unemployed (Table 1; Table 2).

Table 1

Description of the Sample

Variable	M	SD	Mdn	Min	Max
Male $n = 19$ (70.4%) Female $n = 8$ (29.6%)					
Age	24.96	4.17	25	19	34
Substance debut age	13.44	3.53	13	7	26
Number of debut substances	1.41	0.75	1	1	4
Years of substance use	11.52	5.37	10	2	22
Number of previous substances	4.26	1.61	4	2	7
Number of current substances	3.15	2.07	3	0	6

Note. Previous substances = Used before the last 6 months. Current substances = Used within the last 6 months.

Table 2

Substance Use, Marital Status and Work Status within the Sample

Variable	Count	Percent	Variable	Count	Percent
Number of substances			Marital status		
MonoDeb	19	70,37	Unmarried	24	88,89
PolyDeb	8	29,63	Married/cohabitant	3	11,11
PolyPrev	27	100,00	Highest edu. lev.		
PolyCurr	22	81,48	Primary school	14	51,85
Debut substances			High school	5	18,52
Alkohol	14	51,85	Vocational edu.	6	22,22
Cannabis	9	33,33	Higher edu.	2	7,41
Opiats	1	3,70	Work status		
Benzo.	2	7,41	No job	18	66,67
Amfetamin	1	3,70	Part time job	4	14,81
			Full time job	3	11,11
			Student	2	7,41

Note. No. of substances = Number of substances. MonoDeb = Mono substance debut. PolyDeb = Poly substance debut. PolyPrev = Previous poly substance use. PolyCurr = Current poly substance use. Benzo. = Benzodiazepine. Highest edu. lev. = Highest educational level. Vocational edu. = Vocational education. Higher edu. = Higher education.

Measures

Five instruments were used to collect data on dissociative experiences, childhood maltreatment trauma, psychological symptoms and history of substance use. Twenty-six of the participants completed all five instruments; one did not complete the IES-R.

The Dissociative Experiences Scale II Clinical Version. Cronbach's alpha for the DES-II-CV with the present sample is: the symptom subscale Absorption (6 items) alpha = .70; the symptom subscale Depersonalization/Derealization (6 items) alpha = .57; the *uncategorized* subscale (10 items) alpha = .61. The symptom subscale Amnesia (all respondents reported a zero score on items 4 and 8) and, subsequently, the DES-II-CV total sum suffered null variance, and Cronbach's alpha could not be calculated. The scale is included in Appendix B.

Childhood Trauma Questionnaire Short Form. The Childhood Trauma Questionnaire Short Form (CTQ-SF) is a 28 item retrospective self-report questionnaire of childhood maltreatment trauma (Baker & Maiorino, 2010; D. P. Bernstein et al., 2003; Thombs, Lewis, Bernstein, Medrano, & Hatch, 2007). Participants are asked to rate how often they have experienced maltreatment in childhood on a five point Likert scale. The items are categorized into five subscales: emotional abuse, physical abuse, sexual abuse, emotional neglect, and physical neglect. Threshold scores from the CTQ-SF manual for “no”, “low”, “moderate”, and “severe” level of childhood maltreatment trauma (D. P. Bernstein & Fink, 1998) were used to categorize the CTQ-SF subscale scores. Sum scores were dichotomized into no childhood maltreatment trauma (no) and childhood maltreatment trauma (low-severe level) on the five subscales according to recommendations from the test manual (D. P. Bernstein & Fink, 1998). In this study, the Norwegian version of the questionnaire was used (Dovran et al., 2012, 2016; Winje, Dovran, & Murison, 2003). Cronbach’s alpha for the present sample is: .72.

Impact of Event Scale – Revised. The Impact of Event Scale – Revised (IES-R) is a 22 item self-report screening instrument measuring current post-traumatic stress symptoms (Horowitz, Wilner, & Alvarez, 1979; Weiss, 2004; Weiss & Marmar, 1997), and is one of the most widely used scales worldwide for this purpose (Elhai, Gray, Kashdan, & Franklin, 2005). Participants rate symptom intensity during the last 7 days on a five point Likert scale. The items are organized in three subscales: Intrusion, Avoidance and Hyperarousal. In this study the Norwegian translation of IES-R has been used (Winje & Tungodden, 1995; Eid et al., 2009; Heir, Piatigorsky, & Weisæth, 2010). For the IES-R two different cut-off levels were used: sum scores of > 33 (PTSDcut33) and sum scores > 22 (PTSDcut22). Sum scores of > 33 is the recommended cut-off for probable PTSD severity level in international (Creamer, Bell, & Failla, 2003) as well as Norwegian samples of trauma exposed general

population (Heir, Piatigorsky, & Weisæth, 2009; Theodorescu, Heir, Hauff, Wentzel-Larsen, & Lien, 2012). A sum score > 22 has been recommended by Rash et al. (2008) as a cutoff for probable PTSD severity level within populations with substance use disorder (SUD).

Cronbach's alpha for the present sample is: .94 ($N = 26$).

Symptom Checklist 90 – Revised. The Symptom Checklist 90 – Revised (SCL-90-R) is a 90-item self-report inventory of psychological symptoms measured on a five point Likert scale within the last 7 days (Derogatis, 1994; Derogatis & Cleary; 1977; Derogatis, Lipman, & Covi, 1973). Items are organized to form nine subscales: Somatization, Obsessive compulsiveness, Interpersonal Sensitivity, Depression, Anxiety, Hostility, Phobic Anxiety, Paranoid Ideation, and Psychotism. The Global Severity Index (GSI) is considered the best single indicator for severity of symptoms as it comprises the mean score of all responses and reflects the general level of distress (Derogatis, 1994). The Positive Symptom Total (PST) comprises the number of reported symptoms (scores above 0). The Norwegian translation of the SCL-90-R has been used in this study (Derogatis, 2009). Sum scores of the SCL-90-R GSI and the PST were dichotomized into scores above or below cut-off (t-scores > 63 ; Derogatis, 2009). Cronbach's alpha for the GSI for the present sample is: .98.

Client screening instrument. Klientkartleggingssystem (KKS) is a national self-report client screening system for substance use developed by The Bergen Clinics and The Norwegian Institute of Alcohol and Drug Research (Iversen, Lauritzen, Skretting, & Skutle, 2009). The participants report information on their personal substance use, including debut age, number of previous (> 6 months ago) and current (last 6 months) substance use, types of substances, and time span of use. Dichotomous variables were created for three KKS measures: early debut age (≤ 12 years) vs. late debut age (13-17 years), mono substance debut (MonoDeb) vs. poly substance debut (PolyDeb), and no current substance use (noCurr) vs. poly current substance use (PolyCurr).

Statistical procedures

All statistical analyses were conducted using Statistica software version 13.2. Due to the small sample size a non-parametric Mann-Whitney U Test was applied in the analysis of the study variables. Hedge's g was used to calculate effect size (no effect ≤ 0.19 , small effect = 0.20-0.49, medium effect = 0.50-0.79, large effect ≥ 0.80).

Caseness scores for childhood maltreatment trauma, post-traumatic stress symptoms and general psychological symptoms, as well as variables of substance use, were compared on six different dissociation variables: the DES-II-CV total sum, the subscale scores on the symptom subscales Amnesia, Absorption and Depersonalization/Derealization, the total sum of the symptom subscales (Sum AmAbDe), and the score on the subscale *uncategorized*. In further discussions, these variables will be referred to as *symptom subscales* (Amnesia, Absorption and Depersonalization/Derealization), *sum scores* (DES-II-CV total sum and Sum AmAbDe), and *uncategorized* subscale. The present study examined a large number of variables in order to explore the DES-II-CV. As the analyses provided a vast body of results, we will only present the most central findings.

Results

Statistical analyzes

Prevalence of childhood maltreatment trauma, psychological symptoms, and substance use. The DES-II-CV is a recently developed measure and corroborated cutoff values have not yet been established for the modified instrument. Therefore, the prevalence of dissociative symptoms within this sample will not be examined.

The sample prevalence of childhood maltreatment trauma (CTQ-SF) above caseness level (low-severe level) was 59.3% ($n = 16$) for emotional abuse, 25.9% ($n = 7$) for physical abuse, 14.8% ($n = 4$) for sexual abuse, 74.0% ($n = 20$) for emotional neglect, and 48.1% ($n = 13$) for physical neglect, respectively. The prevalence for number of experienced childhood

maltreatment traumas showed that 3.7% (n = 1) of the sample had experienced no childhood maltreatment trauma, 25.9% (n = 7) had experienced 1 type, 29.6% (n = 8) had experienced 2 types, 37.0% (n = 10) had experienced 3 types, and 3.7% (n = 1) participant had experienced 4 types of childhood maltreatment trauma. None of the participants had experienced all 5 types of childhood maltreatment trauma.

Nearly half of the sample (48.1%, n = 13) scored above cutoff for probable PTSD for substance abusers, whereas 25.9% (n = 7) scored above cutoff for probable PTSD severity in trauma exposed general population on the IES-R.

Half the sample (51.9%, n = 14) scored above clinical cutoff on GSI and 37% (n = 10) scored above clinical cutoff on PST on the SCL-90-R.

Results from the KKS showed that 40.7% (n = 11) of the sample were 12 years or younger at substance debut age, 51.9% (n = 14) debuted at age 13 – 17, while 7.4% (n = 2) debuted at age 18 or older. For mono vs. poly debut it was found that 70.4% (n = 19) of the sample debuted with one substance while 29.6% (n = 8) debuted with two or more substances. On current substance use it was found that 81.5% (n = 22) used more than one substance and 18.5% (n = 5) did not use any substances. Table 3 presents an overview of the assessment measures used in this study.

Table 3

Descriptive Statistics of Dissociative Symptoms, Childhood Maltreatment Trauma and Psychological Symptoms within the Sample

Instrument	Nr. items	M	SD	Mdn	Min	Max
DES-II-CV						
Total sum	28	15.44	9.06	15	2	34
Amnesia	6	1.00	1.49	0	0	6
Absorption	6	6.44	3.76	6	1	13
Depers./Dereal.	6	1.44	1.91	1	0	7
Sum AmAbDe	18	8.89	5.71	8	1	22
Uncategorized	10	6.56	4.02	6	0	15
CTQ-SF						
Total sum	28	45.81	12.10	46	26	66
Emotional abuse	5	11.48	5.29	12	5	20
Physical abuse	5	7.26	3.56	6	5	19
Sexual abuse	5	6.26	3.87	5	5	20
Emotional neglect	5	13.18	5.10	12	6	25
Physical neglect	5	7.63	2.72	7	5	15
IES-R						
IES-R sum	22	23.40	18.53	22	0	69
SCL-90-R						
GSI	90	0.96	0.66	0.88	0.21	2.71
PST	90	44.52	18.77	44.00	16.00	87.00

Note. DES-II-CV = Dissociative Experiences Scale II Clinical Version. Depers./Dereal. = Depersonalization/Derealization. Sum AmAbDe = Sum score on symptom subscales Amnesia, Absorption and Depersonalization/Derealization. CTQ-SF = Childhood Trauma Questionnaire Short Form. IES-R = Impact of Event Scale – Revised. IES-R sum = Sum score of the Impact of Event Scale – Revised. SCL-90-R = Symptom Checklist 90 – Revised. GSI = Global Severity Index. PST = Positive Symptom Total.

^a IES-R n = 26. One participant did not complete the IES-R.

Gender differences. The results show overall small difference between men and women on DES-II-CV. No gender differences were found on the symptom subscales Amnesia and Depersonalization/Derealization (all $p \geq .140$), but women scored significantly higher than men on all sum scores as well as the symptom subscale Absorption and the

uncategorized subscale (all $p \leq .043$). However, the effect sizes were small, ranging from 0.39 to 0.43.

