



## Negative affective responses to positive events and stimuli in patients with complex dissociative disorders: a mixed-methods pilot study

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### ABSTRACT

**Background:** Research suggests that individuals exposed to (childhood) trauma are not only unable to experience pleasure, known as hedonic deficit (HD), but also experience 'negative affective responses to positive events', known as negative affective interference (NAI). The clinical relevance and prognostic features of NAI have increasingly been recognized. To date, no studies have focused on NAI in patients with complex dissociative disorders (CDDs) who were abused early in life.

**Objective:** In this pilot study, we quantitatively and qualitatively investigated how NAI is related to trauma-related symptoms and how this phenomenon can be understood in a selected group of adult CDD patients.

**Method:** CDD patients ( $N = 25$ ) referred to an inpatient dissociation-focused treatment programme completed the Hedonic Deficit & Interference Scale (HDIS), and measures of trauma-related symptoms and interpersonal functioning, as well as a qualitative questionnaire addressing possible inner conflicts and phobias with respect to the experience of positive events. A convergent mixed-methods design was used to obtain different but complementary data on NAI to gain a more complete understanding of the phenomenon.

**Results:** The quantitative analyses showed a significant relationship between NAI and trauma-related symptoms and interpersonal functioning. NAI seems to be more strongly associated with these symptoms than HD. The qualitative analysis revealed three themes – fear, shame, and aggressive 'parts' – preventing positive emotions, which provided a possible interpretation of the quantitative results. The integrated findings were discussed in light of theories of structural dissociation of the personality and attachment.

**Conclusions:** These findings indicate that NAI is related to a spectrum of trauma-related symptoms and interpersonal functioning in patients with a CDD to a larger degree than HD and that different dissociative identities are involved. Studies of the relationship between changes in HDIS (particularly the NAI subscale) and changes in trauma-related symptoms and interpersonal functioning following treatment are warranted.

### Respuestas afectivas negativas a eventos y estímulos positivos en pacientes con trastornos disociativos complejos: un estudio piloto de métodos mixtos

**Antecedentes:** Las investigaciones sugieren que los individuos expuestos a traumas (en la infancia) no sólo son incapaces de experimentar placer, lo que se conoce como déficit hedónico (HD), sino que también experimentan 'respuestas afectivas negativas a eventos positivos', lo que se conoce como interferencia afectiva negativa (NAI). Cada vez se reconoce más la importancia clínica y las características pronósticas de la NAI. Hasta la fecha, ningún estudio se ha centrado en la NAI en pacientes con trastornos disociativos complejos (TDC) que sufrieron abusos en las primeras etapas de su vida.

**Objetivo:** En este estudio piloto, investigamos cuantitativa y cualitativamente cómo se relaciona la NAI con los síntomas relacionados con el trauma y cómo se puede entender este fenómeno en un grupo seleccionado de pacientes adultos con TDC.

**Método:** Los pacientes con TDC ( $N = 25$ ) derivados a un programa de tratamiento hospitalario centrado en la disociación completaron la Escala de Déficit e Interferencia Hedónica (HDIS en sus siglas en inglés), y medidas de síntomas relacionados con el trauma y el funcionamiento interpersonal, así como un cuestionario cualitativo que abordaba posibles conflictos internos y fobias con respecto a la experiencia de eventos positivos. Se utilizó un diseño convergente de métodos mixtos para obtener datos diferentes pero complementarios sobre la NAI y así obtener una comprensión más completa del fenómeno.

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### PALABRAS CLAVE

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### 关键词

快感缺失; 消极情感干扰; 分离性障碍; 童年创伤

### HIGHLIGHTS

- Dissociative disorder patients (DDs) experience negative affective responses to positive events (NAI) in addition to hedonic deficits.
- NAI is related to trauma-related symptoms and interpersonal functioning in DDs and may involve dissociative personality parts or 'identities'.

**Resultados:** Los análisis cuantitativos mostraron una relación significativa entre la NAI y los síntomas relacionados con el trauma y el funcionamiento interpersonal. La NAI parece estar más fuertemente asociada a estos síntomas que la HD. El análisis cualitativo reveló tres temas - miedo, vergüenza y 'partes' agresivas - que impiden las emociones positivas, lo que proporcionó una posible interpretación de los resultados cuantitativos. Los resultados integrados se discutieron a la luz de las teorías de la disociación estructural de la personalidad y del apego.

**Conclusiones:** Estos hallazgos indican que la NAI está relacionada con un espectro de síntomas relacionados con el trauma y el funcionamiento interpersonal en pacientes con un TDC en mayor grado que la HD y que están implicadas diferentes identidades disociativas. Se justifica la realización de estudios sobre la relación entre los cambios en el HDIS (particularmente la subescala NAI) y los cambios en los síntomas relacionados con el trauma y el funcionamiento interpersonal después del tratamiento.

