Guidelines for the validation of the Child Dissociative Checklist in Sweden

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GUIDELINES FOR THE VALIDATION OF THE CHILD DISSOCIATIVE CHECKLIST IN SWEDEN

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This study's aim was to explore face, content, concurrent validity and psychometric properties of the Swedish Child Dissociative Checklist (CDC) as well as and to provide guidelines towards validation. The CDC is used in Sweden when dissociation is highly probable, and validation could motivate wider use. Qualitative data was gathered from psychologists-in-training (N = 4) clinical psychologists (N = 5) and parents (N = 23) through a focus group, interviews and questionnaires, respectively. Quantitative data using the CDC and items from the Child Behaviour Checklist (CBCL) was obtained from parents. Results suggest good face, content and convergent validity. Factor analysis provides suggestions for future investigations into quantitative validation. Guidelines when validating is revising certain items, investigating the possibility of developing two versions of the CDC, utilizing an adequate sample size as well as assessment with a clinical group.

Studiens syfte var att undersöka face, innehålls- och konvergent validitet samt psykometriska egenskaper hos den svenska versionen av Child Dissociative Checklist (CDC), samt utforma riktlinjer för validering. I Sverige har CDC använts vid hög närvaro av dissociativa symptom, och validering kan motivera bredare användning. Kvalitativ data samlades in från psykologstudenter (N = 4), kliniska psykologer (N = 5) och föräldrar (N = 23) genom fokusgrupp, intervjuer respektive frågeformulär. Kvantitativa data erhölls från föräldrar med CDC och items från Child Behaviour Checklist (CBCL). Resultaten tyder på god face, innehålls- och konvergent validitet. Faktoranalys bidrar med förslag på framtida tillvägagångssätt för kvantitativ validering. Riktlinjer vid validering är revidering av vissa items, utforskning av möjligheten att utveckla två versioner av CDC, tillgång till ett stort sample samt jämförelse med en klinisk grupp.

There is to date no locally validated questionnaire in Sweden that has the sole focus of evaluating dissociative symptoms in children under the age of 13 (Stockholms Läns Landsting, Barn- och Ungdomspsykiatrin, 2015). At present, children may be assessed with instruments developed with and validated for other populations. This situation is undesirable, as the use of an instrument based on an American population may, though translated, not be sufficiently transferable to a Swedish population and cultural context. This in turn may lead to children being at risk of not receiving correct diagnoses or adequate treatment (Sadowski & Friedrich, 2000). Screening and continuous assessment is important to help parents and healthcare professionals to better recognise symptoms and facilitate treatment planning.

Early intervention could assist children with pathological dissociative behaviour, many of whom have experienced severe trauma, to develop healthier strategies to handle stress and enable them to develop a coherent sense of self (Macfie, Cicchetti, & Toth, 2001). Furthermore, the continuous use of screening instruments provides measurements of the child's progress through treatment (Lang & Stein, 2005). When left untreated, pathological dissociation has a high correlation with psychopathology in adults (Cloitre, Stolbach, Herman, Kolk, Pynoos, Wang & Petkova, 2009), whereby early detection and treatment can be further motivated.

The aim of this study is to examine various dimensions of validity of the Swedish Child Dissociative Checklist (CDC), in order to make recommendations, or suggest guidelines towards its local validation. The CDC evaluates dissociative symptoms in children aged 5-12 years old, with a variety of approaches. Originally developed in the US by Putnam (Putnam, Helmers & Trickett, 1993), the CDC covers six domains consisting of 20-items in total. The CDC was first published in 1982 and is based on one of several "predictor lists"

used by social workers. These predictor lists were in circulation during the 1980´s as clinicians needed to find ways to diagnose dissociation in children, and were developed through clinical experience with patients with dissociative disorders. The CDC has been revised twice and the version in use today is from 1990. The latest version has 16 items in common with its predecessor, but with four additional items (Putnam & Peterson, 1994).

The psychometric properties of the American-version CDC have been established in several studies. The results indicate that validity, internal consistency and reliability of the CDC is good (Putnam, Helmers & Trickett, 1993; Putnam & Peterson, 1994; Wherry, Neil & Taylor, 2009). The CDC has in US samples been shown to successfully identify children with dissociative disorders and distinguish them from maltreated children, as well as from children without psychiatric complaints and scores on the CDC have a positive correlation with the degree of experienced trauma (Putnam & Peterson, 1994).

Dissociation involves alterations in attention, awareness and memory. In this thesis dissociation is viewed according to the taxon model (Waller, Putnam & Carlson, 1996), where different types of dissociative symptoms are seen as either pathological or non-pathological. Dissociation can be a normative process such as losing awareness of time when absorbed in a particularly demanding activity, or constitute a disorder where dissociative symptoms create significant impairment.

Adequate assessment of children exposed to ongoing interpersonal trauma that exhibit complex symptoms, which can be identified and treated, is imperative (Hodges, Godbout, Briere, Lanktree, Gilbert & Kletzka, 2013). Pre-school children in the normal population display more dissociative symptoms than older children (Carlson, Tahiroglu & Taylor 2008). However, preschool children with experiences of sexual abuse, physical abuse, or neglect show more dissociative symptoms than non-maltreated children, and the symptoms displayed indicate pathological dissociation (Macfie, Cicchetti & Toth, 2001).

In pathological dissociation, emotions, thoughts and memories can be suppressed from consciousness and hindered from being incorporated into a person's narrative of his or her life story. Dissociation can create deficits in awareness and attention as well as instigate a sense of alienation (Putnam, Helmers & Trickett, 1993). DSM-V lists four categories of dissociative symptoms relevant in diagnosing dissociative disorder, which are: *Amnesia, derealisation, depersonalization* and *identity confusion* (American Psychiatric Association, 2013). Amnesia is indicated by memory disruptencies that exceeds normal forgetfulness and can include deficits in the ability to remember personal information such as name or address or events that have previously occurred. Derealization is evident when people, items, events or the self seems unreal. Depersonalization refers to having the perception that what is happening at the moment or that which has occurred, is actually happening to someone or something else. Identity confusion involves a lack of self integration and can include forming new and separate identities.

Symptoms of dissociation and trauma present differently in young people than they do in adults. The International Society for the Study of Dissociation (ISSTD, 2004) have developed guidelines pertaining to the evaluation and treatment of dissociative disorders in children and adolescents. Cognitive symptoms include displaying alterations of

consciousness which can present as difficulties concentrating and lack of attention to external stimuli. Children may have trouble remembering people, events and skills which he or she is expected to remember. In terms of behaviour, children may behave very differently in different situations and display abrupt mood changes. The child may have a very vivid imaginary world which seems to have a disproportionate role in the child's everyday life. The child may perceive that imaginary characters control his or her actions. Furthermore, the child may feel that the world or people and things in the world is unreal or that the child him- or herself is unreal. An experience of alienation may also be present (ISSTD, 2004).

Aim of the thesis

The aim of this thesis was to explore different aspects of validity of a Swedish version of the CDC and propose guidelines in all of these aspects for further validation. Face validity was examined by collecting views from parents, psychologists and psychologists-in-training. Content validity was explored by asking psychologists to share their views of the instrument in relation to their clinical experience of using it. Concurrent validity was assessed by comparing parent ratings on the CDC to parent ratings on items from the Child Behaviour Checklist (CBCL) (Achenbach & Rescorla, 2001). Research questions we aimed to answer:

1. What is the face, content and concurrent validity of the CDC?
2. What are the psychometric properties of the Swedish CDC?
3. What recommendations can be made towards the future validation of the CDC?