There were no differences between men and women on the total sum or any of the subscale scores on the CTQ-SF (all $p \geq .061$).

Women had higher scores than men on the IES-R total sum ($Mdn_{women} = 30$, $Mdn_{men} = 13$, $U = 32.5$, $Z_{adj.} = 2.17$, $p = .030$, $ES = 0.43$).

Women ($Mdn = 1.03$) had higher scores than men ($Mdn = 0.66$) on the SCL-90-R GSI ($U = 36.5$, $Z_{adj.} = 2.07$, $p = .038$, $ES = 0.40$), but no gender differences were found for PST ($p \geq .089$).

No gender differences were found on the KKS for substance debut age, number of debut substances or number of currently used substances (all $p \geq .434$).

In sum, few (8 out of 22) gender differences were found on the study variables, with small effect sizes. Due to the small differences and sample size, gender variables will not be considered in the further statistical analyses in this study. Results from analyzes on the major study variables are presented in Table 4.

Table 4

Gender Differences on Dissociative Symptoms, Childhood Maltreatment Trauma and Psychological Symptoms

Instrument	Nr. items	Male (n = 19)				Female (n = 8)				U	Zadj.	p	ES	ES categ.
		M	SD	Mdn	Rank sum	M	SD	Mdn	Rank sum					
DES-II-CV														
Total sum	28	12,58	7,34	11	223,5	22,25	9,53	20	154,5	33,5	-2,23	0,026	-0,43	Small
Amnesia	6	0,74	1,05	0	248,5	1,63	2,20	1	129,5	58,5	-0,98	0,326	-0,19	No
Absorption	6	5,42	3,34	6	226,5	8,88	3,76	10	151,5	36,5	-2,09	0,037	-0,40	Small
Depers./Dereal.	6	1,11	1,66	0	239,5	2,25	2,31	2	138,5	49,5	-1,47	0,140	-0,28	Small
Sum AmAbDe	18	7,26	4,60	7	227,5	12,75	6,50	12	150,5	37,5	-2,02	0,043	-0,39	Small
Uncategorized	10	5,32	3,33	5	225,5	9,50	4,17	11	152,5	35,5	-2,14	0,033	-0,41	Small
CTQ-SF														
Total sum	28	44,01	10,41	46	247,0	50,06	15,37	51	131,0	57,0	-0,98	0,325	-0,19	Small
Emotional abuse	5	0,47	0,51	0	235,5	0,88	0,35	1	142,5	45,5	-1,87	0,061	-0,36	Small
Physical abuse	5	0,26	0,45	0	267,0	0,25	0,46	0	111,0	75,0	0,03	0,972	0,01	Small
Sexual abuse	5	0,11	0,32	0	255,0	0,25	0,46	0	123,0	65,0	-0,91	0,365	-0,17	Small
Emotional neglect	5	0,79	0,42	1	278,5	0,63	0,52	1	99,5	63,5	0,84	0,402	0,16	Small
Physical neglect	5	0,53	0,51	1	277,5	0,38	0,52	0	100,5	64,5	0,67	0,500	0,13	Small
IES-R														
IES-R sum	22	17,42	15,52	13,0	203,5	36,88	18,50	30,0	147,5	32,5	-2,17	0,030	-0,43	Small
SCL-90-R														
GSI	90	0,86	0,68	0,66	226,5	1,19	0,56	1,03	151,5	36,5	-2,07	0,038	-0,40	Small
PST	90	41,37	19,30	39,00	233,5	52,00	16,14	55,00	144,5	43,5	-1,70	0,089	-0,33	Small
KKS														
Subst. debut age		13,47	3,81	14,00	277,0	13,38	3,02	12,50	101,0	65,0	0,57	0,572	0,11	Small
No. debut subst.		1,26	0,45	1,00	252,5	1,75	1,16	1,00	125,5	62,5	-0,86	0,389	-0,17	Small
No. current subst.		3,37	1,80	3,00	281,0	2,63	2,67	2,00	97,0	61,0	0,78	0,434	0,15	Small

Note. DES-II-CV = Dissociative Experiences Scale II Clinical Version. Depers./Dereal. = Depersonalization/Derealization. Sum AmAbDe = Sum score on symptom subscales Amnesia, Absorption and Depersonalization/Derealization. CTQ-SF = Childhood Trauma Questionnaire Short Form. IES-R = Impact of Event Scale – Revised. IES-R sum = Sum score of the Impact of Event Scale – Revised. SCL-90-R = Symptom Checklist 90 – Revised. GSI = Global Severity Index. PST = Positive Symptom Total. Subst. debut age = Substance debut age. No. of debut subst. = Number of debut substances. No. of current subst. = Number of current substances. Current substances = Used within the last 6 months.

Dissociative symptoms and childhood maltreatment trauma. Low to severe level of emotional abuse was related to higher levels of dissociative symptoms on the total sum (Mdn_{EmoAbu} = 18.5, Mdn_{noEmoAbu} = 11, U = 33.5, Z = 2.67, p = .008, ES = 0.51), the symptom subscale Absorption (Mdn_{EmoAbu} = 8, Mdn_{noEmoAbu} = 5, U = 43.5, Z = 2.19, p = .020, ES = 0.42), the sum of the symptom subscales (Mdn_{EmoAbu} = 10.5, Mdn_{noEmoAbu} = 5, U = 47, Z = 2.00, p = .045, ES = 0.39), and for the *uncategorized* subscale (Mdn_{EmoAbu} = 9, Mdn_{noEmoAbu} = 4, U = 22.5, Z = 3.23, p = .001, ES = 0.26). No significant relationship was found between childhood emotional abuse and the symptom subscales Amnesia and Depersonalization/Derealization (all p ≥ .188). (Table 5). The group with low to severe level of physical abuse (Mdn = 2) had significantly higher scores on the Amnesia symptom subscale compared to those with no physical abuse (Mdn = 0, U = 26, Z = 1.57, p = .009, ES = 0.50). No other differences were found for physical abuse and sum scores, the *uncategorized* subscale, or the remaining symptom subscales (all p ≥ .081). No differences were found between the groups with no vs. low to severe levels of physical neglect, emotional neglect or sexual abuse on any of the DES-II-CV variables (all p ≥ .091).

In sum, emotional abuse was related to the sum scores, the symptom subscale Absorption, and the *uncategorized* subscale but not on the two remaining symptom subscales. Physical abuse was associated with higher levels of dissociative symptoms on the symptom subscale Amnesia. No relationship was found for any of the remaining CTQ-SF variables. These results suggest that emotional abuse as well as physical abuse may be related to non-pathological dissociative experiences.

Table 5

Comparison of Emotional Abuse vs. No Emotional Abuse on Dissociative Symptoms

Instrument	Nr. items	Emotional abuse (n = 16)				No emotional abuse (n = 11)				U	Zadj.	p	ES	ES categ.
		M	SD	Mdn	Rank sum	M	SD	Mdn	Rank sum					
DES-II-CV														
Total sum	28	19.38	8.96	18.5	278.5	9.73	5.68	11.0	99.5	33.5	2.67	0.008	0.51	Med.
Amnesia	6	1.38	1.78	1.0	249.0	0.45	0.69	0.0	129.0	63.0	1.32	0.188	0.25	Small
Absorption	6	7.81	3.85	8.0	268.5	4.45	2.66	5.0	109.5	43.5	2.19	0.029	0.42	Small
Depers./Dereal.	6	1.56	2.13	0.5	225.5	1.27	1.62	1.0	152.5	86.5	0.05	0.958	0.01	No
Sum AmAbDe	18	10.75	5.97	10.5	265.0	6.18	4.19	5.0	113.0	47.0	2.00	0.045	0.39	Small
Uncategorized	11	8.63	3.72	9.0	289.5	3.55	2.11	4.0	88.5	22.5	3.23	0.001	0.62	Med.

Note. DES-II-CV = Dissociative Experiences Scale II Clinical Version. Depers./Dereal. = Depersonalization/Derealization. Sum AmAbDe = Sum score of symptom subscales Amnesia, Absorption and Depersonalization/Derealization.

Dissociative symptoms and post-traumatic stress symptom. Participants with scores above the recommended cutoff for probable PTSD for substance abusers (Mdn = 9) scored higher than the group with scores below this cutoff (Mdn = 4) on the *uncategorized* subscale ($U = 38$, $Z = 2.37$, $p = .018$, $ES = 0.47$). No other differences were found for the symptom subscales and sum scores (all $p \geq .143$).

Participants with scores above cutoff for probable PTSD severity in trauma exposed general population (Mdn = 9) scored higher than the group with scores below this cutoff (Mdn = 4) on the *uncategorized* variable ($U = 19$, $Z = 2.74$, $p = .006$, $ES = 0.54$). The same was found for the DES-II-CV total sum ($Mdn_{PTSDcut33} = 22$, $Mdn_{noPTSDcut22} = 12$, $U = 32$, $Z = 1.97$, $p = .049$, $ES = 0.39$). No other significant results were found (all $p \geq .115$).

In sum, high severity levels of post-traumatic stress symptoms were unrelated to dissociative symptom severity, but some associations occurred between normal dissociative phenomena (the *uncategorized* subscale) and to the DES-II-CV total sum.

Dissociative symptoms and general psychological symptom. Participants with scores above cutoff level of general psychological distress (GSI t-score ≥ 63) scored higher than the group with scores below this cutoff on the symptom subscale Depersonalization/Derealization ($Mdn_{GSIcase} = 2$, $Mdn_{noGSIcase} = 0$, $U = 45.5$, $Z = 2.33$, $p = .020$, $ES = 0.48$), the *uncategorized* subscale ($Mdn_{GSIcase} = 8$, $Mdn_{noGSIcase} = 4$, $U = 50.0$, $Z = 1.98$, $p = .048$, $ES = 0.38$), and the DES-II-CV total sum ($Mdn_{GSIcase} = 18.5$, $Mdn_{noGSIcase} = 11.0$, $U = 49.5$, $Z = 1.99$, $p = .046$, $ES = 0.38$). However, the effect sizes were small. No other associations were found between levels of general psychological distress and the remaining DES-II-CV variables (all $p \geq .143$).

Participants with scores above cutoff for number of items endorsed (PST t-score ≥ 63) scored higher than the group with scores below this cutoff on the symptom subscale Depersonalization/Derealization ($Mdn_{PSTcase} = 2$, $Mdn_{noPSTcase} = 0$, $U = 27.5$, $Z = 3.06$, $p =$

.002, ES = 0.59), the symptom subscale Absorption ($Mdn_{PSTcase} = 9$, $Mdn_{noPSTcase} = 5$, $U = 32.0$, $Z = 2.66$, $p = .008$, $ES = 0.51$), the sum scores of the symptom subscales ($Mdn_{PSTcase} = 12.5$, $Mdn_{noPSTcase} = 5$, $U = 26.5$, $Z = 2.92$, $p = .004$, $ES = 0.59$), the *uncategorized* subscale ($Mdn_{PSTcase} = 9$, $Mdn_{noPSTcase} = 4$, $U = 32.0$, $Z = 2.65$, $p = .008$, $ES = 0.51$), and the DES-II-CV total sum ($Mdn_{PSTcase} = 21$, $Mdn_{noPSTcase} = 11$, $U = 25$, $Z = 2.99$, $p = .003$, $ES = 0.58$).

In sum, high severity levels of general psychological distress were related to the Depersonalization/Derealization symptom severity only, but not with symptoms of Amnesia or Absorption. Some associations were found between general psychological distress severity and the DES-II-CV total sum and the *uncategorized* subscale. The variable measuring number of items endorsed was associated with higher scores the symptom subscales Absorption and Amnesia, sum scores and the *uncategorized* subscale. The latter result indicates that there may exist a relationship between a positive symptom scoring bias and dissociation phenomena. Results are displayed in Table 6 and Table 7.