### 复杂性分离障碍患者对积极事件和刺激的消极情感反应:一项混合方法试点研究

**背景:** 研究表明, 暴露于 (童年) 创伤的个体不仅无法体验快感, 即快感缺失(HD), 还会体验到 '对积极事件的负面情感反应', 即消极情感干扰 (NAI)。NAI 的临床相关性和预后特征越来越得到认可。至今尚无研究关注早年受到虐待的复杂性分离障碍 (CDD) 患者的 NAI。

**目的:** 在这项试点研究中, 我们定量和定性地研究了 NAI 如何与创伤相关症状相关, 以及如何在选定的成年 CDD 患者群体中理解这种现象。

**方法:** 转诊到住院分离治疗计划的 N=25 名 CDD 患者完成了快感缺失和干扰量表 (HDIS), 创伤相关症状和人际交往能力的测量, 以及针对积极事件经历可能的内心冲突与恐惧的定性问卷。收敛混合方法设计用于获得不同但互补的 NAI 数据, 以更全面地了解该现象。

**结果:** 定量分析显示 NAI 与创伤相关症状和人际关系功能之间存在显著关系。NAI 似乎比 HD 与这些症状更密切相关。定性分析揭示了三个主题——恐惧, 羞耻和攻击性'部分'——阻止积极情绪, 这为定量结果提供了可能的解释。整合结果根据人格和依恋的结构分离理论进行了讨论。

**结论:** 这些发现表明, CDD 患者中 NAI 与一系列创伤相关症状和人际关系功能的相关程度大于 HD 患者, 并且涉及不同的分离身份。有必要研究 HDIS 的变化 (尤其是 NAI 分量表) 与治疗前后创伤相关症状和人际关系功能变化之间的关系。

## 1. Introduction

Anhedonia has a long history in the psychiatric literature and is associated with trauma and diminished treatment response (Ribot, 1896; Risbrough et al., 2018). It is a condition in which the capacity to feel pleasure is partially or totally lost and that has an assumed neural substrate, originating in the dopaminergic mesolimbic and mesocortical reward circuit (Ritsner, 2014). However, deficits in the reward circuitry may not fully account for the experience of anhedonia in all traumatized individuals. Studies of emotional responding among individuals exposed to childhood trauma indicate that the inability to experience positive affect in the context of positive events may be caused by negative affect accompanied by neural responses involving higher-order brain areas, rather than simply a disruption in lower-order reward circuitry (Frewen & Lanius, 2015).

In light of clinical observations of trauma patients' negative affective responses to positive events and studies suggesting different functional neural expressions and psychophysiology underlying anhedonia (Frewen et al., 2010; Orsillo, Batten, Plumb, Luterek, & Roessner, 2004), Frewen, Dean, and Lanius (2012) proposed a distinction between two clinical

presentations of anhedonia: 1) hedonic deficits, that is, anhedonia as traditionally defined – an inability to experience positive affect associated with feeling affectively blunted, detached, or numb and 2) negative affective interference where negative affective responses to experiences that would normally evoke positive feelings impact the individual's ability to experience the positive affect. Most anhedonia measures only indicate the lack of positive affect vis-à-vis positive events and fail to take into account the presence versus the absence of negative affect, such as fear, anxiety, anger, guilt, and shame, accompanying the positive events and stimuli. Therefore, Frewen et al. (2012) developed the Hedonic Deficit & Interference Scale (HDIS) to overcome these limitations. The HDIS has three sub-scales: *Positive Emotionality* (PE), *Hedonic Deficits* (HD) and *Negative Affective Interference* (NAI); see Appendix A.

Studies have demonstrated that individuals abused in childhood experience a higher degree of HD and NAI and a lower degree of PE compared to individuals without a history of abuse and that the extent of HD and NAI appears to depend on the severity of the abuse. The studies also demonstrate how NAI predicts the severity of post-traumatic stress disorder (PTSD) symptoms better than measures of only HD

(DePierro, D'Andrea, Frewen, Todman, & Kendall-Tackett, 2018; Frewen et al., 2012; Frewen, Dozois, & Lanius, 2012). Frewen et al. (2012) argue that NAI is particularly relevant in response to interpersonal positive events because of the involvement of brain areas related to socio-cognitive function, while DePierro et al. (2018) show that NAI can be evoked in both social and non-social contexts. Few studies have used the HDIS and the samples have mostly been limited to individuals with PTSD.

Dissociation and dissociative disorders (DDs) are characterized by 'a disruption of or discontinuity in the normal integration of consciousness, memory, identity, emotion, perception, body representation, motor control, and behavior' (American Psychiatric Association [APA], 2013). DDs are common in clinical settings (see Şar, 2011).

The term 'complex dissociative disorder' (CDD) used by some authors (see Dell, 2009) refers to the most severe dissociative conditions, that is, the diagnoses Diagnostic and Statistical Manual of Mental Disorders (DSM)-IV/DSM-5 dissociative identity disorder (DID) and DSM-IV dissociative disorder not otherwise specified, subtype 1 (DDNOS-1)/DSM-5 other specified dissociative disorders-1 (OSDD-1) (APA, 2000, 2013). They are characterized by amnesia and/or identity alterations between distinct personality states, also referred to as e.g. dissociative identities or personality parts, alters, and dissociated self-states (International Society for the Study of Trauma and Dissociation [ISSTD], 2011). The term CDD reflects a reconceptualization of DID and is supposed to reflect the diagnosis's poly-symptomatic presentation. It has become increasingly clear over the past few decades that DID is characterized by a vast array of dissociative symptoms that are often subtle and typically manifest through intrusions by alters that are currently not prominent or in control of the body (Boon, Steele, & Van Der Hart, 2011). DDNOS-1/OSDD-1, also known as 'partial DID', is referred to using the same term because it is perceived as a less symptomatic variant of DID (Şar, 2011). The structured interview for DSM-IV Dissociative Disorders (SCID-D) has proven to be a valid diagnostic tool for identifying DDs and distinguishing these disorders from others (Mychailysz, Brand, Webermann, Şar, & Draijer, 2020).