Method

Participants

Psychologists-in-training (N = 4) were asked to participate in a focus group to discuss face validity of the CDC. Participants were recruited through an internet forum for psychology students and a prerequisite to join the group was to be proficient in both Swedish and English.

Clinical psychologists (N = 5) who use the CDC at their place of work were interviewed. All had experience of working with children with dissociation. Some psychologists worked exclusively with trauma and dissociation, while others worked part of their time with trauma. Two psychologists were working at the same workplace while three psychologist worked at different workplaces from each other.

Parents of children aged five in the general population (N = 23), visiting Child healthcare centers (*Barnavårdcentralen*, BVC) in Västerbotten County, Sweden for routine check-ups were asked to complete a survey. Parents were asked to give informed consent, and complete the CDC and the CBCL in relation to their child. Additional questions were also asked in the biographical questionnaire (for example: "Did you find any of the questions in section 2 [the CDC] hard to understand?" and "When you answered the questions in section 1 [the CBCL] and 2 [the CDC], to what extent did you find that the questions covered the same subject?").

Material

A focus group interview guide was constructed for Psychologists-in-training. Participants were asked to evaluate the sentence structure, choice of words and availability of the

Swedish CDC. Furthermore, participants were asked to compare the Swedish CDC to the American original.

An interview guide was constructed with the aim of exploring how clinical psychologists perceive the validity of the CDC. The questions were constructed to assess specific dimensions of validity. Some questions were aimed to explore professionals' views of content validity. The respondents were asked to consider the extent to which the items in the CDC assess the same construct and if the cut-off score is applicable to Swedish populations. Also, a question estimating concurrent validity was included to ascertain if CDC is comparable with other similar instruments. One question aimed to explore face validity, or more specifically how well the language and wording of the items fits the intended target population.

Parents of children in the intended age range of 5 – 6 years of age completed a survey consisting of the *The Child Dissociative Checklist (CDC,* Putnam, Helmers & Trickett, 1993), *The Child Behaviour Checklist (CBCL;* Achenbach & Rescorla, 2001) and a biographical questionnaire including some qualitative questions. These measures are described below.

The Child Dissociative Checklist (CDC) is a measure for dissociative symptoms in children (Putnam, Helmers & Trickett, 1993). The measurement is based on ratings from an observer that is highly familiar with the child and his/her behaviour, preferably a caregiver, parent or teacher. The observer is asked to circle how well a statement, or item, match the child's behaviour during the past 12 months on a three-point scale, ranging from 0 = Not true, 1 = Somewhat true and 2 = Very true. The CDC contains 20 items and the score of all items are summed together. A cut off score equal to 12 or more is considered to indicate clinical levels of dissociation in America. The cut off score of 12 was established through comparisons of the ratings of different clinical groups and a control group. In total, 96% of boys and girls with a diagnosed dissociative disorder not otherwise specified (DDNOS) or multiple personality disorder (MPD) scored 12 or higher. Children with DDNOS (n = 22) had a mean score of 16.8 (SD = 4.7) and children with MPD (n = 31) had a mean score of 24.5 (SD = 5.2). Sexually abused girls (n = 61) had a mean score of 6 (SD = 5.2) with 12 girls (19.6%) scoring 12 or more. The control group (n = 67) had three outliers scoring 12 or higher but had otherwise a mean score of 2.3 (SD = 2.3).

In the American version, internal consistency has been observed to be α = .86, indicating good reliability (Putnam & Peterson, 1994) in samples with both clinical and non-clinical populations. Split-half reliability was r = .88, p = .0001 (Putnam, Helmers & Trickett, 1993). The CDC has good construct validity with high correlations between item scores and scale scores. One-year test-retest reliability has shown to be moderate *rho* = .69*(N* = 73, p = .0001).

The Swedish version of the CDC was translated by D. Nilsson, I. Larsson & C-G Svedin at Linköping University in 2002 with the approval of the original authors (Stockholms Läns Landsting, Barn- och Ungdomspsykiatrin, 2015). The Swedish CDC is protected by copyright, but is available for clinical use and research purposes. The CDC has no Swedish standardization or norm data and was translated with the aim of being used by clinicians at child psychiatric centres in Sweden. The copy used in this study was retrieved from a book by Gerge and Bergendahl-Odby (2013).

The Child Behaviour Checklist (CBCL) is a validated parental report form that aims to assess emotional and behavioural problems among children (Achenbach & Rescorla, 2001). The CBCL is rated on a 3-point scale, ranging from 0 (not true), 1 (somewhat true) and 2 (often true). Originally, two versions were available depending on the age of the child: the preschool version covering the age span 1½-3 and the school age form covering ages 4-18. In 2001, the CBCL was revised and currently, the preschool form covers ages 1½-5, and the school age form covers ages 6-18.

The CBCL has been translated into 79 languages (Ivanova et al. 2007) and the methodology behind translation involves two stages were the CBCL is first translated from English into the other language. Subsequently, this translation is re-translated into English (Rescorla et al. 2007). These operations are done independently of each other to ensure that the translation and the original are compatible (Rescorla et al. 2007). Cross-cultural studies (Crijnen, Achenbach & Verhulst, 1997; 1999) which included a Swedish sample (Larsson & Frisk, 1999) have shown that there are similarities between how parents respond to the questions across cultures with item scores correlating biculturally, overall mean *r = .78* (Crijnen et al., 1997). Age and gender had a similar correlation with item scores despite major differences such as demography, culture and language (Crinjen et al., 1997). However, certain syndromes were scored significantly different between cultures (Crijnen et al., 999). Swedish scores were consistently lower than scores from other countries having most in common with Norway (Crinjen et al., 1997; 1999).

Studies of multi-cultral robustness of the CBCL (Rescorla et al., 2007, Ivanova et al., 2007) have shown preliminary evidence that support this. Rescorla et al. (2007), explored this by looking at internal consistency, impact of society (referred to as culture in earlier studies), gender and age on CBCL scores and rank order of mean item scores (Rescorla et al., 2007). Internal consistency was found to be high with a mean bisociety *r = .88* (range = .77-.92) with the pattern of variation of internal consistency values between CBCL scales consistent across societies. Mean scale scores across the 31 societies showed a similar pattern of response in terms of scores on the Total Problem scale score with an overall mean of 22.5. However, six societies (including Sweden and Norway) scored 1 SD over this mean and six societies scored 1 SD above this. The authors could not find any explanation for these discrepancies but suggest multicultural norms to differentiate between low, medium and high patterns of scoring. Significant differences in the effect of age and gender were found. Mean item scores provided the mean bisociety value of *r* = .74 which suggests that parents rate their children similarly across the societies in the study. Items with indicate a higher degree of pathology were consistently rated lower than items which indicated less pathology.

Ivanova et al. (2007) explored the configural invariance of the CBCL across 30 societies and found that RMSEA´s was less than .06 across all societies. Also, the mean loading on predictors was .62 and mean factor covariance was .70. The results of Ivanova et al. (2007) and Rescorla et al. (2007) studies indicate that the CBCL may be viewed as having multicultural robustness and similar trends can be identified regardless of culture. This however does not imply that the American validity applies to other countries.