Table 6

Comparison of General Psychological Distress vs. No General Psychological Distress on Dissociative Symptoms

Instrument	Nr. items	GSICase (n = 14)				noGSICase (n = 13)				U	Zadj.	p	ES	ES categ.
		M	SD	Mdn	Rank sum	M	SD	Mdn	Rank sum					
DES-II-CV														
Total sum	28	18.64	8.31	18.5	237.5	12.00	8.84	11.0	140.5	49.5	1.99	0.046	0.38	Small
Amnesia	6	0.86	1.23	0.5	193.0	1.15	1.77	0.0	185.0	88.0	0.13	0.895	0.03	No
Absorption	6	7.64	3.56	8.0	231.5	5.15	3.65	5.0	146.5	55.5	1.71	0.087	0.33	Small
Depers./Dereal.	6	2.21	2.15	2.0	241.5	0.62	1.19	0.0	136.5	45.5	2.33	0.020	0.45	Small
Sum AmAbDe	18	10.71	5.38	11.0	236.5	6.92	5.57	5.0	141.5	50.5	1.95	0.052	0.37	Small
Uncategorized	11	7.93	3.69	8.0	237.0	5.08	3.97	4.0	141.0	50.0	1.98	0.048	0.38	Small

Note. GSICase = t-scores > 65 on the Global Severity Index. noGSICase = t-scores > 65 on the General Severity Index. GSICase = Global Severity Index caseness. noGSICase = No Global Severity Index caseness. DES-II-CV = Dissociative Experiences Scale II Clinical Version. Depers./Dereal. = Depersonalization/Derealization. Sum AmAbDe = Sum score of symptom subscales Amnesia, Absorption and Depersonalization/Derealization.

Table 7.

Comparison of Positive Symptom Total vs. No Positive Symptom Total on Dissociative Symptoms.

Instrument	Nr. items	PSTCase (n = 10)				noPSTCase (n = 17)				U	Zadj.	p	ES	ES categ.
		M	SD	Mdn	Rank sum	M	SD	Mdn	Rank sum					
DES-II-CV														
Total sum	28	21,9	6,97	21,0	200,0	11,65	8,04	11	178,0	25,0	2,99	0,003	0,58	Med.
Amnesia	6	1,1	1,37	1,0	152,5	0,94	1,60	0	225,5	72,5	0,66	0,512	0,13	No
Absorption	6	8,9	3,21	9,0	193,0	5,00	3,34	5	185,0	32,0	2,66	0,008	0,51	Med.
Depers./Dereal.	6	2,8	2,15	2,0	197,5	0,65	1,22	0	180,5	27,5	3,06	0,002	0,59	Med.
Sum AmAbDe	18	12,8	4,52	12,5	198,5	6,59	5,12	5	179,5	26,5	2,92	0,004	0,56	Med.
Uncategorized	11	9,1	3,38	9,0	193,0	5,06	3,67	4	185,0	32,0	2,65	0,008	0,51	Med.

Note. PSTCase = t-scores > 65 on the Positive Symptom Total subscale. noPSTCase = t-scores > 65 on the Positive Symptom Total subscale. PSTCase = Positive Symptom Total Caseness. noPSTCase = No Positive Symptom Total Caseness DES-II-CV = Dissociative Experiences Scale II Clinical Version. Depers./Dereal. = Depersonalization/Derealization. Sum AmAbDe = Sum score of symptom subscales Amnesia, Absorption and Depersonalization/Derealization.

Dissociative symptoms and substance abuse. No differences in dissociative symptoms were found between early debut age vs. late debut age, mono substance debut vs. poly substance debut, or no substance use currently vs. poly substance use currently (all $p \geq .125$). In sum, this may indicate that these abuse characteristics are not associated with dissociative experiences.

Discussion

Exploring Dissociative Symptoms within a Sample of Substance Abusers

In line with results from previous research on comorbidity among substance abusers, the prevalence of childhood maltreatment trauma, post-traumatic stress symptoms and general psychological symptoms was quite high within our sample (Abueg & Fairbank, 1992; Bonin, Norton, Asmundson, Dicurzio, & Pidlubney, 2000; Dansky, Roitzsch, Brady, & Saladin, 1997; van Hasselt et al., 1992; Lisak, 1993; Reynolds, Mezey, Wheeler, Drummond, & Baldacchino, 2005).

Overall, there were few results in support of a relationship between childhood maltreatment trauma and dissociative symptoms in this study. No relationship was found for either physical abuse, physical neglect, sexual abuse or emotional neglect. This is in contrast to previous literature indicating that physical and sexual childhood abuse are some of the most predictive variables of dissociation assessed by using the DES-II within both clinical and non-clinical samples (e.g. Chu & Dill, 1990; Chu et al., 1999; Zlotnick et al. 1994; Engel et al., 1996; Gershuny & Thayer, 1999; Gleaves, 1996; Simeon et al., 2001). Previous research has suggested that the lacking support for a childhood maltreatment trauma - dissociation relationship may in part be explained by underreports of trauma due to insufficient assessment methods (Draijer & Langeland, 1999; Langeland et al., 2002). However, this does not seem to be the case in our study since five types of childhood maltreatment trauma have been included and the prevalence of the different forms of trauma was high within our sample. Rather, these

results may reflect a more complex relationship between childhood maltreatment trauma and dissociative symptoms among substance abusers.

One of the main findings of this study was the relationship between childhood emotional abuse and levels of dissociative symptoms. Emotional abuse was significantly associated with the sum scores, the symptom subscale Absorption and the *uncategorized* subscale of the DES-II-CV. These results are in line with research suggesting that childhood emotional abuse may be the strongest predictor of dissociation among substance abusers (e.g. Tamar-Gurol et al., 2008; Schäfer et al., 2010; Somer, 2003). However, in this study, childhood emotional abuse was found to be most strongly related to the *uncategorized* subscale as well as the DES-II-CV total sum. The second strongest relationship was found between emotional abuse and the symptom subscale Absorption. The symptom subscale Absorption and the *uncategorized* subscale are both believed to measure everyday non-pathological dissociative experiences (I. H. Bernstein et al., 2001; Frischholz et al., 2014; Kihlstrom, 2005; Körlin et al., 2007; Waller et al., 1996). Our results may therefore imply that childhood emotional abuse is related to higher levels of “normal” dissociative experiences in the present sample of substance abusers. Previous research on the relationship between childhood maltreatment trauma and dissociation has too often included the DES-II total sum (e.g. Chu & Dill, 1990; Njavits & Tamar-Gurol et. al 2008; Sanders & Gioals, 1991; Schäfer et al. 2010). Some have investigated the relationship between childhood maltreatment trauma and the symptom subscales, but few have studied the *uncategorized* subscale (Chu et al., 1999; Perona-Garcelán et al., 2012; Poythress, Skeem & Lilienfeld, 2006). The *uncategorized* subscale consists of 10 items and the symptom subscale Absorption consists of 6 items. Together these two scales represent more than half of the 28 items of the DES-II.

Another plausible explanation for the scarce support of a relationship between childhood maltreatment trauma and dissociative symptoms may be that the participants within

our study are prone to chemical dissociation rather than psychological dissociation (Langland et al., 2002; Roesler & Dafler, 1993). Since the DES-CV-II provides instructions not to report experiences of dissociation in the presence of intoxication, chemical dissociation should not be included in the answer. The co-occurrence of effects of chemical induced and trauma induced dissociative symptoms may cause difficulties with distinguishing the two. This may indicate that the absence of a trauma - dissociation relationship found within our study is not related to measurement issues of the DES-II-CV but rather reflects an *actual decreased capacity to psychologically dissociate* among substance abusers (Langland et. al. 2002).

Overall, there were few significant findings in the present sample for the relationship between dissociative symptoms and PTSD. Participants with PTSD displayed higher levels of dissociative symptoms on the *uncategorized* subscale, as well as the DES-II-CV total sum. These results could further argue for the possibility that trauma is more strongly associated with heightened levels of non-pathological dissociative experiences rather than pathological dissociative symptoms.

Higher levels of general psychological symptoms were found to be associated with higher levels of dissociative symptoms. Our findings support previous studies indicating that dissociative symptoms are highly comorbid with other psychological disorders (Lipsanen, Saarijärvi, & Lauerma, 2004; Steinberg, Barry, Sholomskas, & Hall, 2005). However, the effects sizes for the relationships between dissociative symptoms and the GSI were generally small whereas the effect sizes for the PST were moderate. The GSI measures symptom pressure while PST measures symptom variety. Our results may indicate that the participants with higher levels of dissociative symptoms are displaying a positive response bias causing them to report many symptoms but low levels of distress. This would support the fantasy

model of dissociation suggesting that dissociative symptoms are highly related to suggestibility and cognitive biases (Giesbrecht et al., 2008; Merckelbach et al., 2000).

No relationship was found between dissociative symptoms and debut age, number of substance at debut or number of currently used substances. This would suggest that such characteristics of substance abuse do not influence level of dissociative symptoms. Few studies have investigated how specific characteristics of substance abuse, such as debut age, number of used substances, severity of substance use, or types of substances may be related to dissociative symptoms among substance users. Most studies have looked at how dissociative symptoms are related to different types of substance abuse such as alcohol vs. drug use (e.g. Langeland et al. 2004; Najavits & Walsh, 2012; Schäfer et al, 2007; Seedat, Stein, & Forde, 2003) Some of these studies suggest that a combination of drug and alcohol abuse is most strongly related to dissociative symptoms (Langeland et al. 2004; Schäfer et al, 2007). Schäfer et al. (2007) found that younger age at onset of alcohol use was significantly related to higher level of dissociative symptoms within a sample of alcohol dependent patients. These findings stand in contrast to our results. We did not investigate the specific types of substances used, which may have affected our results. It is for example possible that participants that debuted with more than one substance have higher levels of dissociative symptoms compared to those who debuted with only alcohol.

In sum, there was little support for a relationship between dissociative symptoms and childhood maltreatment trauma, psychological symptoms or characteristics of substance abuse. The results found to be significant indicate a more specific link between childhood emotional abuse and non-pathological dissociative experiences as well as PTSD-symptoms and non-pathological dissociative experiences. Number of reported symptoms (PST) was also found to be related to dissociative symptoms, suggesting that participants may be displaying a positive response bias. Generally, effect sizes were found to be small within this study with

some moderate results. Unfortunately, effect sizes have seldom been reported in previous studies investigating dissociative symptoms in both clinical and non-clinical samples (e.g. Najavits & Walsh, 2012; Schäfer et al. 2007; Schäfer et.al. 2010; Seedat et al., 2003). Consequently, this may indicate that findings from studies without reports of effect size should be considered having unsubstantiated conclusions.

Exploring the Dissociative Experiences Scale II Clinical Version

The present study is the first to employ the DES-II-CV to assess dissociative symptoms. Building on the large body of research conducted on its predecessor, the present scale will hopefully accommodate some of the shortcomings of the DES-II.

The Norwegian translation of DES-II is available at an international website (Sidran Institute, 2017) for purchase. However, there is little information to be found elsewhere in the literature. Several attempts have been made to contact the authors responsible for the translation, without success. This limited information is problematic since there are a number of precautions to consider when translating the scale in order to avoid issues related to comprehension and cultural sensitivity. However, similarities found between the American and Norwegian language and culture, such as their western origins, may reduce the impact of these issues. On the other hand, in a study of the Swedish translation of the DES-II, it was found that a more culture specific translation of the items was more appropriate due to comprehension difficulties related to the direct translation of the items (Körlin et al., 2007). Considering the geographic proximity, linguistic similarities and shared historical background of Norway and Sweden it is likely that similar issues with translation may occur in the Norwegian translation of the DES-II (Körlin et al., 2007). Even if a direct translation of the American DES-II do not post any major issues, a more cultural specific approach would be preferable.