The validity and aetiology of dissociation and DDs have been discussed for decades, particularly the most severe DD, DID. Critics claim that DID is fantasy-driven (e.g. Lynn, Lillienfeld, Merckelbach, Giesbrecht, & van der Kloet, 2012). However, there is strong empirical support for the relationship between childhood trauma and CDDs (Dalenberg et al., 2012).

Furthermore, CDDs are associated with severe levels of distress, self-destructive behaviour, compromised daily functioning, a chronic course of

symptoms in standard treatment, and major treatment challenges, including attrition from treatment (Brand, Lanius, Vermetten, Loewenstein, & Spiegel, 2012; Mueller-Pfeiffer et al., 2012).

### 1.1. The present pilot study

Our previous study (Jepsen, Langeland, Sexton, & Heir, 2014) indicated that patients with a CDD were more distressed and had lower effect sizes following a three-month inpatient trauma treatment program for adults who were sexually abused early in life compared to patients without a CDD. A critical finding was that the CDD patients ( $n = 23$ ) reported no to little improvement in their dissociation scores at discharge and at one-year follow-up (Cohen's  $d$  of .09 and .25, respectively), while the non-dissociative patients ( $n = 33$ ) reported moderate improvements at these time points (Cohen's  $d$  of .62 and .69, respectively). In our current dissociation-focused program for CDD patients, we observe patients' difficulties with positive experiences, increased internal conflicts, and involuntary resistance in relation to feeling better and making progress. It is natural to ask if the phenomena of anhedonia, in particular negative affective interference, can explain some of the treatment challenges for CDD patients. If so, we may better know how to help these patients more effectively.

In search of factors that contribute to the maintenance of psychopathology, the aim of this mixed-methods pilot study is to get a better understanding of how negative affective interference is related to dissociation and other trauma-related symptoms in CDD patients.

#### 1.1.1. Research questions and hypotheses

The main research questions were:

- (1) Do CDD patients experience negative affective responses to positive events and hedonic deficits, and are these features related to trauma-related symptoms and interpersonal functioning?
- (2) Is negative affective interference evoked not only by positive social events but also by positive non-social events?
- (3) How do dissociative identities play a role in CDD patients' experience of negative affective interference?

To address the first set of research questions, the following hypotheses were tested by quantitative methods:

- CDD patients will experience a higher level of NAI than PTSD patients.
- NAI and HD will be positively correlated with each other and negatively correlated with PE.

**Table 1.** Demographics, abuse characteristics, and clinical variables at admission.

Variable	N (%)	M (SD; range)
Age, <i>n</i> = 25		41.44 (9.62; 22–59)
Gender, <i>n</i> = 25		
Male	3 (12)	
Female	22 (88)	
Married or living together, <i>n</i> = 25	9 (36)	
Has own child(-ren), <i>n</i> = 25	6 (24)	
Employed last year, <i>n</i> = 23	8 (32)	
Previous hospitalizations, <i>n</i> = 25	17 (68)	
Suicide attempt/s, lifetime, <i>n</i> = 25	13 (52)	
Self-mutilation, in the past, <i>n</i> = 25	14 (56)	
Childhood Trauma Questionnaire (CTQ), <i>n</i> = 22		88.86 (13.72; 64–114)
Childhood physical abuse		13.86 (5.26; 5–24)
Childhood emotional abuse		19.65 (5.22; 6–25)
Childhood sexual abuse		21.65 (3.40; 13–25)
Childhood physical neglect		14.00 (4.55; 7–22)
Childhood emotional neglect		15.44 (5.33; 5–21)
Medication use, <i>n</i> = 25		
Antidepressiva	12 (48)	
Anxiolytics	6 (24)	
Antipsychotics	4 (16)	
Hyphnotics	13 (52)	
Analgetics	15 (60)	
Alcohol Identification Test (AUDIT), <i>n</i> = 23		3.70 (3.64; 0–14)
Dissociative diagnosis, <i>n</i> = 25		
... DID	5 (20)	
... DDNOS-1/OSDD	20(80)	

CTQ = Childhood Trauma Questionnaire; AUDIT = Alcohol Identification Test; DID = DSM-IV/DSM-5 dissociative identity disorder; DDNOS-1/OSDD = DSM-IV dissociative disorder not otherwise specified/DSM-5 other specified dissociative disorder.

•NAI and HD will be positively correlated with dissociative symptoms, complex PTSD symptoms, post-traumatic cognitions, and interpersonal problems, while PE will be negatively correlated with these symptoms.

•NAI will be more strongly correlated with these specific (complex) trauma-related symptoms and interpersonal functioning than will HD.

The second and third research questions were examined by qualitative methods and the results served as a background for interpreting the quantitative findings.

## 2. Method

### 2.1. Participants

The study included 25 adult CDD patients with complex trauma admitted to an inpatient dissociation-focused treatment program at the Department for

Trauma Treatment at Modum Bad Psychiatric Center (Norway). Among others, the program included psychoeducational groups using selected chapters from *Coping with Trauma-Related Dissociation* (Boon et al., 2011) based on the theory of structural dissociation of the personality (TSDP; Van Der Hart, Nijenhuis, & Steele, 2006). They were admitted in four consecutive groups of eight from June 2018 to May 2019; seven were excluded, as they had not completed the HDIS. All patients reported childhood sexual abuse and had previously been in outpatient treatment. The participants provided informed consent to participate in the study. For more details, see Table 1.