The CBCL has not been validated in Sweden, however it has been validated in Norway (Nøvik, 1999), and has shown to distinguish children with psychiatric problems from children who are not part of a clinical group. A Danish validation study (Bilenberg, 1999)

reported good construct validity and acceptable reliability both in terms of inter-parent ratings (.65) and test-retest reliability (.85). In Scandinavia, studies have shown that parent ratings in Denmark (Bilenberg, 1999), and Sweden (Larsson & Frisk 1999) on the CBCL are very similar to parent ratings in Norway (Nøvik, 2000) in regards to total mean behavior problem score, which can indicate that Scandinavian parents share similar perceptions of problematic behavior (Nøvik, 2000). Bilenberg (1999) describes the similarities between Scandinavian norms as "amazing". For the purpose of this dissertation, adequate validity and reliability for the Swedish CBCL is assumed based on indications of the multi-cultural robustness of the CBCL as well as Scandinavian validity studies in Norway and Denmark.

The CBCL has not been developed to evaluate dissociation and PTSD or dissociation symptoms and therefore does not have a specific scale for trauma and dissociation (Achenbach & Rescorla, 2001). In order to measure trauma, researchers have combined items associated with trauma from the CBCL to form subscales relevant in trauma assessment for research purposes (Milot, Plamondon, Ethier, Lemelin, St-Lauren & Rousseau, 2013; Sim, Friedrich, Davies, Trentham, Lengua & Pithers, 2005). Several different versions of dissociation/PTSD scales have been examined (Dehon, 2005; Ogawa, Scroufe, Weinfield, Carlson & Egeland, 1997; Hulette, Freyd, Pears, Kim, Fisher & Becker-Blease, 2008a). The dissociation scale proposed by Sim et al. (2005) has displayed high internal consistency between items (3 items: α = .70 - .85) and has been shown to have good validity (Hulett et al., 2008a; Milot et al., 2013; Sim et al., 2005). A scale measuring both PTSD and dissociation (7 items: α = .70 - .85), as well as a scale measuring symptoms associated with PTSD (16 items: α = .67 - .74), was also proposed (Sim et al., 2005; Milot et al et al. 2013). The three scales and the specific items are presented in Table 1.

The majority of previous studies with 5-year-old children have been conducted with the 4-18 school age form of the CBCL which corresponds to the 6-18 school age form (Achenbach & Rescorla, 2001; Sim et al., 2005; Hulett et al., 2008a). The Dissociation scale, the PTSD scale and the Dissociation/PTSD scale are derived from items in the CBCL 4-18 that are now found unchanged in the CBCL 6-18. (Achenbach & Rescorla, 2001; Sim et al., 2005). However, many of these items are not found in the current pre-school version of the CBCL for children 1½ -5 years. In total, 7 of the 16 items from the proposed PTSD/dissociation scale are missing as well as two of the three items from the dissociation scale (Achenbach & Rescorla, 2000). The preschool version of CBCL 1½-5 has therefore been excluded from this study in favour of the school age version 6-18. Studies have shown that there is little difference in ratings among 5 year olds and 6 year olds on the proposed PTSD, dissociation and PTSD/dissociation scale in CBCL (Sim et al., 2005), which further motivates use of the school age form.

Table 1. *Items from the three proposed scales from the CBCL. X indicates item is included in the specific scale.*

	Items	PTSD	Dissociation	PTSD/ Dissociation
9	Can't get his/her mind off certain thoughts; obsessions	x		x
29	Fears certain animals, situations, or places other than school	x		x
45	Nervous, highstrung or tense	x		x
47	Nightmares	x		x
50	Too fearful or anxious	x		x
76	Sleeps less than most kids	x		x
100	Trouble sleeping	x		x
13	Confused or seems to be in a fog		x	x
17	Daydreams or gets lost in his/her thoughts		x	x
80	Stares blankly		x	x
8	Can't concentrate, can't pay attention for long			x
40	Hears sounds or voices that aren't there			x
66	Repeats certain acts over and over, compulsions			x
84	Strange behavior			x
87	Sudden changes in mood or feelings			x
92	Talks or walks in sleep			x

Qualitative questions to parents included questions about their impression of the items in the CDC. Parents were asked if they perceived questions in the CDC and CBCL to be related and asked to consider the relevance of all items in the CDC.

Design

The design of the study was a mixed methods approach, where both qualitative information and quantitative data was collected. To explore the face validity of the Swedish version of the CDC, psychology students were asked to evaluate the items on the Swedish version and to assess whether they perceive the translation from English to Swedish as adequate. Clinical psychologists who currently use the CDC in their practice were interviewed to gather their views on the instrument and its use in practice. Quantitative data was collected in Västerbotten county in an availability sample of parents of children aged five or six in the general population. Data from parents was collected at child health care centres by the nurse who informed the parents about the study and ask parents if they would like to participate. Qualitative data was also obtained from the questionnaire by letting parents share their reactions to and impressions of the items.

Procedure

A focus group was conducted *(N=4)*. The aim of the thesis as well as the subject of the focus group was posted on an internet forum for psychology students. Readers were informed that their participation was on a voluntary basis and no compensation (besides coffee) was offered. The focus group met once, for a duration of approximately one hour.

After a short introduction and agenda, participants were informed that the discussion would be recorded and they were then asked to give consent. Participants were invited to look at a copy of the Swedish CDC and to make written comments on the form concerning the construction, language and accessibility. After this, participants were invited to share their opinions with the group. When all of the participants had been given the chance to share their comments, the group was given a copy of the American CDC. The forms were examined item by item. The moderator read each item aloud in both the English and Swedish whereby the group reflected if the translation was adequate.

Psychologists who use CDC in their assessment of dissociative symptoms in children were interviewed through a semi-structured interview (N = 5). Interviews were conducted in person or by phone.

A questionnaire consisting of three parts was administered to parents visiting the BVC (N = 23). The first part of the questionnaire consisted of the three trauma related scales proposed by Sim et al. (2005) in the CBCL. The CBCL is copyrighted by the Achenbach System of Empirically Based Assessment and the Swedish version is distributed by Journal Digital. Journal Digital was contacted during the preparation phase of the study and most generously gave their permission for use of the CBCL in this thesis. The second part consisted of the CDC. The Swedish CDC is protected by copyright, but is available for clinical use and research purposes. The third part of the questionnaire was comprised of a section with questions covering the parent's opinions and reactions to the CDC.

Analysis

Focus group data was analysed according to a two-stage process presented by Powell and Single (1996). First, the recorded data was transcribed, coded and sorted into initial categories. Aspects other than the language and wording in the CDC were not coded. In the second stage the codes were rearranged into subthemes and themes. The examination of the Swedish version of CDC and the examination of the translation into Swedish were analysed separately from each other.

Qualitative data from psychologists was analysed through thematic analysis described by Braun and Clark (2006). After transcribing the data, initial codes were identified. The codes were then clustered into themes. These were reviewed, defined and analysed.