The reason for adjusting the metrics of the DES-II-CV was to harmonize the scale to the metrics of other measures of psychological symptoms widely used both internationally and in Norway. Having assessment measures with the same metric system allows for more direct comparison across measures within clinical practice as well as empirical research (Weiss, 2004). A short and well defined timeframe may be useful when measuring dissociative *symptoms*, since retrospective measures may cause problems in terms of remembering past experiences. The shorter timeframe used within the DES-II-CV could lead to more accurate recollections, eliminating some of the biases often associated with retrospective measures. However, symptoms that occur more sporadically may not be captured. To avoid this issue it could be useful to use repeated measures that may more accurately capture variation over time (van Ijzendoorn & Schuengel, 1996). Regarding the possible difficulties with distinguishing chemically induced and psychological dissociative symptoms, there may be an advantage of having a shorter time frame since it is easier to restrict answers to periods where participants have not been intoxicated.

The DES-II-CV examines the *frequency* rather than the *intensity* of dissociative experiences. This means that recurrent or fluctuating symptoms as well as symptoms that last over a longer period of time will result in scores reflecting severe levels of dissociation. However, frequency does not necessarily capture the subjective psychological strain that accompanies dissociative experiences. For example, an individual with few but intense experiences of dissociative symptoms may be more impacted by these than someone with several but less intense symptoms (Holmes et al., 2005). With the present format, the DES-II-CV would not capture such nuances of subjective experience of distress, i.e. not reflecting a wide range of symptoms as suggested by the developers of the original DES-scale. Holmes et al. (2005) suggest that the scale should increase its range of items and include assessment of *severity* of symptoms, not only frequency. However, Horowitz et al. (1979) did not find any

major differences between using frequency vs. intensity when developing the Impact of Event Scale, suggesting that this may not pose a significant problem within the DES-II-CV.

The DES-II-CV is reported to be a measure of both normal and pathological dissociative experiences, and as mentioned, there have been made distinctions between pathological and non-pathological items within the scale. However, these distinctions are sometimes unclear and may lead to difficulties with interpreting results. The symptom subscales Amnesia and Depersonalization/Derelization are related to pathological dissociative experiences (Frischholz et al., 2014; Körlin et al., 2007). Absorption has often been regarded a symptoms subscale but has in later research been associated with normal dissociative experiences (I. H. Bernstein et al., 2001; Frischholz et al., 2014; Kihlstrom, 2005; Körlin et al., 2007; Waller et al., 1996). The *uncategorized* subscale represents a cluster of 10 undefined items that seem to reflect common everyday experiences. It is problematic that an undefined cluster of items with little empirical research represents such a large proportion of the total items within the scale. When calculating the total sum on the DES-II-CV, no distinction is made between the different items, suggesting that high score on the DES-II-CV may reflect high levels of non-pathological symptoms or even undefined symptoms that we do not yet know the relevance of.

In the present study, the Cronbach's alpha of the DES-II-CV resulted in quite low levels of internal consistency. There are different reports on what can be regarded an acceptable value for alpha, ranging from .70 to .90 (Bland & Altman, 1997; DeVellis, 2003; Nunnally & Bernstein, 1994; Tavakol & Dennick, 2011). The alpha scores of the DES-II-CV found in this sample ranged from .57 to .70, and the total sum could not be calculated due to null variance. The low reliability found in this study is problematic since it suggests that the items within the DES- II-CV do not measure the same construct. The low alpha values in this study could be caused by an insufficient number of items within each of the DES-II-CV

subscales or poor inter-relatedness between the items. Another reason may be the construct measured, in other words dissociation, is a heterogeneous construct, leading to too much variance among the assessed items.

According to the trauma model of dissociation, if the DES-II-CV measures dissociative symptoms, it should be associated with reports of traumatic experiences. Results from our study show generally low support for these relationships. van Ijzendoorn and Schuengel (1996) investigated the relationship between dissociation and sexual abuse, physical abuse and PTSD in a meta-study of clinical and non-clinical population where they included effect sizes. They found a relationship between total sum on the DES-II and reports of trauma in some studies, but also found studies using a comparison group that did not sufficiently predict high DES-scores. Furthermore, large samples appeared to yield smaller effect sizes. These issues could either call into question the view that dissociation is a coping mechanism associated with trauma or it may reflect an issue with the validity of the DES-II, as well as the DES-II-CV. Either way, it highlights the need for a more distinct and agreed upon definition of dissociation, which may lead to more valid and reliable assessment methods.

Limitations of this study

One of the limitations of this study is that we have a small sample size and no comparison group, making it hard to generalize results to other populations. Another limitation concerns the retrospective nature of the measures included in this study. Retrospective assessment requires that the respondent gives an accurate report of his or her own experience (Loftus & Pickrell, 1995). However, memory impairments as well as psychological mechanisms such as denial, response biases and cognitive failures may affect an individual's capacity to accurately recall and report these experiences (Loftus & Pickrell, 1995; Rinck & Becker, 2005). Dissociation has in itself often been regarded a disorder of

forgetting as reflected by items included by the symptom subscale Amnesia and the *uncategorized* subscale. Furthermore, substance abuse can result in memory difficulties suggesting that our sample may be more likely to give inaccurate answers on retrospective reports. However, in a study examining the stability of self-reports on the CTQ-SF in a group of methadone maintained heroin addicts, a high degree of consistency was found over a four-month test-retest interval. This suggests that addicts can recall traumatic events quite accurately even after a long period of time (D. P. Bernstein et al 1994). Furthermore, a review of literature concerning retrospective self-report questioners, found that the use of validated measures with reasonable item operationalization that does not require the respondent to interpret, might increase the validity of such measures (Hardt & Rutter, 2004). The CTQ-SF, IES-R and SCL-90-R are measures with good empirical support in terms of validity and reliability (e.g. D. P. Bernstein et al., 2003; Weiss & Marmar, 1997; Derogatis, 1994). The modifications made to the metric system of the DES-II-CV, and the present exploration of the scale, is a first step in making the DES-II-CV equivalent to the standard of other validated measures of psychological assessment.

Despite the limitations of the present study, several interesting observations can be made. The hope is that this may contribute to further understanding of dissociative symptoms among substance abusing populations and the assessment of dissociative symptoms.

Clinical implications and further research

This study included 6 different variables of the DES-II-CV: the three symptom subscales as well as their sum score, the *uncategorized* subscale, and the total sum of the scale. Including this many variables was useful since it allowed for an exploration of how different types of dissociative experiences may explain relationships found on the measures of childhood maltreatment trauma, post-traumatic stress symptoms, general psychological symptoms, and substance abuse characteristics. However, in future research we would

recommend to only apply scales relevant to the specific research questions investigated. We would suggest that the symptoms subscales are used exclusively when investigating pathological dissociative symptoms, and that researchers avoid including scores of non-pathological items such as, items within the *uncategorized* subscale, in total sum of the scale. Further development of the DES-II-CV items should include a discussion on whether there is a need to include assessment of symptom *intensity* in addition to the assessment of *frequency*. This will also make the DES-II-CV more comparable with other measures of psychological symptoms.

The DES-II-CV uses the same question formulation as the DES-II, and the scale may therefore pose similar issues in regard to comprehension of the items as those proposed by previous research (e.g. Wright & Loftus, 1999). When the DES-II-CV was administered to the inpatients at Kalfaret, it took respondents the same amount of time to complete the DES-II-CV as it took them to complete all the other assessment measures put together. This may reflect difficulties with understanding the questions within the scale. Further research on the DES-II-CV should consider the need for reformulations of the items to make them more easily understandable. Moreover, if these difficulties reflect a lack of culture sensitivity, there may be a need to investigate the item content of the scale in a Norwegian speaking sample.

To assess dissociative experiences using the DES-II-CV, a clinical cutoff for the scale needs to be established. To do this, corroborative diagnostic interviews should be used in addition to other established measures on dissociative symptoms. Furthermore, the scale needs to be investigated using large samples of both clinical and non-clinical populations and preferably with control groups.

The short-time frame and the new response format made to harmonize the DES-II-CV with other measures of psychopathology should make it easier for researcher to further investigate the relationship between dissociative symptoms and other forms of

psychopathology. This may contribute to more standardized and empirically supported treatments and diagnosis within clinical practice. Having the same “tool” and using the same vocabulary to resonate around dissociative phenomena’s can hopefully make it easier for researchers to communicate their findings and engage in reasonable discussions. Being the most widely used measure for dissociative symptoms, the DES-II could contribute to unifying the field of research on dissociation. We believe that the modifications of the DES-II-CV may provide some beneficial improvement that could further our understanding of dissociative assessment and contribute to a more coherent view of dissociation within the field.

Conclusion

The aim of this study was to explore the DES-II-CV by investigating the relationship between dissociative symptoms and types of childhood maltreatment trauma, psychological symptoms, and characteristics of substance abuse. Limited support was found for the relationship between dissociative symptoms and the variables of interest, and effect sizes were generally small. One of the main finding of this study was the relationship between non-pathological dissociative symptoms and childhood emotional abuse. This finding reflects the importance of distinguishing between pathological vs. non-pathological dissociative experiences when assessing dissociative symptoms. The limited support for a relationship between dissociative symptoms and childhood maltreatment trauma found in this study suggests a more complex relationship between trauma and dissociation among substance abusers which may be mediated by chemically induced dissociative symptoms.

This study highlights issues concerning the complex and often contradicting field of dissociative research and gives emphasis to the importance of having a well-defined and globally agreed upon definition of dissociation as well as empirically supported and easily administered assessment measures. Several authors have pointed out issues concerning the theoretical foundation, empirical evidence, and structure of the DES-II. Modification made to

the DES-II CV, may account for some of these shortcomings and hopefully provide a first step toward a more unified and empirically supported understanding of dissociative phenomena.

References

- American Psychiatric Association (1980). *Diagnostic and Statistical Manual of Mental Disorders, Third Edition*. Washington, DC: Author.
- American Psychiatric Association (1994). *Diagnostic and Statistical Manual of Mental Disorders, Forth Edition*. Washington, DC: Author.
- American Psychiatric Association (2013). *Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition*. Arlington, VA: Author.
- Anstorp, T. & Benum, K. (2014). Hva trenger terapeuten for å gi god traumebehandling? In T. Anstorp & K. Benum (Eds.), *Traumebehandling: Komplekse traumelidelser og dissosiasjon* (pp. 19-38). Oslo: Universitetsforlaget AS.
- Abueg, F. A. & Fairbank J. A. (1992). Behavioral treatment of the PTSD-substance abuser: A multidimensional stage model. In P. Saigh (Ed.), *Posttraumatic Stress Disorder: A behavioral approach to assessment and treatment* (pp. 111–147). Pergamon Press, New York.
- Baker, A. J. L. & Maiorino, E. (2010). Assessments of emotional abuse and neglect with the CTQ: Issues and estimates. *Children and Youth Services Review*, 32(5), 740–48.
- Bennett, M. R. & Hacker, P. M. S. (2003). *Philosophical foundations of neuroscience*. Malden, MA: Blackwell Publishing.
- Bernstein, I. H., Ellason, J. W., Ross, C. A., & Vanderlinden, J. (2001). On the dimensionalities of the Dissociative Experiences Scale (DES) and the Dissociation Questionnaire (DIS-Q). *Journal of Trauma & Dissociation*, 2(3), 101-120. doi: 10.1300/J229v02n03_07
- Bernstein, D. P. & Fink, L. (1998). *Childhood Trauma Questionnaire: A retrospective self-report*. San Antonio: The Psychological Corporation.