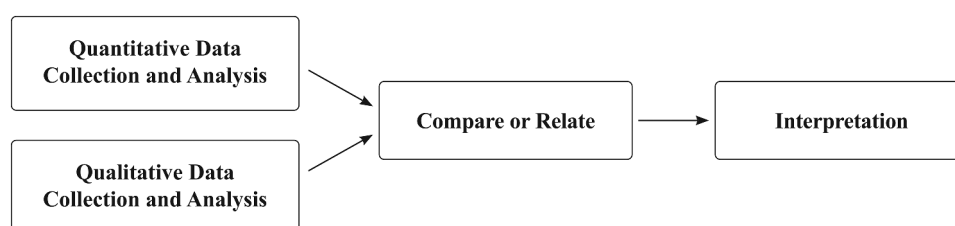
### 2.2. Design

A convergent parallel design was most appropriate for the present study because the intent of the procedures was to obtain different but complementary data on NAI to gain a more complete understanding of the phenomenon (Creswell & Plano Clark, 2011). In this type of design, qualitative and quantitative data are collected in parallel, analysed separately, and then integrated and interpreted. The four major steps in this design are outlined in the procedural flowchart in Figure 1.

### 2.3. Measures and assessments

#### 2.3.1. Quantitative data collection

The participants were administered the following psychometrically sound self-report measures at admission: The HDIS (Frewen et al., 2012) is a 21-item measure of PE, HDs, and NAI. Scores of frequencies are rated on an 11-point rating scale from 0 ('not at all or never true') to 10 ('completely true or very frequent'); see Appendix A. The 28-item Dissociative Experiences Scale-II (DES-II; Carlson & Putnam, 1993) measures the frequency of psychoform dissociative symptoms on a 0–100 scale, with 0 being 'never' and 100 being 'always'. The 12-item International Trauma Questionnaire (ITQ; Cloitre et al., 2018) captures symptoms of two main constructs of complex PTSD (World Health Organization [WHO], 2019): 1) PTSD and 2) Disturbances in Self-Organization (DSO). Scores are rated on a 5-point Likert scale



**Figure 1.** The convergent parallel mixed-methods design (adapted from Creswell, 2014).

ranging from 0 ('not at all') to 4 ('extremely'). The ITQ was not part of the hospital's standard assessment packet during the study period. However, the PTSD Checklist for DSM-5 (PCL-5; Weathers et al., 2013) was administered to assess PTSD symptoms, and a 16-item version of the DSO section, part of a preliminary version of the ITQ (see Cloitre, Roberts, Bisson, & Brewin, 2015), was administered to assess complex PTSD-related DSO symptoms. Based on these two measures, we made the ITQ variable by following the same procedure as in the Sele, Hoffart, Bækkelund, and Øktedalen (2020) study: PTSD symptoms of re-experiencing were represented by PCL items 2 and 3 (corresponding to items 1 and 2 of the ITQ), avoidance was represented by items 6 and 7 (corresponding to items 3 and 4 of the ITQ), and sense of threat was represented by items 17 and 18 (corresponding to items 5 and 6 of the ITQ). DSO symptoms of affective dysregulation (AD) were represented by AD2 and AD6, DSO symptoms of negative self-concept (NSC) were represented by NSC1 and NSA2, and DSO symptoms of disturbances in relationships (DR) were represented by DR1 and DR2 of the preliminary ITQ version (see Cloitre et al., 2018). The 9-item Brief Post-Traumatic Cognitions Inventory (PTCI-9; Wells et al., 2019) measures post-traumatic cognitions. Scores are rated on a Likert scale ranging from 1 ('totally disagree') to 7 ('totally agree'). The 64-item Inventory of Interpersonal Problems (IIP-C; Alden, Wiggins, & Pincus, 1990) reports on interpersonal functioning. Scores are rated on a Likert scale from 0 ('not at all')

to 4 ('extremely'). Symptom levels across symptom measures were high. For further details on descriptives and Cronbach alphas, see Table 2.

### 2.3.2. Qualitative data collection

The qualitative form (Inner Conflict in Response to Positive Events and Stimuli – Qualitative Form, Norwegian version) was developed by two of the authors (EKKJ and GH). The form states that some people may experience internal conflict related to positive experiences. The patients are asked to indicate if the statements have applied to them during the last month and if so to describe them further. The questions are related to nine different types of positive experiences, social and non-social. See Appendix B for an English version.

### 2.3.3. Other assessments

The revised version of SCID-D (SCID-D-R; Steinberg, Hall, Lareau, & Cicchetti, 2000) was administered by experienced psychologists and psychiatrists before treatment to assess a dissociative disorder. It has good to excellent reliability and discriminant validity. The 28-item Childhood Trauma Questionnaire, Short Form (CTQ-SF; Bernstein et al., 2003) retrospectively measures childhood experiences of abuse and neglect (CAN). Scores are rated on a 5-point Likert scale, with 1 being 'never true' and 5 being 'very often true'. The Alcohol Use Disorders Identification Test (AUDIT; Saunders, Aasland, Babor, De la Fuente, & Grant, 1993) was used to assess self-reported use of alcohol.