Quantitative data from parents was analyzed using IBM Statistics 23.0 (SPSS, 2016). Psychometric properties were explored initially through principal components factor analysis. After evaluation of the Scree-plot, with a guideline of number of points before the break in the line, and the Kaiser criterion, with a guideline of factors with an eigenvalue larger than one. Kaiser-Meyer-Olkin Measure of Sampling Adequacy was employed as a measure of factorability of the data, and Bartlett's Test of Sphericity were evaluated to estimate homogeneity of variance. For Factor Analysis to be recommended suitable, the Bartlett's Test of Sphericity must be less than .05, moreover, the Kaiser-Meyer-Olkin Measure of Sampling Adequacy must be over .49 to be accepable however values are preferable higher than this and the closer to 1, the better (Williams, Brown, Onsman, 2010). Reliability analysis was investigated by means of Cronbach's Alpha, and inter-item correlations. Correlation between dissociation scores on the CDC and dissociation scores on the CBCL were established to indicate concurrent validity.

Qualitative questions from parents was analysed through thematic analysis (Braun & Clark, 2006).

Results

Qualitative results

To examine face validity, psychology students were asked to compare and evaluate the Swedish CDC in its own right as well as in relation to the American original. Eight items were observed as potentially problematic (see Table 2).

Table 2. *Items that participants commented on during the focus group.*

Item	American version	Swedish version
2	Child goes into a daze or trance-like state at times or often appears "spaced-out." Teachers may report that he or she "daydreams" frequently in school.	Barnet går in i ett förvirrat eller transliknande tillstånd, eller verkar ofta helt "bortkopplad/utspacad". Lärare kan rapportera att hon eller han ofta dagdrömmer i skolan.
3	Child shows rapid changes in personality. He or she may go from being shy to being outgoing, from feminine to masculine, from timid to aggressive.	Barnet visar snabba förändringar i sin personlighet. Han eller hon kan gå från att vara blyg till att vara utåtriktad, från feminin till maskulin, från försagd till aggressiv.
5	Child has a very poor sense of time. He or she loses track of time, may think that it is morning when it is actually afternoon, gets confused about what day it is, or becomes confused about when something has happened.	Barnet har en mycket dålig tidsuppfattning. Han eller hon tappar bort tiden, kan tro att det är morgon när det faktiskt är eftermiddag, blir förvirrad omkring vilken dag det är, eller blir förvirrad angående tidpunkten när något hänt.
6	Child shows marked day-to-day or even hour-to-hour variations in his or her skills, knowledge, food preferences, athletic abilities, e.g. changes in handwriting, memory for previously learned information such as multiplication tables, spelling, use of tools or artistic abilities.	Barnet visar tydliga variationer i sina färdigheter, sin kunskap, vilken mat han eller hon föredrar och sina fysiska färdigheter från dag till dag, eller till och med timme för timme. Det kan gälla tex förändringar i handstil, minne av tidigare inlärd information som multiplikationstabellen, stavning, användning av redskap eller konstnärliga färdigheter.
10	Child refers to himself in the third person (e.g. as she or her) when talking about self, or at times insists on being called by a different name. He or she may also claim that things that he or she did actually happened to another person.	Barnet hänvisar till sig själv i tredje person (Tex som hon eller henne) när han eller hon talar om sig själv, eller insisterar ibland att på att bli kallad för ett annat namn. Barnet kan också påstå att saker som han eller hon gjort egentligen hände en annan person.

11	Child has rapidly changing physical complaints such as headache or upset stomach. For example, he or she may complain of a headache one minute and seem to forget about it in the next.	Barnet har snabbt skiftande kroppsliga klagomål så som huvudvärk eller magbesvär tex kan han eller hon klaga över huvudvärk, ena minuten för att senare i nästa minut verka ha glömt det helt och hållet.
12	Child is unusually sexually precocious and may attempt age-inappropriate sexual behaviour with children or other adults.	Barnet är ovanligt sexuellt försigkommet och kan försöka dra in andra barn, eller vuxna, i sexuella aktiviteter som inte är åldersadekvata.
20	Child has two or more distinct and separate personalities that take control over the child's behavior	Barnet har två eller flera tydliga och åtskilda personligheter som tar kontrollen över barnets beteende.

The participants' general impression and opinion of the Swedish CDC was that the items were well written and easy to understand. The items contained several examples which added clarity to the questions. The participants found certain items problematic (see Table 2). However, despite this, items were not perceived to be confusing to the extent that the participants felt respondents would be at risk of misunderstanding the question. The participants felt certain words used could be unintelligible but believed that even these words could be understood in the context in which they were presented. The participants perceived the items to cover different constructs and did not experience any repetitive questions. The theme "*Problematic phrases*" is defined as consisting of sentences that are structured in such a way that they are at risk of being confusing. Whereas the theme "*Difficult words*" consists of specific words that are perceived to be less well-chosen in the context they are presented. Sub-themes contain words that are rarely used and may be difficult to understand, words that are considered as clinical terminology and words that are considered too youthful and hard to understand for older participants.

Table 3. *Participants' experience of problematic phrases and words in the Swedish version of the CDC*

Themes	Sub-theme
Problematic phrases	Too many and too vague symptoms (Items 6 and 10) Item consists of two questions (item 2) Too clinical (item 20) Alternates specific and general examples in different items (Items 5 and 6) Gender normative examples (Item 3)
Difficult words	Unusual words used in translation (Timid, item 3 and precocious, item 12) Terminology (age-inappropriate, item 12) Youth jargon (Spaced out, item 2)

The participants reported overall that the CDC was well translated and 13 of 20 items received no negative comments. Overall, 7 items received minor criticism from the participants (see Table 3). Two themes were derived from the comments: *Modified meaning* and *Wrong choice of words*. The first theme indicates that the translated sentence was different enough that the overall meaning of the sentence was slightly changed. Sub-themes included in the first theme are non-transferred formatting and added information. The participants reported that the emphasis on certain words was altered when quotation marks and the use of bold letters was missed in the translated version, thus slightly changing the overall meaning of the item. The added information sub-theme refers to one item that asks if the child has trouble remembering *when* something has happened. The participants felt that the translated version asks if the child has trouble remembering the *specific time* of day that something has happened, which they felt to be similar to the original, but also more particular. The second theme describes specific words that the participants did not perceive to be ideal. With some words, participants believed that a more accurate translation could be made. With other words, participants felt that the translation was accurate, but the word chosen was too rare and/or too uncommon.

Table 4. *Participants' experience of problematic aspects in the translation found when comparing the American and the Swedish version of the CDC*

Theme	Sub-theme
Modified meaning	Non-transferred formatting (quotation marks, item 2; bolding on insists, item 10) Added information ("…when something has happened", item 5)
Wrong choice of words	More accurate translation available (Spaced-out, item 2; timid, item 3; athletic abilities, item 6; changing, item 11) Difficult word (precocious, item 12; age-inappropriate, item 12)

Interviews with clinical psychologists

Three themes were identified in the interviews with the psychologists (See Table 5). Specific items mentioned by the psychologists, and not previously mentioned in interviews with the psychology students (refer to Table 2), will be presented in table 6 at the end of the interview section.