Bernstein, D. P., Fink, L., Handelsman, L., Foote, J., Lovejoy, M., Wenzel, K., Sapareto, E., & Ruggiero, J. (1994). Initial reliability and validity of a new retrospective measure of child abuse and neglect. *American Journal of Psychiatry*, *151*(8), 1132-1136.

Bernstein, E. M. & Putnam, F. W. (1986). Development, reliability, and validity of a dissociation scale. *Journal of Nervous and Mental Health Diseases*, *174*(12), 727-734.

Bernstein-Carlson, E. & Putnam, F. W. (1993). An update on the dissociative experience scale. *Dissociation*, *6*, 19-27.

Bernstein, D. P., Stein, J. A., Newcomb, M. D., Walker, E., Pogge, D., Ahluvalia, T., & Zule, W. (2003). Development and validation of a brief screening version of the Childhood Trauma Questionnaire. *Child Abuse & Neglect*, *27*(2), 169–190. doi:10.1016/s0145-2134(02)00541-0

Bland, J. M. & Altman, D. G. (1997). Statistics notes: Cronbach's alpha. *Bmj*, *314* (7080), 572.

Blum, K. (1984). *Handbook of abusable drugs*. New York: Gardner Press.

Bonin, M. F., Norton, G. R., Asmundson, G. J. G., Dicurzio, S., & Pidlubney, S. (2000). Drinking away the hurt: The nature and prevalence of PTSD in substance abuse patients attending a community-based treatment program. *Journal of Behaviour Therapy and Experimental Psychiatry*, *31*(1), 55-66. [http://doi.org/10.1016/S0005-7916\(00\)00008-2](http://doi.org/10.1016/S0005-7916(00)00008-2)

Bremner J. D., Vermetten, E., Southwick, S. M., Krystal, J. H., & Charney, D. S. (1998). Trauma, memory, and dissociation: An integrative formulation. In J. D. Bremner & C. Marmar (Eds.), *Trauma, Memory and Dissociation* (pp. 365–402). Washington DC: APA Press.

Briere, J., Scott, C., & Weathers, F. (2005). Peritraumatic and persistent dissociation in the presumed etiology of PTSD. *American journal of Psychiatry*, *162*(12), 2295-2301. <http://dx.doi.org/10.1176/appi.ajp.162.12.2295>

Briere, J., Weathers, F. W., & Runtz, M. (2005). Is dissociation a multidimensional construct? Data from the Multiscale Dissociation Inventory. *Journal of Traumatic Stress, 18*(3), 221-231. doi: 10.1002/jts.20024

Brown, R. J. (2006). Different types of “dissociation” have different psychological mechanisms. *Journal of Trauma and Dissociation, 7*(4), 7-28.

Bryant, R. A. (2007). Does dissociation further our understanding of PTSD? *Journal of Anxiety Disorders 21*(2), 183-191.

Butler, L. D. (2006). Normative dissociation. *Psychiatric Clinics of North America, 29*(1), 45-62.

Bækkelund, H. & Berg, A. O. (2014). Kartlegging og diagnostisering av traumerelaterte lidelser. In T. Anstorp & K. Benum (Eds.), *Traumebehandling: Komplekse traumelidelser og dissosiasjon* (pp. 78-99). Oslo: Universitetsforlaget.

Bøe, T., Haslerud, J., & Knudsen, H. (1992). The Norwegian translation of the Dissociative Experiences Scale of E. B. Carlson & F. W. Putnam. Stavanger. The Norwegian translation is available at Sidran institute at <https://www.sidran.org/shop/atools/dissociative-experiences-scale-ii/>

Cardeña, E. & Spiegel, D. (1993). Dissociative reactions to the San Francisco Bay Area earthquake of 1989. *American Journal of Psychiatry, 150*, 474-478.

Bemstein, E. M., & Putnam, F. W. (1988). Further Validation of the Dissociative Experiences Scale. In *annual meeting of the APA*.

Carlson, E. B. & Putnam, F. W. (1993). An update on the Dissociative Experiences Scale. *Dissociation; 6*(1), 16-27.

Chu, J. A. (2011). Trauma and dissociation. 30 years of study and lessons learned along the way, *Rebuilding Shattered Lives: Treating Complex PTSD and Dissociative Disorders* (pp. 3-19). Hoboken, New Jersey: John Wiley & Sons.

Chu, J. A., & Dill, D. L. (1990). Dissociative symptoms in relation to childhood physical and sexual abuse. *The American Journal of Psychiatry*, *147*(7), 887-892.

Chu, J. A., Frey, L. M., Ganzel, B. L., Matthews, J. A. (1999). Memories of childhood abuse: Dissociation, amnesia, and corroboration. *American Journal of Psychiatry*, *156*(5), 749–755. <http://ajp.psychiatryonline.org/doi/abs/10.1176/ajp.156.5.749>

Cohen, F. S. & Densen-Gerber, J. (1982). A study of the relationship between child abuse and drug addiction in 178 patients: Preliminary results. *Child Abuse & Neglect*, *6*(4), 383-387. [https://doi.org/10.1016/0145-2134\(82\)90081-3](https://doi.org/10.1016/0145-2134(82)90081-3)

Condon, L. & Lynn, S. J. (2014). State and trait dissociation: Evaluating convergent and discriminant validity. *Imagination, Cognition and Personality*, *34*(1), 25-37.

Creamer, M., Bell, R., & Failla, S. (2003). Psychometric properties of the Impact of Events Scale – Revised. *Behav Res Ther*, *41*, 1489-1496.

Dalenberg, C. J., Brand, B. L., Gleaves, D. H., Dorahy, M. J., Loewenstein, R. J., Cardeña, E., ..., & Spiegel, D. (2012). Evaluation of evidence for the trauma and fantasy model of dissociation. *Psychological Bulletin*, *138*(3), 550-588. doi: 10.1037/a0027447

Dalenberg, C. J., Brand, B. L., Loewenstein, R. J., Gleaves, D. H., Dorahy, M. J., Cardeña, E., Frewen, P. A., Carlson, E. B., & Spiegel, D. (2014). Reply: Reality versus fantasy: Reply to Lynn et al. (2014). *Psychological Bulletin*, *140*(3), 911-920. doi: 10.1037/a0027447

Dansky, B. S., Roitzsch, J. C., Brady, K. T., & Saladin, M. E. (1997). Posttraumatic stress disorder and substance abuse: Use of research in a clinical setting. *Journal of Traumatic Stress*, *10*(1), 141-148. doi: 10.1002/jts.2490100114

Dell, P. F. (2006). The Multidimensional Inventory of Dissociation (MID): A comprehensive measure of pathological dissociation. *Journal of Trauma & Dissociation*, *7*(2), 77-106.

Dell, P. F., & O'Neil, J. A. (Eds.) (2009). *Dissociation and the dissociative disorders: DSM-V and beyond*. New York, NY: Routledge.

Derogatis, L. R. (1994). *Symptom Checklist-90 – Revised: Administration scoring and procedures manual*, 3rd ed. Minneapolis, MN: National Computer System.

Derogatis, L. R. (2009). *Symptom Checklist-90 – Revised. Norsk versjon. Manual for administrering og skåring*. Bromma, Sverige: Pearson Assessment.

Derogatis, Lipman, & Covi (1973). Derogatis, L. R., Lipman, R. S., & Covi, I. (1973). The SCL-90: An outpatient psychiatric rating scale. *Psychopharmacology Bulletin*, 9, 13-28.

Derogatis, L. R., & Cleary, P. A. (1977). Confirmation of the dimensional structure of the SCL-90: A study in construct validation. *Journal of clinical psychology*, 33(4), 981-989.

DeVellis, R. (2003). *Scale development: Theory and applications*. Thousand Okas, CA: Sage.

Dovran, A., Winje, D., Øverland, S. N., Arefjord, K., Dalsbø, A. S., Jentoft, N. B., ..., Waage, L. (2012). Psychometric properties of the Norwegian version of the Childhood Trauma Questionnaire in Norwegian risk samples. *Scandinavian Journal of Psychology*, 54, 286–291. doi:10.1111/sjop.12052

Dovran, A., Winje, D., Øverland, S., Arefjord, K., Hansen, A., & Waage, L. (2016). Childhood maltreatment and adult mental health. *Nordic Journal of Psychiatry*, 70(2), 140-145. doi: 10.3109/08039488.2015.1062142

Draijer, N. & Langeland, W. (1999). Childhood Trauma and Perceived Parental Dysfunction in the Etiology of Dissociative Symptoms in Psychiatric Inpatients. *The American Journal of Psychiatry*. 156(3), 379-385.

Dube, S. R., Felitti, V. J., Dong, M., Capman, D. P., Giles, W. H., & Anda, R. F. (2003). Childhood abuse, neglect, and household dysfunction and the risk of illicit drug use:

The adverse childhood experiences study. *Pediatrics*, *111*(3) 564-572. doi:

10.1542/peds.111.3.564

Dunn, G. E., Paolo, A. M., Ryan, J. J., & Van Fleet, J. (1993). Dissociative symptoms in a substance abuse population. *The American Journal of Psychiatry*, *32*(4), 695-705.

Dunn, G. E., Rayn, J. J., & Dunn, C. E. (1994). Trauma symptoms in substance abusers with and without histories of child abuse. *Journal of psychoactive drugs*, *26*, 357-360.

Dunn, G. E., Ryan, J. J., Paolo, A. M., & Van Fleet, J. N. (1995). Comorbidity of dissociative disorders among patients with substance use disorders. *Psychiatric Services*, *46*, 153-156.

Eid, J., Larsson, G., Johnsen, B. H., Laberg, J. C., Bartone, P. T., & Carlstedt, B. (2009). Psychometric properties of the Norwegian Impact of Event Scale-Revised in a non-clinical sample. *Nordic Journal of Psychiatry*, 1-7.

Elhai, J. D., Gray, M. J., Kashdan, T. B., & Franklin C. L. (2005). Which instruments are most commonly used to assess traumatic event exposure and posttraumatic effects? A survey of traumatic stress professionals. *Journal of Trauma Stress*, *18*, 541-545.

Engel, C. C., Walker, E.A., & Katon, W. J. (1996). Factors related to dissociation among patients with gastrointestinal complaints. *Journal of Psychosomatic Research*, *40*(6), 643-653. [https://doi.org/10.1016/0022-3999\(95\)00636-2](https://doi.org/10.1016/0022-3999(95)00636-2)

Espírito Santo, H. & Abreu J. L. P. (2009). Portuguese Validation of the Dissociative Experiences Scale (DES). *Journal of Trauma & Dissociation*, *10*(1), 69-82. doi: 10.1080/15299730802485177

Evren, C. & Evren B. (2005). Self-mutilation in substance-dependent patients and relationship with childhood abuse and neglect, alexithymia and temperament and character dimensions of personality. *Drug and Alcohol Dependence*, *80*(1), 15-22.

<https://doi.org/10.1016/j.drugalcdep.2005.03.017>

Fisher, D. G. & Elinsky, S. (1990). A factor analytic study of two scales measuring dissociation. *American Journal of Clinical hypnosis*, 32, 201-207.

Frischholz, E. J., Braun, B. G., Sachs, R. G., Hopkins, L., Schaeffer, D. M., Lewis, J., Leavitt, F., Pasquotto, J. N., & Schwartz, D. R. (1990). The Dissociative Experiences Scale. Further replication and validation. *Dissociation*, 3, 151-153.

Frischholz, E. J., Schwartz, D. R., Braun, B. G., & Sachs, R. G. (1991). Factor analytic studies of dissociative experiences in normal and abnormal populations. *Manuscript submitted for publication*.