**Table 2.** Decisions and phases in the thematic analysis.

Choices in thematic analysis	Decisions taken in this analysis
<i>What counts as a theme?</i>	The entire dataset was analysed, and the importance of the theme was based on whether it captured something important in relation to the research questions. Even though the themes were not mentioned by all the participants it may be useful because the patients most likely have different awareness of and access to different parts of themselves, and some may have been prevented from completing the form. These assumptions are based on the fact that it was written on some of the forms that the patient could not describe why they experienced NAI or that angry parts would punish them if they filled it out.
<i>Inductive vs. theoretical thematic analysis?</i>	The analysis was driven by the data. The patients' answers may, however, have been influenced by the theoretical foundation of the treatment.
<i>Semantic or latent themes?</i>	The themes were identified on a latent level because some interpretative work was done beyond the patients' written answers. However, most of the analysis is close to what the patients wrote.
<i>Phases of Thematic Analysis</i>	<i>Means of Establishing Trustworthiness</i>
<i>Phase 1: Familiarizing yourself with your data</i>	The author (KK) became familiar with all aspects of the data by reading the data repeatedly and searching for meanings and patterns while writing down ideas for codings (Braun & Clarke, 2006).
<i>Phase 2: Generating initial codes</i>	In this phase, the entire dataset was coded systematically line-by-line based on the theoretical framework and the decisions described above. The data were coded for as many potential themes as possible because the coding phase is often criticized for losing its context (Braun & Clarke, 2006).
<i>Phase 3: Searching for themes</i>	A mind map was used in this stage, which is a visual representation to sort the codes into themes. Some codes formed main themes, while others formed subthemes. The codes that did not belong anywhere were temporarily placed under a theme called miscellaneous, consistent with Braun and Clarke (2006) recommendation.
<i>Phase 4: Reviewing themes</i>	All the extracts were used to judge if there was any meaningful coherence within the themes and clear and identifiable distinctions between the themes. All the extracts were read to determine if they formed a consistent pattern, and some themes were amalgamated into one because they were overlapping. The validity of the individual themes in relation to the entire dataset and whether the thematic map reflected the meanings evident in the data as a whole (which it did) were assessed.
<i>Phase 5: Defining and naming themes</i>	The essence of the different themes was identified in this stage. I tried to avoid making the themes too complex and trying to do too much. However, this was challenging due to the complexity that characterizes CDDs.
<i>Phase 6: Producing the report</i>	The author KK attempted to present the themes in a concise, logical, and interesting way and to embed the extracts within an analytic narrative based on the theoretical framework while answering the research questions. Sufficient evidence for the themes was presented, which is intended to capture the essence of the point that was conveyed.

NAI = negative affective interference; CDD = complex dissociative disorders.

A total score of  $\geq 8$  indicates harmful use of alcohol and alcohol dependence.

## 2.4. Statistics and data analyses

### 2.4.1. The quantitative analyses

Data were analysed using SPSS version 25 for Windows. Examination of the data distribution and the low  $n$  indicated that Spearman's rho ( $r_s$ ) was appropriate to test the hypothesis. Correlation values of 0.10–0.29 indicated a small association, 0.30–0.49 a medium association, and  $\geq 0.50$  a large association (Cohen, Cohen, West, & Aiken, 2003). Little's Missing Completely At Random test (Little, 1988) showed that data were missing completely at random ( $\chi^2$  (1021,  $N = 25$ ) 26,214;  $p = 1.00$ ). Therefore, pairwise deletion was used. The level of significance was set to  $p < .05$  (two-tailed).

### 2.4.2. The qualitative analysis

The qualitative data were analysed using thematic analysis (TA), defined by Braun and Clarke (2006) as 'a method for identifying, analyzing, and reporting patterns (themes) within data' (p. 79). This six-phase systematic approach was used because it imposes high standards on the work of the analyst and the analysis itself. The steps of the TA were explained in sufficient detail to enable the reader to determine the validity. The procedure is illustrated in Table 2.

### 2.4.3. Data integration and interpretation

A side-by-side comparison for data analysis was employed. This involves presenting the quantitative and qualitative findings together in the discussion so they can be easily compared and interpreted. To minimize additional validity threats associated with the convergent mixed-methods design, the same individuals were included in the qualitative and quantitative analyses (Creswell & Plano Clark, 2011).

## 3. Results

### 3.1. Quantitative findings

Table 3 displays the correlations between the main variables.

#### 3.1.1. The relationships between the HDIS subscales

In accordance with the hypothesis, the patients experienced a high level of NAI, and there was a strong, significant, negative correlation between PE and NAI. However, inconsistent with the hypothesis, the correlation between PE and HD was weak and non-significant, and the relationship between HD and NAI was non-existent.

#### 3.1.2. The relationships between the HDIS subscales and dissociative symptoms

In accordance with the hypothesis, a moderate, positive, significant correlation between NAI and DES was found, and NAI was more strongly associated with DES than HD. Additionally, as predicted, PE was weakly negatively (but non-significantly) correlated with DES; however, inconsistent with the hypothesis, no relationship was found between HD and DES.

#### 3.1.3. The relationships between the HDIS subscales and other trauma-related symptoms and interpersonal functioning

As predicted, PE was significantly and moderately-strongly negatively correlated with complex PTSD symptoms, post-traumatic cognitions, and interpersonal functioning. However, inconsistent with the hypothesis, HD was weakly negatively correlated with complex PTSD symptoms and moderately negatively correlated with interpersonal functioning, and it was weakly positively correlated with post-traumatic cognitions. However, none of these correlations were significant. As predicted, NAI was significantly moderately-strongly positively correlated with symptoms of complex PTSD, post-traumatic cognitions, and interpersonal functioning. Consistent with the

**Table 3.** Descriptives (mean, SD, and Cronbach's alpha) for the main variables, HDIS, DES, ITQ, PTCI-9, and IIP-C and their associations with the HDIS subscales.