Table 5. *Themes and sub-themes from the interviews with the psychologists.*

Theme	Sub-theme
Application in a clinical setting	Selective use Qualitative use A measure for dissociation
Accuracy in predicting dissociation	Perceived predictors for dissociation Less discriminant items for dissociation Less useful items Accessibility
Inadequate norms	Affects if it's used Affects how it's used More measures needed

Application in a clinical setting

Selective Use

Even though the psychologists often met traumatised children, they did not use the CDC with all children. They described that they primarily used the CDC on children with strong indications of having dissociative problems. Almost all the psychologists reported that most of the caretakers who were asked to use the CDC at their clinic, scored their children far above the cut-off of 12. The following example describes how one psychologist decides when to use the CDC:

> *It's not as if we screen all children here, that's not what we do. It is used especially when there is a suspicion that there may be dissociation, with children who have suffered trauma and things like that (...) so we have used it on the children we already in advance are thinking that they have dissociative problems, or perhaps suspect it.*

Another psychologist uses the CDC more often:

> *Relatively often, it is quite often one gets the suspicion that there is dissociation, then again it can be different degrees of dissociation, and it is not always I think it is necessary. It's not something I use with all my patients, but relatively often.*

Qualitative use

The practitioners described their use of the CDC often as a qualitative measure during or before treatment. They use it to explain symptoms and dissociative problems to caretakers. This is to give the caretakers alternative explanations to the problems they are experiencing with their child, or to make the symptoms more apparent for them. Many practitioners use the questions in the CDC as a basis for a clinical interview that can be followed up with additional questions. In the comment below a psychologist describes how she uses the CDC to make the child's problems more visible to their guardians.

> *I use it when I feel it must be made more visible. This is often when we need to think about how we're doing and think about this child, and understand this child. But also make guardians aware that this problem exists or can exist.*

The comment below describes how a psychologist uses the CDC qualitatively.

It's been a rather qualitative use you could say. I have used it with parents or family, and afterwards you go through this and they estimate their child, and then you get a sum. And we have a small standard specification, they say there are no standards but that has not been the main use, but more that "this much is true," and that these symptoms can be about this and so on. Thus, what is dissociation, and can it be that this may be about "this and this".

A measure of dissociation

The majority of the psychologists used the CDC to assess symptoms before and after treatment, as a part of the treatment plan. One psychologist primarily used the report form TSCYC (Trauma Symptom Checklist for Young Children), but could also use the CDC as a supplement if the TSCYC indicated severe dissociation. This since the dissociation scale in the TSCYC contains less items than the CDC, and thus has less symptoms to base the treatment plan on.

I use these forms both to assess and diagnose but also to plan interventions. But sometimes it can also be that I in treatment have missed some dissociative symptoms initially. So it could also become part of an ongoing treatment.

Accuracy in predicting dissociation

Perceived predictors for dissociation

The practitioners perceived many items as being more accurate than others in identifying dissociation. Four practitioners mentioned being in a trancelike state (item 2, see Table 2) as a good indicator of dissociation. Three practitioners mentioned that the child shows variation in his or her skills (item 6, see Table 2) and showing rapid regression (item 7, see Table 2) also as a common symptom among children with dissociation. Two practitioners mentioned having a poor sense of time (item 5, see Table 2), rapid changes in personality (item 3, see Table 2) and deliberate self-harm at times (item 13, see Table 2) as viable items. Items mentioned by one practitioner each were having a vivid imaginary companion (item 15, see Table 6), being unusually forgetful (item 4, see Table 6), hearing voices (item 14, see Table 6), the child referring to themself in third person (item 10, see Table 2) and the child having rapidly changing physical complaints (item 11, see Table 2). Examples of how the psychologists reasoned about the items are shown below:

It is more like this question two, that a child goes into a daze or trance-like state at times or often appears "spaced-out." Teachers may report that he or she "daydreams" frequently in school, it is almost two questions in one. That [item], I think is one. Rapid changes and becoming someone else is another. Even this, being confused and forgetting things one has done and not know about them later. Many of these questions are really good, variations in skills, regression is also one.

Generally I need to be careful with many questions so that I don't misread something to do with the child's´ life situation as a symptom. But for example, I think question 2 is always good. And then I also ask what type, if it seems to be negative or positive to explore the circumstances surrounding it.

To be in a daze and being spaced-out, that's typical. Changes in behaviour is also very typical. Some children can have many skills and a lot of knowledge that becomes disconnected. Regression. To vary in skills and abilities. Other children with psychiatric problems are usually more consistent in what competencies they master. This can vary very much when problematic dissociation is present. Same thing with sexually precocious behaviour, even if that is not they way I would express it. But a child that has a sexuallized behaviour, that is sometimes connected to dissociation. Then I think to hear voices.

Based on those I have worked with, all questions are good actually, but number two, that one disappears. Yes, and I believe everyone has had a poor sense of time.

Less discriminant items for dissociation

Many of the psychologists felt that some items did not discriminate well between dissociation and other things such as developmental disorders, attachment issues, neuropsychiatric disorders, post-traumatic stress disorder, sleep disorders and sometimes even a vivid imagination. Items mentioned by psychologists in this matter were item 15, 17, 18 (see Table 6).

What I find difficult is that the children I work with often have experienced repeated trauma, relational trauma, have attachment disorders. There is not a single trauma, and they have received no help with affect regulation. It's so complicated and how to distinguish between it all I do not know. Rapid swings in mood can also be related to disorganized attachment, as well as dissociation.

Less useful items

Two items (items 10 and 20, see Table 2) were mentioned as being less useful by psychologists based on their experience that these specific items were seldom identified by parents. Two additional items were mentioned as seen below, item 3 (see Table 2) and item 9 (see Table 6).

I know the background to item three, but I don't find it to be a particularly helpful item (...) Item nine isn't very helpful I find, because often when a child has been so severely maltreated, then the child needs to lie and withhold information as they feel it is what they need to do to survive. I don't think it resonates well and it is hard to determine if the child doesn't know or because he or she feels that they must withhold information. So, that's something I think one should be careful with.

Accessibility

Most the psychologists felt that the CDC was user friendly and believed that parents were able to understand the items. Some items were however mentioned as potentially confusing. One psychologist mentioned that parents may wonder what is meant by "trance-like states" (item 2, see Table 2). Also it may be hard for some parents to grasp what is meant by "normal discipline" (item 8, see Table 6). Some parents may have trouble with the language in general or may themselves be traumatized.

Since I work with traumatised families, parents are sometimes too preoccupied with this or identify themselves with this as they also are traumatised. Because I work with the type of clients that I do, it's hard for me to answer how it is understood by fully functional parents. It's mostly the abstract questions that can be hard to understand,

but they often understand with follow-up questions. But the teachers seldom have trouble understanding, I haven't received any questions.

Inadequate norms

Affects if it is used

Psychologists felt that the lack of Swedish norms makes it less likely that the CDC is used as a screening tool.

The biggest problem is this with the standards. The absence of it. This is a major flaw and I think it affects the motivation to use it when you cannot score and count on it. Also, it would be interesting to know how common it is in a norm group.

Affects how it is used

Psychologists described that they didn't really look at the points per say, instead they focused on what symptoms were identified. Many times the children assessed with the CDC had very high points. The cut-off can be relevant in terms of creating awareness of dissociative tendencies.

Well, it's hard. It's an acceptable sum to get one's attention and maybe motivate further assessment. But one needs to check which answers have been given.

Well, I was given a form the other day where the child received over twenty points. I sort of note these numbers with a grain of salt. If one has an impression of something, or the child displays something in the room, or descriptions are given that indicate this, the caretaker describes this and the CDC score confirms this, I can presume to be on the right track.

Psychologists described that the CDC needs to be used in conjunction to other forms of information and stressed the importance of critical thinking and having an open mind.