Frischholz, E. J., Braun, B. G., Sachs, R. G., Schwartz, D. R., Lewis, J., Shaeffer, D., Westergaard, C., & Pasquotto, J. (2014). Construct validity of the dissociative experiences scale: II. Its relationship to hypnotizability. *American Journal of Clinical Hypnosis*, 57(2), 012-109. doi: 10.1080/00029157.2015.967056

Gershuny, B. S., Thayer, J. F. (1999). The relations among psychological trauma, dissociative phenomena, and trauma related distress: A review and integration. *Clinical Psychology Review*, 19(5), 631-657.

Giesbrecht, T., Lynn, S. J., Lilienfeld, S. O., & Merckelbach, H. (2008). Cognitive processes in dissociation: An analysis of the core theoretical assumptions. *Psychological Bulletin*, 134(5), 617-647.

Gleaves, D. H. (1996). The sociocognitive model of dissociative identity disorder: A reexamination of the evidence. *Psychological Bulletin*, 120(1), 42-59.

<http://dx.doi.org/10.1037/0033-2909.120.1.42>

Hacking, I. (1995). *Rewriting the soul: Multiple personality and the sciences of memory*. Princeton, NJ: Princeton University Press.

Hardt, J. & Rutter, M. (2004). Validity of adult retrospective reports of adverse childhood experiences: Review of the evidence. *J Child Psychol Psychiatry*, 45, 260-73.

Haynes, S. N., Smith, G. T., & Hunsley, J. D. (Eds.) (2011). *Scientific foundations of clinical assessment*. New York: Routledge.

Heir, T., Piatigorsky, A., & Weisæth, L. (2009). Longitudinal changes in recalled perceived life threat after a natural disaster. *The British Journal of Psychiatry, 194*, 510-514. doi: 10.119/bjp.bp.108.056580.

Heir, T., Piatigorsky, A., & Weisæth, L. (2010). Posttraumatic stress symptom clusters associations with psychopathology and functional impairment. *Journal of Anxiety Disorders, 24*(8), 936-940. <https://doi.org/10.1016/j.janxdis.2010.06.020>

Holmes, E. A., Brown, R. J., Mansell, W., Fearon, R. P., Hunter, E. C. M., Frasquilho, F., & Oakley, D. A. (2005). Are there two qualitatively distinct forms of dissociation? A review and some clinical implications. *Clinical Psychology Review, 25*, 1–23. doi: 10.1016/j.crp.2004.08.006

Holden, J. S. (2012). Development and psychometric properties of the Dissociative Continuum Scale – II (DCS-II). *A Dissertation Presented to the Faculty of the California School of Professional Psychology at Alliant International University, San Diego*.

Horowitz, M. J., Wilner, N., & Alvarez, W. (1979). The Impact of Event Scale: A measure of subjective stress. *Psychosomatic Medicine, 41*, 209-218.

Iversen, E., Lauritzen, G., Skretting, A., & Skutle, A. (2009). *Det nasjonale dokumentasjonssystemet innen tiltaksapparatet for rusmiddelmissbrukere: Klientkartleggingsdata. Rapport for 2008*. Bergen, Oslo: Stiftelsen Bergensklinikkene, Statens institutt for rusmiddelforskning.

Jakobsen, M., Benum, K., & Anstorp, T. (2006). Dissosiasjon –Noen diagnostiske overveielser: Kritiske innspill og kliniske erfaringer. In T. Anstorp, K. Benum & M. Jakobsen (Eds.), *Dissosiasjon og relasjonstraumer. Integrering av det splittede jeg* (pp. 89-101). Oslo: Universitetsforlaget.

Janet, P. (1889). L'automatisme psychologique: Fisaide psycliologie aperimetitale sur la /orma. In Jerieuresde l'actite' humaine, Alcan, Paris.

Janet, P. (1907). *The Major Symptom of Hysteria*. New York: MC Millan.

Janet (1891). *Revue Philosophique de la France et de l'Étranger. Étuede sur un cas d'abouletie et d'iées fixes*, 31, 258-287. URL: <http://www.jstor.org/stable/41075305>

Jepsen, E. K. K., Langeland, W., Sexton, H., & Heir, T. (2014). Inpatient treatment for early sexually abused adults: A naturalistic 12-month follow-up study. *Psychological Trauma: Theory, Research, Practice, and Policy*, 6(2), 142–151.

Jueridini, J. (2003). Does dissociation offer a useful explanation for psychopathology? *Psychopathology*, 37, 259-265.

Keane, T. M Gerald, R.J., Lyons, J.A., & Wolfe J. (1988). The interrelationship of substance abuse and posttraumatic stress disorder in Vietnam veterans. *Behav Ther*, 8, 9–12.

Kihlstrom (2005). Dissociative Disorders. *Annual Review of Clinical Psychology*, 1, 227-253. doi: 10.1146/annurev.clinpsy.1.102803.143925

Kimerling, R., Prins, A., Westrum, D., & Lee, T. (2004). Gender issues in the assessment of PTSD. In J. P. Wilson & T. M. Keane (Eds.), *Assessing psychological trauma and PTSD* (pp. 565-599). New York: Guilford Press.

Kleindorfer, S. O. (2006). Dissociative Experiences in the Peoples' Republic of China. *Journal of Trauma Practice*, 4(1-2), 81-94. doi: 10.1300/ J189v04n01_06

Körlin, D., Edman, G., & Nybäck, H. (2007). Reliability and validity of the Swedish version of the Dissociative Experiences Scale (DES-II). *Nordic Journal of Psychiatry*, 61(2), 126-142. doi: 10.1080/08039480701226112

Landry, M. J. (1994). *Understanding drugs of abuse: The processes of addiction, treatment, and recovery*. American Psychiatric Pub.

Langeland, W., Draijer, N., & van der Brink, W. (2002). Trauma and dissociation in treatment-seeking alcoholics: Towards a resolution of inconsistent findings. *Comprehensive psychiatry*, 43(3), 195-203.

Langeland, W., Draijer, N., & van der Brink, W. (2004). Psychiatric comorbidity in treatment-seeking alcoholics: The role of childhood trauma and perceived parental dysfunction. *Alcoholism clinical & Experimental Research*, 28(3), 441-447. doi: 10.1097/01.ALC.0000117831.17383.72

Larøi, F., Billieux, J., Defeldre, A.-C., Ceschi, G., & van der Linden, M. (2013). Factorial structure and psychometric properties of the French adaptation of the Dissociative Experiences Scale (DES) in non-clinical participants. *Revue européenne de psychologie appliquée* 63(2013), 203-308. doi: <http://dx.doi.org/10.1016/j.erap.2013.04.004>

Leavitt, F. (1999). Dissociative Experiences Scale Taxon and measurement of dissociative pathology: Does the Taxon add to an understanding of dissociation and its associated pathologies? *Journal of Clinical Psychology in Medical Settings*, 6(4), 427–440. doi: 10.1023/A:1026275916184

Lipsanen, T., Saarijärvi, S., & Lauerma, H. (2003). The Finnish version of the Dissociative Experiences Scale-II (DES-II) and psychiatric distress. *Nordic Journal of Psychiatry*, 57(1), 17-22. doi: 10.1080/08039480310000211

Lipsanen, T., Saarijärvi, S., & Lauerma, H. (2004). Exploring the relations between depression, somatization, dissociation and alexithymia—overlapping or independent constructs? *Psychopathology*, 37(4), 200-206.

Lisak, D. (1993). Men as victims: Challenging cultural myths. *Journal of Traumatic Stress*, 6(4), 577-580.

Loftus, E., & Ketcham, K. (1996). *The myth of repressed memory: False memories and allegations of sexual abuse*. Macmillan.

Loftus, E. F., & Pickrell, J. E. (1995). The formation of false memories. *Psychiatric annals*, 25(12), 720-725.

Lynn, S. J., Lilenfeld, S. O., Merckelback, H., Giesbrecht, T., McNally, R. J., Loftus, E. F., ..., Malaktaris, A. (2014). Comment: The trauma model of dissociation: Inconvenient truths and stubborn fiction. Comment on Dalenberg et al. (2012). *Psychological Bulletin*, 140(3), 896-910. doi: 10.1037/a0035570

Lynn, S. J., Lilenfeld, S. O., Merckelback, H., Giesbrecht, T., & van der Kloet, D. (2012). Dissociation and dissociative disorders: Challenging Conventional Wisdom. *Current Directions in Psychological Science* 21(1), 48-53. doi: 10.1177/0963721411429457

Madakasira, S. & O'brien, K. F. (1987). Acute post traumatic stress disorder in victims of natural disaster. *Journal of Nervous and Mental Disease*, 175, 286-290.

Maldonado, J. R., Butler, L. D., & Spiegel, D. (2002). Treatments for dissociative disorders. *In a Guide to Treatments that Work*. New York: Oxford University Press.

Marmar, C. R., Weiss, D. S., Schlenger, W. E., Fairbank, J. A., Jordan, K., Kulka, R. A., & Hough, R. L. (1994). Peritraumatic dissociation and posttraumatic stress in male Vietnam theatre veterans. *American Journal of Psychiatry*, 151, 902-907.

Marmar, C. R., Weiss, D. S., & Meltzer, T. J. (1998). Peritraumatic dissociation and posttraumatic stress disorder. In J. D. Bremner & C. R. Marmar (Eds.), *Trauma, memory and dissociation* (pp. 229-252). Washington, DC: American Psychiatric Press.

McNally, R. J. (2003). *Remembering trauma*. Cambridge, MA: Harvard University Press.

Medrano, M.A., Zule W. A., Hatch, J., & Desmond J. P. (1999). Prevalence of Childhood Trauma in a Community Sample of Substance-Abusing Women. *The American Journal of Drug and Alcohol Abuse*, 25(3), 449-462. <http://dx.doi.org/10.1081/ADA-100101872>

Merckelbach, H. & Muris, P. (2001). The causal link between self-reported trauma and dissociation: A critical review. *Behaviour Research and Therapy*, 39(3), 245-254.

Merckelbach, H., Muris, P., Horselenberg, R., & Stougie, S. (2000). Dissociative experiences, response bias, and fantasy proneness in college students. *Personality and Individual Differences*, 28, 49–58.

Merckelbach, H., à Campo, J., Hardy, S., & Giesbrecht, T. (2005). Dissociation and fantasy proneness in psychiatric patients: A preliminary study. *Comprehensive psychiatry*, 46(3), 181-185.

Najavits, L. M. & Walsh, M. (2012). Dissociation, PTSD, and substance abuse: An empirical study. *Journal of Trauma & Dissociation*, 13(1), 115-126.

Noyes, R. & Kletti, R. (1977). Depersonalization in response to life threatening danger. *Comprehensive Psychiatry*, 18, 375-384. [https://doi.org/10.1016/0010-440X\(77\)90010-4](https://doi.org/10.1016/0010-440X(77)90010-4)

Noyes Jr, R., & Kletti, R. (1976). Depersonalization in the face of life-threatening danger: A description. *Psychiatry*, 39(1), 19-27.

Freinkel, A., Koopman, C., & Spiegel, D. (1994). Dissociative symptoms in media eyewitnesses of an execution. *American Journal of Psychiatry*, 151(9), 1335-1339.

Nunally, J. & Bernstein, L. (1994). *Psychometric theory*. New York: McGraw-Hill Higher, INC.

Oh, H. Y., Kim, D., & Kim, Y. (2015). Reliability and validity of the Dissociative Experiences Scale among South Korean patients with schizophrenia. *Journal of Trauma & Dissociation*, 16(5), 577-591. doi: 10.1080/15299732.2015.1037040

Olsen, S. A., Clapp, J. D., Parra, G. R. & Beck, J. G.(2013). Factor structure of the Dissociative Experiences Scale: An examination across sexual assault status. *Journal of Psychopathological Behavior Assessment*; 35, 394-403. doi: 10.1007/s10862-013-9347-4.