Variable	Number of items	Cronbach's alpha	Mean	SD	$r_s$		
					HDIS-PE	HDIS-HD	HDIS-NAI
<b>The Hedonic Deficit and Interference Scale (HDIS), <math>n = 25</math></b>	21	-					
Positive Emotionality	5	.88	2.56	1.37	1	-.246	-.631**
Hedonic Deficits	5	.94	5.28	2.93	-.246	1	-.025
Negative Affective Interference	11	.88	6.09	2.18	-.631**	-.025	1
<b>Dissociative Experiences Scale (DES-II), <math>n = 25</math></b>	28	.93	42.26	20.72	-.161	-.016	.399*
<b>International Trauma Questionnaire (ITQ), <math>n = 25</math></b>	12	.85	2.75	0.60	-.572**	-.065	.663**
<b>Posttraumatic Cognitions Inventory (PTCI-9), <math>n = 21</math></b>	9	.88	4.62	1.14	-.494*	.080	.729**
<b>Inventory of Interpersonal Problems (IIP-64), <math>n = 25</math></b>	64	.93	1.84	0.49	-.422*	-.392	.485*

HDIS = Hedonic Deficit and Interference Scale; HDIS-PE = HDIS-subscale of Positive Emotionality; HDIS-HD = HDIS-subscale of Hedonic Deficits; HDIS-NAI = HDIS-subscale of Negative Affective Interference; DES-II = Dissociative Experiences Scale-II; ITQ = International Trauma Questionnaire; PTCI-9 = Posttraumatic Cognitions Inventory; IIP-64 = Inventory of Interpersonal Problems;  $r_s$  = Spearman's correlation coefficient. \*\* Correlation is significant at the .01 level (2-tailed). \*Correlation is significant at the .05 level (2-tailed).

hypothesis, NAI was more strongly related with (complex) trauma-related symptoms than HD.

### 3.2. Qualitative findings

The TA revealed three key themes that were evidenced across the patient group – fear, shame, and aggressive parts preventing positive emotions. All the patients except one experienced NAI in relation to at least five different positive experiences. Examples of patients' quotes relevant to illustrating the main themes are reported in Table 4. The letters in parentheses in the following text refer to the quotes in the table.

#### 3.2.1. Theme 1: fear

An overarching theme common across the patients is that in the past positive experiences have been followed by abuse. This is particularly interesting because it emphasizes how relational trauma in childhood seems to cause fear during circumstances that usually evoke positive emotions in adulthood. This was either described in terms of negative experiences in general (a) or described more specifically in relation to past trauma (b). The patients also describe how positive experiences seem to trigger traumatic memories and lead to loss of knowledge and time (c).

While some patients seemed to have access to traumatic memories and to understand why positive experiences evoke fear, others reported they did not understand why they experienced fear in response to positive events (d) or that a part of them did not think anything had happened (e). One core belief prominent across the data was the assumption that receiving help or sharing positive experiences or feelings with others is dangerous because they may have a hidden agenda (f).

#### 3.2.2. Theme 2: shame

Another prominent theme in the data is shame. The patients write that they experience shame after positive experiences (g). One patient describes how positive experiences are associated with being judged and ridiculed (h). A statement about being non-deserving was frequently made by the patients; more specifically, some patients describe how different parts of them have this opinion (i). This seemed to be a barrier to many different positive experiences (j).

#### 3.2.3. Theme 3. Aggressive parts preventing positive emotion

A third theme constantly mentioned by the patients was that they were not allowed to experience positive experiences (k). This was also expressed more implicitly by several patients in that they needed permission to engage in positive experiences (l). The patients

experienced angry voices and being threatened with punishment if they did not adhere to the warning not to take part in various positive experiences (m). The data also suggest that positive experiences, such as getting better, feel threatening for them if it means that parts of them will disappear or get less space (n).

Although the patients describe how they experience fear, shame, and aggression in response to positive events, they also describe how they desire positive events and how this seems to create an inner conflict (o).

The analysis indicates that positive events evoke negative emotions and prevent the patients from enjoying positive experiences, whether social or non-social. This answers the first qualitative research question about whether CDD patients experience NAI during both social and non-social positive experiences. Although they report NAI across every experience that is supposed to be positive, it is evident the negative emotions are related to previous negative interpersonal experiences.

These themes also demonstrate how dissociative identities or personality parts seem to be involved in the inner conflict related to positive experiences and how this inner conflict is experienced. This answers the second research question.

## 4. Discussion

### 4.1. The relationship between positive emotionality, hedonic deficits, and negative affective interference

The CDD patients in the present study had a lower mean PE score and higher mean HD and NAI scores compared to the PTSD sample in the study by Frewen et al. (2012). In contrast to that study, our CDD patients reported a higher mean score of NAI than HD. This may indicate that patients with a CDD experience a higher level of NAI than patients diagnosed with PTSD and that NAI prevents the experience of pleasure in CDD patients to a greater extent than HD. Consistent with previous studies, NAI was significantly negatively correlated with PE. However, inconsistent with previous studies, no relationship was found between NAI and HD (DePierro, 2016; DePierro et al., 2018; Frewen et al., 2012, 2012). The reason for the observed missing relationship between the HD and NAI subscales and the insignificant relationship between the HD and PE subscales remains unclear, and more investigations are needed. However, the phrasing of the instructions for administering the HD subscale, experienced as unclear by some participants, could be a possible explanation (see Appendix A). When this factor is ruled out, it is relevant to discuss and search for other explanations,

for example, whether or not NAI always accompanies HD in these individuals, or if state-dependent neurobiological/psychophysiological differences in CDD patients related to different aspects of anhedonia as measured by the HDIS provides an explanation (see e.g. Frewen et al., 2012; Reinders et al., 2018).