But if it does not coincide with other information you have to keep that in mind. If we say that they get a high score, then I have to think about what it stands for. And I can't presume that dissociation isn´t present even if the score is low. It can take some time for things to become visible, and if one again reminds oneself that some of the caretakers to these children haven´t know the child for very long, one must consider this when weighing the results.

I find dissociation quite complex and one needs to somehow go further to understand what the parent means. But maybe this is because I always have to do this as I work with people who have lots of different cultures and perceptions of the psyche, I always need to be vigilant as to what the parent actually says. And in these circumstances, cut-offs aren't that that useful.

More measures needed

Follow-up questions could add clarity and help discriminate between dissociative symptoms and symptoms that could be manifestations of other psychiatric, developmental or social problems. Questions could also be more specific. For example, when asking about vivid imaginary companions.

Yes, if it [the imaginary world] is very negative, is the child afraid of their imaginary companions, if injuries are blamed on the imaginary companion.

One psychologist felt that the scale could be graded differently.

You mark 1 or 2. I don't know, maybe it would have been better to have a wider scale than just 0-1-2. It's quite hard now I think. Because sometimes perhaps the parents don't really grasp how often it happens. Maybe it has happened one time quite recently and then it seems very prevailing. Generally, I think it should have two parts. How strong, how often and so on. Intensity, duration and frequency.

Also, this practitioner felt the CDC does not distinguish between symptoms that have different degrees of severity.

Generally, I think I would like there to be some sort of taxon index in the CDC. So that if you score 2 on some items and end up on a total score of less than 12, but it is the more serious dissociative experiences then it is more severe than if one potentially scored 1 on twelve items that aren't really that dissociative.

Table 6. *Items mentioned by the psychologist during interviews, not previously presented.*

Item	American version	Swedish version
4	Child is unusually forgetful or confused about things that he or she should know, e.g. may forget the names of friends, teachers or other important people, loses possessions or gets easily lost.	Barnet är ovanligt glömskt eller förvirrat om saker han eller hon borde veta, glömmer tex namnet på kamrater, lärare eller andra viktiga personer, tappar bort sina ägodelar eller går lätt vilse.
6	Child shows marked day-to-day or even hour-to-hour variations in his or her skills, knowledge, food preferences, athletic abilities, e.g. changes in handwriting, memory for previously learned information such as multiplication tables, spelling, use of tools or artistic ability.	Barnet visar tydliga variationer i sina färdigheter, sin kunskap, vilken mat han eller hon föredrar och sina fysiska färdigheter från dag till dag, eller till och med timme för timme. Det kan gälla tex förändringar i handstil, minne av tidigare inlärd information som multiplikationstabellen, stavning, användning av redskap eller konstnärliga färdigheter.
8	Child has a difficult time learning from experience, e.g. explanations, normal discipline or punishment do not change his or her behavior.	Barnet har svårt att lära av erfarenheter, dvs förklaringar, normal uppfostran eller bestraffning påverkar inte hans eller hennes beteende.
9	Child continues to lie or deny misbehavior even when the evidence is obvious.	Barnet fortsätter att ljuga eller förneka dåligt uppförande även när bevisen är uppenbara.
14	Child reports hearing voices that talk to him or her. The voices may be friendly or angry and may come form "imaginary companions" or sound like the voices of parents, friends or teachers.	Barnet säger att det hör röster som talar till honom/henne. Rösterna kan vara vänliga eller arga och kan komma från låtsaskamrater eller låta som rösterna hos föräldrar, kamrater eller lärare.
15	Child has a vivid imaginary companion or companions. Child may insist that the imaginary companion(s) is responsible for things that he or she has done.	Barnet har en mycket levande låtsaskamrat eller flera låtsaskamrater. Barnet kan insistera på att låtsaskamraten är ansvarig för saker han eller hon har gjort själv.
17	Child sleepwalks frequently.	Barnet går ofta i sömnen.

Quantitative results

The range of the total score on CDC was between 0 and 10, where one participant scored 10, and over half of the participants (52%) scored zero. The sample presented here does

not present any cases that meet the clinical cut-off of 12, and should be viewed as a normal sample. The means, standard deviations, skewness and kurtosis for each individual item in the CDC is shown in table 7.

Table 7. *Descriptive statistics of the items in CDC. Means, skewness and kurtosis are presented.*

Item	N	Mean (SD)	Skewness	Kurtosis
1	23	.04 (.21)	4.8	23.00
2	23	.00 (0)		
3	23	.30 (.47)	0.91	-1.29
4	23	.17 (.39)	1.84	1.52
5	23	.17 (.38)	1.84	1.52
6	23	.22 (.52)	2.47	5.86
7	23	.09 (.29)	3.14	8.61
8	23	.22 (.42)	1.47	0.16
9	23	.26 (.45)	1.17	-0.71
10	23	.09 (.29)	3.14	8.61
11	23	.26 (.45)	1.17	-0.71
12	23	.00 (0)		
13	23	.00 (0)		
14	23	.00 (0)		
15	23	.04 (.21)	4.8	23.00
16	23	.13 (.34)	2.35	3.86
17	23	.04 (.21)	4.8	23.00
18	23	.04 (.21)	4.8	23.00
19	23	.04 (.21)	4.8	23.00
20	23	.00 (0)		

The mean scores, as seen in Table 6, on the CDC were overall low with a range between 0 and .3 on a three-point scale. Skewness and kurtosis were high on several items with 9 items over 2. Item 2, 12, 13, 14 and 20 was excluded from later factor analysis, due to the fact that the items were not endorsed at all, and therefore had no variance. Additionally, items 6 and 19 showed low loadings on the initial factor analysis and was excluded from later analysis. A cut-off point of .3 was used as suggested by Tabachnick & Fidell (2007). Correlations between the 13 items from the CDC suitable for analysis are shown in Table 8.

Table 8. *Correlation between the items in the CDC-revised.*

Item	1	3	4	5	7	8	9	10	11	15	16	17	18
1	1												
3	.32	1											
4	-.1	.2	1										
5	.47*	.2	.4	1									
7	.69*	.47*	.27	.27	1								
8	.41	.57*	.59*	.31	.59*	1							
9	-.13	.47*	.51*	-.01	.17	.65*	1						
10	.69*	.47*	.27	.27	1*	.59*	.17	1					
11	.36	.68*	-.01	.51*	.17	.41	.1	.17	1				
15	-.05	.32	.47*	-.1	.69*	.41	.36	.69*	-.13	1			
16	.55*	.59*	.16	.16	.8*	.74*	.36	.80*	.36	.55*	1		
17	1*	.32	-.1	.47*	.69*	.41	-.13	.69*	.36	-.05	.55*	1	
18	-.05	.32	.47*	-.1	.69*	.41	.36	.69*	-.13	1*	.55*	-.05	1

Significant at .05 *

Perfect correlation was found between items 17 and 1, 7 and 10, as well as between items 15 and 18. Strong correlations were found between items 16 and 7 as well as between items 16 and 10 with both pairs at .8. Several correlations above .6 were found and item 10 had 4 such correlations with items 15, 16, 17 and 18. Negative correlations were found despite the fact that all items are scored in the same direction. These correlations were not, however significant at the .05 level. The lowest correlations significant at .05 were between items 3 and 7 as well as 4 and 15, both at .47.