Pekala, R. J., Kumar, V. K., Ainslie, G., Elliott, N. C., Mullen, K. J., Salinger, M. M., & Masten, E. (1999). Dissociation as a function of child abuse and fantasy proneness in a substance abuse population. *Imagination, Cognition and Personality, 19*(2), 105-129.

Perona-Garcelán, S., Carrascoso-López, F., José, M., García-Montes, J. M., Ductor-Recuerda, M. J., López Jiménez, A. M., ..., Gómez-Gómez, M. T. (2012). Dissociative experiences as mediators between childhood trauma and auditory hallucinations. *Journal of Traumatic Stress, 25*(3), 323-329. doi: 10.1002/jts.21693

Poythress, N. G., Skeem, J. L., & Lilienfeld, S. O. (2006). Associations among early abuse, dissociation, and psychopathy in an offender sample. *Journal of psychology, 115*(2), 288-297. <http://dx.doi.org/10.1037/0021-843X.115.2.288>

Putnam, F. W. (1989). *Diagnosis and Treatment of Multiple Personality Disorder*. New York, Guilford Press.

Putnam, F. W. (1991). Dissociative phenomena. In A. Tasman & S. M. Goldfinger (Eds.), *American Psychiatric Press Review of Psychiatry* (pp. 145-160). Washington, DC: American Psychiatric Press.

Rauschenberger, S. L., & Lynn, S. J. (1995). Fantasy proneness, DSM-II—R Axis I psychopathology and dissociation. *Journal of abnormal psychology, 104*(2), 373.

Reynolds, M., Mezey, G., Wheeler, M., Drummond, C., & Baldacchino, A. (2005). Co-morbid post-traumatic stress disorder in a substance misusing clinical population. *Drug and Alcohol Dependence, 77*(3), 251-258.

Rash, C. J., Coffey, S. F., Baschnagel, J. S., Drobles, D. J., & Saladin, M. E. (2008). Psychometric properties of the IES-R in traumatized substance dependent individuals with and without PTSD. *Addictive Behaviors, 33*, 1039-1047.

Read, J. P., Bollinger, A. R., & Sharansky, E. (2002). Assessment of comorbid substance use disorder and posttraumatic stress disorder. In P. Ouimette & P. J. Brown (Eds.),

Trauma and substance abuse: Causes, consequences, and treatment of comorbid disorders (pp. 111-125). Washington, DC: American Psychological Association Press.

Rinck, M. & Becker, E. S. (2005). A comparison of attentional biases and memory biases in women with social phobia and major depression. *Journal of abnormal psychology, 114*(1), 62.

Roesler, T. A. & Dafler, C. E. (1993). Chemical dissociation in adults sexually victimized as children: Alcohol and drug use in adult survivors. *Journal of substance abuse treatment, 10*(6), 537-543.

Ross, C. A. (1989). *Multiple Personality Disorder: Diagnosis, clinical features and Treatment*. New York, John Wiley & Sons.

Ross, C. A. (1997). *Dissociative Identity Disorder: Diagnosis, Clinical Features and Treatment of Multiple Personality*. New York: John Wiley & Sons.

Ross, C. A., Duffy, C. M. M., & Ellason, J. W. (2002). Prevalence, reliability and validity of dissociative disorders in an inpatient setting. *Journal of Trauma & Dissociation, 3*(1), 7-17. doi: 10.1300/J229v03n01_02

Ross, C. A., Joshi, S., & Currie, R. (1991). Dissociative experiences in the general population: A factor analysis. *Hospital & Community Psychiatry, 42*(3), 297-301.

Ross, C. A., Kronson, J., Koensgen, S., Barkman, K., Clark, P., & Rockman, G. (1992). Dissociative comorbidity in 100 chemical dependent patients. *Hosp Common Psychiatry, 43*, 840-842.

Ross, C. A., Ellason, J. W., & Anderson, G. (1995). A factor analysis of the Dissociative Experiences Scale in dissociative identity disorder. *Dissociation, 8*(1), 229-235.

Sandberg, D. A., & Lynn, S. J. (1992). Dissociative experiences, psychopathology and adjustment, and child and adolescent maltreatment in female college students. *Journal of Abnormal Psychology, 101*, 717-723.

Sanders, B. & Gioals, M. H. (1991). Dissociation and childhood trauma in psychologically disturbed adolescents. *The American Journal of Psychiatry*, 148(1), 50-54.

URL: <https://search.proquest.com/docview/220493179?accountid=8579>

Schwartz, D., & Frischholz, E. J. (1991). Confirmatory factor analysis of the Dissociative Experiences Scale. In B. G. Braun & E. B. Carlson (Eds.), *Proceedings of the Eighth International Conference on Multiple Personality and Dissociative States*. Chicago: Rush.

Schäfer, I., Reininghaus, U., Langeland, W., Voss, A., Zieger, N., Haasen, C., Karow, A. (2007). Dissociative symptoms in alcohol-dependent patients: Associations with childhood trauma and substance abuse characteristics. *Comprehensive Psychiatry*, 48(6), 539-545.

Schäfer, I., Verthein, U., Oechsler, H., Deneke, C., Riedel-Heller, S., & Martens, M. (2009). What are the needs of alcohol dependent patients with a history of sexual violence? A case-register study in a metropolitan region. *Drug and alcohol dependence*, 105(1), 118-125.

Schäfer, I., Langeland, W., Hissbach, J., Luedecke, C., Ohlmeier, M. D., Chodzinski, C., ..., the TRAUMAB-Study group (2010). Childhood trauma and dissociation in patients with alcohol dependence, drug dependence, or both. A multi-center study. *Drug and Alcohol Dependence*, 109, 84-89. doi: 10.1016/j.drugalcdep.2009.12.012

Seedat, S., Stein, M. B., & Forde, D. R. (2003). Prevalence of dissociative experiences in a community sample: relationship to gender, ethnicity, and substance use. *The Journal of nervous and mental disease*, 191(2), 115-120.

Sidran Institute (2017). *The Dissociative Experiences Scale, II*. URL: <https://www.sidran.org/shop/atools/dissociative-experiences-scale-ii/>

Simeon, D., Guralnik, O., Schmeidler, J., Sirof, B., & Knutelska, M. (2001). The role of childhood interpersonal trauma in depersonalization disorder. *American Journal of Psychiatry*, 158(7), 1027-1033

Simpson, T. L. & Miller, W. R. (2002). Concomitance between childhood sexual and physical abuse and substance use problems: A review. *Clinical Psychology Review, 22*(1), 27-77. [http://doi.org/10.1016/S0272-7358\(00\)00088-X](http://doi.org/10.1016/S0272-7358(00)00088-X)

Sloan, P. (1988). Post-traumatic stress in survivors of an airplane crash-landing: A clinical exploratory research investigation. *Journal of traumatic stress, 1*, 211-229.

Somer, E., Altus, L., & Ginzburg, K. (2010). Dissociative psychopathology among opioid use disorder patients: Exploring the “chemical dissociation” hypothesis.

Comprehensive psychiatry, 51(4), 419-425. <https://doi.org/10.1016/j.comppsy.2009.09.007>

Spiegel, D. (1984). Multiple personality as a post-traumatic stress disorder. *Psychiatric Clinics of North America*.

Spiegel, D., Loewenstein, R. J., Lewis-Fernandez, R., Sar, V., Simenon, D., Vermetten, E., & Dell, P. F. (2011). Dissociative disorders in DSM-5. *Depression and Anxiety, 28*(9), 824-852.

Steinberg, M. (1994). *Interviewer's guide to the Structured Clinical Interview for DSM-IV Dissociative Disorders Revised*. Arlington, VA: American Psychiatric Association.

Steinberg, M., Barry, D. T., Sholomskas, D., & Hall, P. (2005). SCL-90 symptom patterns: Indicators of dissociative disorders. *Bulletin of the Menninger Clinic, 69*(3), 237-249.

Steinberg, M., Hall, P., Lareau, C., & Cicchetti, D. V. (2000). Recognizing the validity of dissociative symptoms using the SCID-D-R: Guidelines for clinical and forensic evaluations. *Southern California Interdisciplinary Law Journal, 1*, 225-242.

Steinberg, M. & Steinberg, A. (1995). Using the SCID-D to assess Dissociative Identity Disorder in adolescents: Three case studies. *Bulletin of the Menninger Clinic, 59*(2), 221-231.

Tamar-Gurol, D., Sar, V., Karadag, F., Evren, C., & Karagoz, M. (2008). Childhood emotional abuse, dissociation, and suicidality among patients with drug dependency in Turkey. *Psychiatry and Clinical Neurosciences*, *62*(5), 540-547.

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

Theodoreescu, D.S., Hier, T., Hauff, E., Wentzel-Larsen, T., & Lien, L. (2012) Mental health problems and post-migration stress among multitraumatized refugees attending outpatient clinics upon resettlement to Norway. *Scandinavian Journal of Psychology*, *53*, 316-332. doi: 10.1111/j.1467-9450.2012.0954.x

Thombs, B. D., Lewis, C., Bernstein, D. P., Medrano, M. A., & Hatch, J. P. (2007). An evaluation of the measurement equivalence of the Childhood Trauma Questionnaire – Short Form across gender and race in a sample of drug-abusing adults. *Journal of Psychosomatic Research*, *63*, 391-398.

Torrie, A. (1944). Psychosomatic causalities in the Middle East. *Lancet*, *29*, 139-143.

Vaillant, G. E. (1983). *The natural history of alcoholism*. Cambridge, Mass.: Harvard University Press.

van der Hart, O., Nijenhuis, E. R., & Steele, K. (2006). In *The haunted self: Structural dissociation and the treatment of chronic traumatization*. WW Norton & Company.

van Hasselt, V. B., Ammerman, R., Glancy, L.J., & Bukstein, O.G. (1992). Maltreatment in Psychiatrically Hospitalized Dually Diagnosed Adolescent Substance Abusers. *Journal of the American Academy of Child & Adolescent Psychiatry*, *31*(5), 868-874. <https://doi.org/10.1097/00004583-199209000-00014>

van den Hout, M., Merckelbach, H., & Pool, K. (1996). Dissociation, Reality Monitoring, Trauma, and Thought Suppression. *Behavioural and Cognitive Psychotherapy*, *24* (2). 97-108. <https://doi.org/10.1017/S1352465800017367>

van Ijzendoorn, M. H. & Schuengel, C. (1996). The measurement of dissociation in normal and clinical populations: Meta-analytic validation of the Dissociative Experiences Scale (DES). *Clinical Psychology Review, 16*(5), 365-382.

van der Kolk, B. A., van der Hart, O., & Marmar, C. R. (1996). Dissociation and information processing in Posttraumatic stress disorder. In B. A. Van der Kolk, A. C., McFarlane, & L. Weisæth (Eds.), *Traumatic stress* (pp. 303-330). New York: Guilford.

Van der Kolk, B. A. (1996). The complexity of adaptation to trauma: Self-regulation, stimulus discrimination, and characterological development.

van der Kolk, B. A. & Fisher, R. (1995). Dissociation and the fragmentary nature of traumatic memories: Overview and exploratory study. *Journal of Traumatic Stress, 8*, 505-525.

Waller, N. G., Putnam, F. W., & Carson, E. B. (1996). Types of dissociation and dissociative types: A taxometric analysis of dissociative experiences. *Psychological Methods, 1*, 300-321.

Waller, N. G., & Ross, C. A. (1997). The prevalence and biometric structure of pathological dissociation in the general population: Taxometric and behavior genetic findings. *Journal of Abnormal Psychology, 106*, 499-510.

Watson, D. (2003). Investigating the construct validity of the Dissociative Taxon: Stability analyses of normal and pathological dissociation. *Journal of Abnormal Psychology, 112*(2), 298–305. doi: 10.1037/0021-843X.112.2.298

Weiss, D. S. (2004). The Impact of Event Scale – Revised. In J. P. Wilson & T. M. Keane (Eds.), *Assessing psychological trauma and PTSD* (pp. 168-189). New York: Guilford Press.