#### **4.2. Integration of quantitative and qualitative findings and interpretation: a high degree of consistency**

So far, we have presented the quantitative and qualitative results separately. However, if we compare them, we can see a high degree of consistency, and the qualitative themes suggest an interpretation of the quantitative results.

The first theme, fear, may explain the relationship between NAI and complex PTSD symptoms because positive experiences have previously been followed by abuse. The theme also provides a possible interpretation of the relationship between NAI and post-traumatic cognitions, which involves negative cognitions about others and the world because the patients do not perceive other people as trustworthy due to their experiences of relational trauma. The merged findings support the findings of DePierro et al. (2018) and Frewen et al. (2012), that is, that there is a relationship between NAI and PTSD symptoms.

The second theme, shame, indicates that abuse not only leads to fear during positive experiences but also shame because the abuse affects the individual's perception of themselves and their expectations of relationships. They do not feel they deserve positive experiences. This theme was also consistent with the relationship found between NAI and posttraumatic cognitions and complex PTSD scores. The PTCI and ITQ do not only measure fear-related symptoms but also additional symptoms such as shame, guilt, negative self-concept, and disturbances in relationships, which are associated with childhood trauma. These results support previous research that has suggested NAI is related to shame (DePierro, 2016; DePierro et al., 2018; Frewen et al., 2012).

The third theme, aggressive parts preventing positive emotion, reflects how the patients experience they are not allowed to have positive experiences and will be punished if they have. This theme contributes to a possible explanation for why a high level of NAI is related to a low level of PE and a high level of PTSD symptoms.

The three themes may also provide an interpretation of why NAI is related to interpersonal functioning because the patients experience fear, shame, and angry voices in response to being social.

#### **4.3. The involvement of the different dissociative personality parts**

So far, we have not discussed the specific expression of NAI in CDDs, namely how distinct personality states or

dissociative personality parts are involved in NAI. Therefore, we now move to a more controversial but highly relevant topic.

The patients not only describe how different positive events and stimuli trigger different emotions, such as fear, shame, and aggression, but also how distinct personality states experience the same positive experience differently.

The themes reveal a pattern of interrelated experiences that logically relate to how dissociation is understood based on the TSDP (Van Der Hart et al., 2006), the treatment's theoretical foundation. In the following sections the integrated findings will be interpreted in light of this theory and attachment theory. According to TSDP, severe or chronic trauma can provoke a structural dissociation between emotional parts of the personality (EPs) and apparently normal parts of the personality (ANPs). EPs are mediated by action systems of defence (e.g. fight, flight, freeze, attach for survival, submit); they hold the traumatic memories and re-experience the trauma when trauma-related cues activate the defence system. ANPs are mediated by action systems of daily life (e.g. caregiving, exploration, creativity/play, social engagement, sexuality, energy management) and are the parts of the personality that are fixed on daily life. ANPs are primarily characterized by ignorance and phobia of trauma and trauma reminders and are associated with symptoms of loss of functions, both mental and bodily.

The theory suggests how positive experiences seem to activate the defence system and create an inner conflict between EPs that hold fear, shame, and aggression and the ANP(s) that desires positive experiences in daily life and cannot understand the link between positive experiences and fear and shame because it has no memory of the event or is not very aware of the EP that has become triggered (Boon et al., 2011). One patient describes how 'EPs wake me up at night'. Another patient describes amnesia (loss of knowledge and time) in response to positive experiences. According to the theory, these experiences are manifestations of intrusions of EPs into the ANP(s).

The theme of aggressive parts preventing positive emotions is logically linked to the two other themes of fear and shame because the most powerful internal triggers for angry parts are signs of perceived weakness or neediness, such as fear and shame (Boon et al., 2011). It appears the aggressive parts try to protect the patients against the vulnerability positive experiences involve. The aggressive parts may stand in the way of positive experiences because they assume this means they will disappear, which is likely to trigger significant fear, as they are the ones who protect the individual against shame, fear, vulnerability, helplessness, and powerlessness (Boon et al., 2011).

The internal conflict between different dissociative identities or 'parts' is consistent with the relationship



found between NAI and dissociative symptoms. The merged findings are consistent with the TSDP, which hypothesizes that classical conditioning, such as the conditioning between positive experiences and fear, shame, and aggression, maintains the structural dissociation of the personality (Van Der Hart et al., 2006). Even neutral stimuli, such as deserving a normal life or other positive ‘commonalities’ seem to intensify inner conflicts between different dissociated identities with little or no recognition of each other, and the patient is ‘stuck’ with no solution unless the conflict is identified and solved. This could explain why treatment typically progresses more slowly with CDD patients than with non-CDD patients with a (complex) PTSD.

To show that this relationship between NAI and dissociative symptoms represents the involvement of different dissociative identities, it requires that these dissociative manifestations are observable symptoms of the underlying dissociative organization of the personality. Therefore, it is based on the theoretical perspective (such as the TSDP). As the treatment involved psycho-educational groups and literature using the language of ‘parts’, one could argue from a sociocultural perspective (e.g. Lynn et al., 2012) that the internal conflict around positive experiences is caused by the treatment because of patients’ susceptibility. An important objection to this argument, however, is that the patients were not asked about the involvement of different parts of the personality. Furthermore, the fantasy model is strongly contradicted by research findings (Dalenberg et al., 2012). It is also important to note that the experience of events evoking different simultaneous emotions leading to inner conflicts in the individual is not uncommon across different clinical and non-clinical populations. However, the quality of CDD patients’ experience of the internal conflict seems to differ from other individuals’ experience (including complex PTSD patients without a CDD) by the marked discontinuity in the sense of self and sense of agency and adds another dimension to the conflict. For example, most people would refer to themselves as ‘I’ despite having different aspects or sides of their personality. In the quotes, the patients refer to themselves and different states of their personality as ‘we’, ‘one and others’, and one mentioned them by name (see Table 4).