The factor loadings and communalities of the *CDC-revised* were as follows: Item 1 (.64, h^2=.41), Item 3 (.67; h^2=.45), Item 4 (.43, h^2=.18), Item 5 (.38; h^2=.14), Item 7 (.93, h^2=.86), Item 8 (.81; h^2=.65), Item 9 (.41, h^2=.17), Item 10 (.93; h^2=.86), Item 11 (.40, h^2=.16), Item 15 (.65; h^2=.42), Item 16 (.88; h^2=.77), Item 17 (.64, h^2=.41), Item 18 (.65; h^2=.42). The variance explained by this factor was 45.30%. Items 7 and 10 showed the highest communality with the dissociation factor while item 5 showed the lowest communality. Chronbachs alpha for the 13 items from the *CDC-revised* was $\alpha = .87$.

The CBCL Dissociation scale did not extract as one factor in factor analysis and was discarded from further use. The PTSD/Dissociation scale from CBCL was analysed with factor analysis. Items 4, 5, 8, 9, 10, 14 and 16 showed low loadings with a cut-off point off .3 (Tabachnick & Fidell, 2007), and were excluded from the scale. Chronbach's Alpha for the remaining 9 items was .81.

The CBCL PTSD/dissociation-revised factor scale showed a strong correlation with the factor from the *CDC-revised*, $r(21) = .78$ $p < .01$. This correlation implies that there is more

than 60% (60,84%) shared variance between the factor indicated by the *CDC-revised*, and the factor indicated by the revised PTSD/dissociation measure. This provides some proof for concurrent validity.

Comments from parents
Of all the parents, only one felt that their child displayed a behaviour described in the CDC to a large extent (item 3, see table 2.). Only one parent felt that an item (item 14) was out of place. "Child reports hearing voices that talk to him or her. The voices may be friendly or angry and may come from "imaginary companions" or sound like the voices of parents, friends or teachers ". One parent felt that one item, (item 6, see table 2) was hard to understand whilst the rest of the parents reported that they did not find any questions hard to understand. One parent felt that verbal questions would have been easier to respond to:

> *Had needed more explanation or verbal questions. If the questions had been asked verbally, you would have gotten a clearer answer.*

When asked to compare the items from the CBCL with the items from the CDC, two parents felt that the CBCL and the CDC did not look at the same construct, 17 parents felt that they were partly similar, three parents felt that they looked at the same construct entirely and one response was missing.

Discussion

The aim of this study was to examine various aspects of validity of the CDC in order to propose guidelines towards further validation. In this study, face validity was found to be good, based on responses from psychology students, psychologists using the measure, and parents asked to complete it. There does not seem to be any previous research into the face validity of the measure, although a reading of the literature suggests that it emerged from a community of practice (Putnam, Helmers & Trickett, 1993). The psychology students found the CDC to be well written and they perceived the translation into Swedish as good. They did find some minor flaws with both the Swedish version in itself and also how it was translated from English into Swedish. However, the psychology students did not have the impression that the flaws were problematic to such an extent that it would cause major misinterpretations or greatly affect the outcome of the CDC.

The results suggests that there is potential improvements that could be made to the Swedish version of the CDC (see Appendix A). For example, in item 2 (see Table 2), the word "spaced-out" can be removed as it may be confusing. The words *for example* could be added to clarify that dissociative behaviour may be noticed for example through teachers' perception that the child "daydreams" frequently in school. Also the quotation marks around the word daydreams may be translated to the Swedish word "dagdrömmer". In item 3 (see Table 2) the word *timid* may be translated to "skygg" instead of the less commonly used "försagd". In item 5 (see Table 2), the word "tidpunkten", which can be translated to *time of day* in English, could be removed, as the original items is not so specific. In item 6 (see Table 2), *food preferences* could be translated to the word "matpreferenser", instead of the previous six word translation. In item 10 (see Table 2) the word *insists* can be made bold as it is in the original CDC-item. Item 12 (see Table 2) can be reworded in Swedish to what in English may be translated as "*The child may exhibit an age-inappropriate sexualized behavior towards grown-ups or*

other children". This to keep the question oriented towards behaviors observed in the child, instead of characteristics of the child. In item 20 (see Table 2) the word *has* is replaced by the words "upplevs ha" in Swedish which is the English equivalent of *is perceived to have*. It is suggested that the Swedish translation can be adjusted to more accurately reflect the original item.

The psychologists described their perception of the CDC as an instrument which seemed to have good face validity, having items that covered dissociative symptoms presented in a credible way. Face validity as assessed by the parents at BVC indicates that most of the parents did not find the items problematic or have trouble understanding the questions. However, three items were mentioned as potentially problematic. In terms of content, a majority felt that the questions from the CDC and the CBCL covered a similar construct.

Psychologists were interviewed to investigate the content validity of the CDC. Most of the psychologists felt that all items reflected symptoms that were common among children with high levels of dissociation. Many of the items contained symptoms that were perceived to be shared with other conditions. The CDC seems to contain items that all measure symptoms associated with dissociation which therefore provides evidence that indicates good content validity. To address content validity of the CDC, knowledge of dissociation is needed to assess if the scale measures all of the dimensions of the construct. Therefore, neither the psychologist-in-training nor the parents were deemed able to provide an adequate assessment of content validity. In factor analysis, two of the items showed low loadings and five items were not endorsed. It could be argued that this complicates the determination of content validity from this sample. However, this study is based on a normal sample that is not expected to have dissociation to a greater extent and this may have influenced the low endorsements on certain items. Pathological dissociation is not expected to be found in a normal sample and the fact that pathological dissociation as measured by CDC and CBCL was not found may possibly indicate that the items do not measure constructs which are commonly seen in the normal population. Of the items, 13 from the CDC did form one factor which could give some evidence for content validity and indicates that the items measure the same underlying construct.

As the CDC only aims to measure one variable (dissociation) and its items are expected to form one factor, factor analysis can be conducted despite the small sample size (de Winter, Dodou & Wieringa, 2009). Results from this analysis must be viewed with extreme caution. Firstly, small samples are more prone to statistical error and secondly the sample consists of children in the normal population were the degree of pathological dissociation is expected to be very low (Putnam, Helmers & Trickett 1993). Variance will therefore be limited leading to items not being endorsed. Five items were scored 0 by all the parents in the study and two items showed low loadings. It is probable that a larger sample size would increase the number of endorsed items and thus the result stresses the importance of a large sample size in further validation.

The psychologists mentioned how some items are better at discriminating dissociation than others, and questions could be refined to better identify pathological dissociation. This could improve the CDC's ability to discriminate dissociation from other conditions. The desire to improve the CDC's ability to discriminate could be interpreted as a reflection of the needs of the psychologists to assess dissociation and to plan treatment. Originally, two versions of the CDC were intended to be developed (Putnam, Helmers &

Trickett, 1993). First an observer report form which later became the CDC, and also a diagnostic structured interview that was never completed due to problems during scale development. The interviews with the psychologists suggests however that there may be a need for the development of a diagnostic structured interview version of the CDC to be used by clinicians.

The clinical psychologists used the CDC with children for whom they had strong reasons to believe that dissociative behavior was present. Parents to these children generally scored their child to have very high degrees of dissociative behavior. This could be an argument for collaborating with children's psychiatric centres in order to obtain a clinical sample in further validation of the Swedish CDC. Research can be done to examine if the Swedish CDC can differentiate between children with confirmed dissociative disorders and a control group, like the original CDC can (Putnam, Helmers & Trickett, 1993; Putnam & Peterson, 1994).