Weiss, R. D., Griffin, M. L., & Mirin, M. S. (2009). Drug Abuse as self-medication for depression: An empirical study. *The American Journal of Drug and Alcohol Abuse, 18*(2), 121-129. <http://dx.doi.org/10.3109/00952999208992825>

Weiss, D. S. & Marmar, C. R. (1997). The Impact of Event Scale – Revised. In J. P. Wilson & T. M. Keane (Eds.), *Assessing psychological trauma and PTSD* (pp. 399-411). New York: Guilford Press.

Wenzel, K., Bernstein, D. P., Handelsman, L., Rinaldi, P., Ruggiero, J., & Higgins, B. (1996). Levels of dissociation in detoxified substance abusers and their relationship to chronicity of alcohol and drug use. *The Journal of Nervous and Mental Disease, 184*(4), 220-227.

Winje, D. (2015, unpublished). Modification of the Norwegian translation of the Dissociative Experiences Scale. Research group of Trauma Psychology, Faculty of Psychology, University of Bergen.

Winje, D., Dovran, A., & Murison, R. (2003). Spørreskjema om traumer i barndom og ungdom. Instrumentoversettelse fra engelsk: D. P. Bernstein; Childhood Trauma Questionnaire (CTQ). Bergen, Norway: Psykologiske Fakultet, Universitetet i Bergen

Winje, D. & Tungodden, N. (1995). Impact of Event Scale Revised (IES-R). Instrumentoversettelse fra engelsk: Weiss, D. S. & Marmar, C. R. (1997). The Impact of Event Scale Revised. In J. P. Wilson, & T. M. Keane (Eds.), *Assessing Psychological Trauma and PTSD: A practitioner's Handbook* (pp. 399-411). New York: Guilford. Translated and reproduced by permission from D. S. Weiss.

World Health Organization (1992). *The ICD-10 Classification of Mental and Behavioural Disorders, Clinical Descriptions and Diagnostic Guidelines*. Geneva: World Health Organization.

Wright, D. B., & Livingston-Raper, D. (2002). Memory distortion and dissociation: Exploring the relationship in a non-clinical sample. *Journal of Trauma and Dissociation*, 3, 97-109. doi: 10.1300/J229v03n03_06

Wright, D. B. & Loftus, E. F. (1999). Measuring dissociation: Comparison of alternative forms of the Dissociative Experiences Scale. *The American Journal of Psychology*, 112(4), 497-519.

Wu, N. S., Schairer, L. B., Dellor, E., & Grella, C. (2009). Childhood trauma and health outcomes in adults with comorbid substance abuse and mental health disorders. *Addictive Behaviours*, 5(1), 68-71. <http://doi.org/10.1016/j.addbeh.2009.09.003>

Zlotnick, C., Begin, A., Shea, M. T., Pearlstein, T., Simpson, E., & Costello, E. (1994). The relationship between characteristics of sexual abuse and dissociative experiences. *Comprehensive Psychiatry*, 35, 465-470.

Zlotnick, C., Shea, M. T., Pearlstein, T., Simpson, E., Costello, E., & Begin, A. (1996). The relationship between dissociative symptoms, alexithymia, impulsivity, sexual abuse, and self-mutilation. *Comprehensive psychiatry*, 37(1), 12-16.

Zlotnick, C. (1997). Posttraumatic stress disorder (PTSD), PTSD comorbidity, and childhood abuse among incarcerated women. *The Journal of Nervous and Mental Disease*, 185(12), 761-763.

Appendices

Appendix A

General guidelines for main thesis written in expanded article form at the Faculty of Psychology, University of Bergen:

Main thesis in expanded article form must be written according to the standard of the American Psychological Association (APA) 6th Edition. Font size 12pt Times New Roman, Courier or similar should be used, double line spacing, left, right, top, and bottom margin at 2.5 cm. The term "expanded article form" implies that the form should be scientific and that it may be expanded in terms of what is commonplace for page numbers of an article. As a general rule, the page number should be within the range of 40 to 60 text pages. Reference list and appendices will be added. The main thesis may differ somewhat from the article form as the introduction can contain a broader review of literature and a more comprehensive presentation of backgrounds and issues than commonly found in articles. Likewise, the method and discussion can be more in-depth. There should be a summary in Norwegian and in English, each of approximately 200 words. According to the wishes of the Faculty of Psychology, a standard front page issued by the faculty has been used. Other parts of the main thesis must comply with the APA standard.

Up to three students can collaborate on the main thesis. The page number does not need to increase with the number of authors, but there will be greater demands on the project's scope. It is expected that all authors have contributed with equal efforts.

At <http://www.uib.no/emne/PROPSY317> there will be further information on the main thesis.

Appendix B

The Dissociative Experiences Scale II Clinical Version (DES-II-CV)

Rettleddning: Dette skjemaet består av 28 spørsmål om opplevelser som du kan ha i ditt daglige liv. Vi er interessert i hvor ofte du har slike opplevelser. Det er viktig å merke seg at en **ikke** spør etter opplevelser du har hatt **under rus av alkohol eller andre stoff**.

Merk av hvor ofte dette har hendt deg i løpet av de siste 7 dager ved å sette kryss i ruten slik:

Merk av hvor ofte dette har hendt deg i løpet av de siste 7 dager		Aldri	Sjelden	Noen ganger	Ofte	Veldig ofte
Eks	Enkelte mennesker merker plutselig, mens de kjører bil, buss eller trikk, at de ikke kan huske hva som har hendt under hele eller deler av turen. Merk av hvor ofte dette har hendt deg i løpet av de siste 7 dager			X		

	Merk av hvor ofte dette har hendt deg i løpet av de siste 7 dager	Aldri	Sjelden	Noen ganger	Ofte	Veldig ofte
1	Enkelte mennesker merker plutselig, mens de kjører bil, buss eller trikk, at de ikke kan huske hva som har hendt under hele eller deler av turen. Merk av hvor ofte dette har hendt deg i løpet av de siste 7 dager					
2	Enkelte mennesker merker plutselig, når de lytter på en annen som snakker, at de ikke har hørt noe eller bare deler av det som er sagt. Merk av hvor ofte dette har hendt deg i løpet av de siste 7 dager					
3	Enkelte mennesker opplever å befinne seg på et sted uten å vite hvordan de er kommet dit. Merk av hvor ofte dette har hendt deg i løpet av de siste 7 dager					
4	Enkelte mennesker oppdager at de er kledd i klær som de ikke kan huske at de har tatt på seg. Merk av hvor ofte dette har hendt deg i løpet av de siste 7 dager					
5	Enkelte mennesker oppdager ting blant sine eiendeler som de ikke kan huske å ha kjøpt. Merk av hvor ofte dette har hendt deg i løpet av de siste 7 dager					
6	Enkelte mennesker opplever iblant at personer som de ikke kjenner, tar kontakt med dem, kaller dem ved et annet navn og insisterer på at de har truffet dem før. Merk av hvor ofte dette har hendt deg i løpet av de siste 7 dager					
7	Enkelte mennesker har iblant en opplevelse av å stå ved siden av seg selv, eller opplever seg selv gjøre ting som om de ser på en annen person Merk av hvor ofte dette har hendt deg i løpet av de siste 7 dager					
8	Enkelte mennesker har fortalt at de av og til ikke kjenner igjen venner eller familiemedlemmer. Merk av hvor ofte dette har hendt deg i løpet av de siste 7 dager					
9	Enkelte mennesker oppdager at de ikke kan huske viktige hendelser i sitt liv (for eksempel skoleskifte, flytting, bryllup). Merk av hvor ofte dette har hendt deg i løpet av de siste 7 dager					
10	Enkelte mennesker opplever å bli anklaget for løgn når de selv ikke mener å ha løyet. Merk av hvor ofte dette har hendt deg i løpet av de siste 7 dager					
11	Enkelte mennesker opplever, når de ser seg selv i speilet, at de ikke kjenner seg selv igjen. Merk av hvor ofte dette har hendt deg i løpet av de siste 7 dager					

	Merk av hvor ofte dette har hendt deg i løpet av de siste 7 dager	Aldri	Sjelden	Noen ganger	Ofte	Veldig ofte
12	Enkelte mennesker opplever iblant at andre personer, ting og verden rundt dem føles uvirkelig. Merk av hvor ofte dette har hendt deg i løpet av de siste 7 dager					
13	Enkelte mennesker opplever en følelse av at kroppen deres ikke tilhører dem. Merk av hvor ofte dette har hendt deg i løpet av de siste 7 dager					
14	Enkelte mennesker kan iblant oppleve å huske noe så levende at det kjennes som om de opplever det på nytt. Merk av hvor ofte dette har hendt deg i løpet av de siste 7 dager					
15	Enkelte mennesker opplever at de ikke er sikre på om hendelser de husker, virkelig har hendt, eller om det bare er en drøm. Merk av hvor ofte dette har hendt deg i løpet av de siste 7 dager					
16	Enkelte mennesker opplever, når de er på et sted de kjenner, at det føles rart og fremmed. Merk av hvor ofte dette har hendt deg i løpet av de siste 7 dager					
17	Enkelte mennesker opplever, når de ser TV eller film, at de blir så oppslukt av historien at de ikke følger med på hva som skjer rundt dem. Merk av hvor ofte dette har hendt deg i løpet av de siste 7 dager					
18	Enkelte mennesker opplever iblant at en dagdrøm eller fantasi blir så levende at det føles som om det virkelig har hendt. Merk av hvor ofte dette har hendt deg i løpet av de siste 7 dager					
19	Enkelte mennesker oppdager at de iblant kan ignorere smerte. Merk av hvor ofte dette har hendt deg i løpet av de siste 7 dager					
20	Enkelte mennesker opplever at de iblant sitter og stirrer ut i luften uten å tenke på noe og uten å merke at tiden går. Merk av hvor ofte dette har hendt deg i løpet av de siste 7 dager					
21	Enkelte mennesker prater iblant høyt med seg selv når de er alene. Merk av hvor ofte dette har hendt deg i løpet av de siste 7 dager					
22	Enkelte mennesker oppdager at de i en situasjon oppfører seg så annerledes enn i en annen situasjon at det er nesten som om de skulle være to forskjellige personer. Merk av hvor ofte dette har hendt deg i løpet av de siste 7 dager					
23	Enkelte mennesker oppdager at de i visse situasjoner uten besvær kan utføre ting som de ellers har store vanskeligheter med (for eksempel i sport, arbeid, sosiale sammenhenger og lign.). Merk av hvor ofte dette har hendt deg i løpet av de siste 7 dager					
24	Enkelte mennesker opplever iblant at de ikke kan huske om de har utført noe, eller om de bare tenkte å gjøre det (for eksempel vet ikke om de har postet brevet eller bare tenkte å gjøre det). Merk av hvor ofte dette har hendt deg i løpet av de siste 7 dager					
25	Enkelte mennesker finner bevis for at de har gjort ting som de ikke kan huske å ha gjort. Merk av hvor ofte dette har hendt deg i løpet av de siste 7 dager					

26	Enkelte mennesker finner blant sine egne ting tegninger eller notater som de må ha utført, selv om de ikke kan huske det. Merk av hvor ofte dette har hendt deg i løpet av de siste 7 dager					
27	Enkelte mennesker hører iblant stemmer i hodet som sier hva de skal gjøre eller kommenterer det de holder på med. Merk av hvor ofte dette har hendt deg i løpet av de siste 7 dager					
28	Enkelte mennesker føler det noen ganger som om de ser verden i en tåke. Ting og mennesker synes å være fjerne eller uklare. Merk av hvor ofte dette har hendt deg i løpet av de siste 7 dager					