The psychologists described their use of CDC as mostly qualitative. The psychologists expressed their perception of this use as very helpful when they wished to clarify and elucidate dissociative behavior to parents of children with high degrees of dissociation. They did not however use the CDC as a screening instrument, mainly due to the lack of Swedish norms. Many of the psychologists felt that establishing Swedish norms was crucial to motivate its intended use as a psychometric measurement. With other instruments recently receiving a Swedish standardisation, such as the TSCYC (Nilsson, Gustafsson & Svedin, 2012), the CDC may be at risk of becoming less frequently used or even irrelevant. At the same time, it was somewhat encouraging to learn that the American norms are not blindly applied to Swedish cases.

The CBCL PTSD/Dissociation scale (Sim et al., 2005) and the CDC as applied here (after factor analysis of both measures), were shown to be strongly related in their revised form. This relationship is offered as some preliminary evidence pointing to concurrent validity – an important aspect for the continued use of the CDC, as a freely-available instrument useful in screening for dissociation.

Item 2 (see Table 2) in the CDC was the item the majority of the clinical psychologists believed to be most indicative of dissociation. This was one of the items not endorsed due to the fact that no parent identified this behaviour in their children. Item 6 (see Table 2) was also mentioned by many psychologists as indicative of dissociation, but was excluded from factor analysis due to low loadings. So two of the three most indicative items of dissociation, according to the psychologists, wasn't suitable for factor analysis. As noted earlier, the sample presents a normal population, and is small, and this may have affected the outcome. No one in the sample had a total score of 12, which indicates that no one in our sample is at risk of experiencing pathological dissociation. It is therefore possible to argue that the items that most strongly indicates dissociation should be low in a small sample from the normal population. There may also be a different degree of severity in the various items. For example, it is probably more common for a child in a normal population to have a poor sense of time or having physical complaints (item 5 and 11, see Table 2) than being sexually precocious or having multiple personalities (Item 12 and 20, see Table 2). The items that were excluded from the factor analysis may have been the items that were more associated with severe symptoms of dissociation. A larger sample

or a clinical sample could have helped with answering the question if some items are more severe or unusual than others.

The focus group was small and perhaps the presence of additional participants could have added legitimacy to the results of the group. Conducting a focus groups is a suitable method to show a wide range of views (Powell & Single, 1996). More participants could have given a greater spread of opinions on how the structure and translation of the Swedish version of the CDC could be improved. The results obtained from the focus group is however considered to be valid and provides insights in how to further develop the Swedish CDC.

The most problematic part of this study was the lack of sufficient quantitative data. To reach desirable amounts of participants, the data collection would have to have proceeded for a longer period of time than that which the timeframe of this dissertation allowed. Also, there may have been other ways of obtaining data from parents, however many of these avenues were discarded due to the decision that the sample should be obtained in a healthcare setting. That was to ensure that the child had access to proper interventions if pathological dissociation was detected. The sample was small but specific in terms of participation criteria as all participants were parents to five year olds. This is a strength as the difference in age cannot be a factor when analysing the sample.

Another grave limitation of the study is the factor analysis. Several items were not endorsed at all which made the items unsuitable for analysis. This was not something that was expected or planned for by the authors of this study. The factor analysis was highly exploratory and needs to be replicated on a new sample for the results to be of value.

Based on the findings of this study, the following guidelines can be recommended when the Swedish CDC is validated. Firstly, there may be potential improvements that could be made in the Swedish CDC prior to its validation. Language could be modernized to become more accessible. This study indicates however that the construct of dissociation seems to be covered by the CDC. To cater to the needs of both clinical psychologists who use the CDC in treatment and to a wider group of healthcare professionals who could use the CDC to screen for dissociative pathology, two versions of the CDC may need to be developed. Further research is needed to establish if the Swedish CDC can discriminate children with pathological dissociation from children without these tendencies, and between pathological dissociation from other psychiatric or developmental issues. In that regard an adequate sample size as well as a clinical group is needed to obtain reliable results. To motivate further use of the Swedish CDC, validations and norms need to be established. Some evidence can be derived from this study that the proposed CBCL/Dissociation scale from CBCL (Sim et al., 2005) could potentially be used in validation. However, another possibility is the TSCYC (Nilsson, Gustafsson & Svedin, 2012). Discriminant validity also needs to be assessed in future validation studies.

The CDC is currently used with children who are expected to exhibit pathological dissociative behaviour and these children have caretakers who, according to many of the psychologists interviewed in this study, provide a score on the CDC at the top of the scale. Sums at or above twenty are not uncommon. If the cut-off of 12 is a reasonable indicator of pathological dissociation, there may be children who have problems in their daily life that could be attributed to pathological dissociation and may be in need of treatment, but

who are not acknowledged. Symptoms of pathological dissociation can be identified (Hodges et al., 2013) and if treatment can be provided, these children can learn other ways to handle overwhelming experiences and promote healthy development despite previous adversities (Macfie, Cicchetti, & Toth, 2001). This could reduce their risk of suffering from psychiatric problems as adults as there is a strong correlation between pathological dissociation and adult psychiatric problems (Cloitre et al., 2009). Providing healthcare professionals with a locally validated screening instrument which has been standardized to provide norms for pathological dissociation could motivate a further and wider use of the CDC and potentially identify a larger group of children than is possible today. The results presented in this report could guide such future efforts.

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APPENDIX A. SUGGESTED REVISION FOR CDC ITEMS IN SWEDISH

Item 2. Barnet går in i ett förvirrat eller transliknande tillstånd, eller verkar ofta helt "bortkopplad". Till exempel kan lärare rapportera att hon eller han ofta "dagdrömmer" i skolan.

Item 3. Barnet visar snabba förändringar i sin personlighet. Han eller hon kan gå från att vara blyg till att vara utåtriktad, från feminin till maskulin, från skygg till aggressiv.

Item 5. Barnet har en mycket dålig tidsuppfattning. Han eller hon tappar bort tiden, kan tro att det är morgon när det faktiskt är eftermiddag, blir förvirrad omkring vilken dag det är, eller blir förvirrad angående när något hänt.

Item 6. Barnet visar tydliga variationer i färdigheter, kunskaper, matpreferenser eller fysiska färdigheter från dag till dag, eller till och med timme för timme. Det kan gälla tex förändringar i handstil, minne av tidigare inlärd information som multiplikationstabellen, stavning, användning av redskap eller konstnärliga färdigheter.

Item 10. Barnet hänvisar till sig själv i tredje person (Tex som hon eller henne) när han eller hon talar om sig själv, eller **insisterar** ibland att på att bli kallad för ett annat namn. Barnet kan också påstå att saker som han eller hon gjort egentligen hände en annan person.

Item 12. Barnet kan uppvisa ett sexualiserat beteende gentemot vuxna eller andra barn som inte är lämpligt utifrån barnets ålder.

Item 20. Barnet upplevs ha två eller flera tydliga och åtskilda personligheter som tar kontrollen över barnets beteende.

Note.

As part of the examination of this work, one anonymous reviewer noted that item 2 contains a sentence which may be confusing. "Teachers may report that he or she "daydreams" frequently in school." If the words "he or she" are replaced with the words "the child" the daydreaming refers to the child and not the teacher. This also applies in the Swedish item.