#### **4.4. Social aspects of NAI and its relationship to complex trauma symptoms**

The qualitative analysis enhanced the understanding of NAI by clarifying that NAI occurs in both social and non-social positive events and seems to be related to the childhood abuse because both event types were associated with memories of early relational trauma. This may explain why studies have found that NAI is

associated with brain areas involved in socio-cognitive functioning during both social and non-social events (Frewen et al., 2011). From an attachment perspective, non-social positive experiences can be related to negative affective responses because the caregiver’s frightening and/or frightened behaviour can have happened in everyday activities that are not necessarily regarded as social, such as sleeping, eating, and doing things they like. Hence, the child and later the adult ‘adopts’ these reactions that then seem illogical, confusing, and difficult to understand for people around them, including their therapists (Hesse & Main, 2000).

#### **4.5. Strengths and limitations**

Our study improves previous research by characterizing NAI and its relationship with trauma-related symptoms in individuals with CDDs. To our knowledge, this has not been studied before. Furthermore, by adding qualitative interviews, it provides information to better understand the lived experiences of individuals with these internal conflicts and struggles that might otherwise have remained unrecognized and ‘acting behind the scenes’. The information may provide hypotheses for further research and clinical work.

However, it has several limitations, so the findings are preliminary and should be viewed with caution. First, our sample was small and did not allow for factors that are not explicit features of a CDD (e.g. age, gender, medication). Second, the study sample consisted of CDD patients in need of an inpatient program and did not include a non-dissociative comparison group. Third, it is not clear from the data to what extent the findings apply to structural dissociation versus complex PTSD or PTSD. Fourth, conclusions about the direction of the relationship between NAI and trauma-related symptoms cannot be made, and the statistical tests were based on limited data, increasing the risk for type 1 errors. Fifth, the comparison between NAI and HD was only based on a visual inspection of the strength of the correlations.

#### **4.6. Implications for research**

The findings indicate the need for further research. Studies with larger CDD samples, including a non-dissociative comparison group and more men, are needed. Such studies should also investigate if changes in NAI are related to changes in dissociation and other trauma-related symptoms from pre- to post-treatment, CDD patients’ reports of childhood trauma, and NAI’s relationship with the measures’ subscales. Further research on the involvement of dissociative identities is needed. To avoid the possibility the treatment has influenced the experience of an internal conflict between different dissociative

**Table 4.** CDD patients' reports of inner conflicts in response to positive events and stimuli and main themes and subthemes identified during analysis.

Theme	Patients' quotes
<b>1. Fear</b>	<p>(a) 'Life has shown me that good things often are followed by painful things'.</p> <p>(b) 'Doing things I like is dangerous because by being present there is always the imminent danger of new assaults due to being social'; 'You can just as easily be mistreated for being good as for being bad'.</p> <p>(c) 'It is difficult to be in the kitchen and cook ... "Zoning out" and going away from the cooking/boiling food until the fire alarms go off'; 'Suicidal impulses due to trauma memories'; 'Hard to go to the store to buy food'; 'Don't remember how to make simple food (boil eggs)'; 'Chaotic and absent due to amnesia equals trouble planning, shopping, and cooking that needs time'; 'Destroy food when trying to make it; sabotage it instead'; 'Doing things I like can cause anxiety and/or time disappears, so I am not able to complete them'.</p> <p>(d) 'I do not know why, but I get frightened instead of ... feeling whatever one should feel when people praise you etc. Just want to get away'; 'Good feelings or experiences feel fake and unreal, the space and loneliness increases'.</p> <p>(e) 'A part of me does not think anything has happened'.</p> <p>(f) 'Life has shown me that help is often linked to betrayal and disappointment, and that asking for help often comes with a price, and so it is easiest to trust myself'; 'Receiving help is dangerous, some may demand something I can't give'; 'It is difficult (to accept praise). I become uncertain. Is there a hidden agenda? What must I give in return?'; 'Terrified/panic for what is required/expected back in payment/penalty'.</p>
<b>2. Shame</b>	<p>(g) 'To get help should feel good and calming. For various reasons, I have experienced increasing guilt and shame for not being good enough, not performing enough'; 'I do not make it to liking something, I keep getting hit by repulsion disgust, vulgarity, shame, mockery, stupidity'; 'I feel disgusted when I eat'; 'I am hopeless, I cannot manage anything – worthless'.</p> <p>(h) 'I have grown up with people making problems/issues for me if I try to do something: "This is not going to work out" or say judgmental things: "There are better things to spend your life on" or when others stress with things I intend to do ... and ridicule me ...'.</p> <p>(i) 'I do not deserve it'; 'The less pleasant (part) thinks that I do not deserve help in any way'; 'Some of the inner parts protest loudly that I do not deserve help'.</p> <p>(j) 'What I do, does not deserve praise'; 'I do not feel like I deserve help'; 'Do not deserve food'; 'Do not deserve rest'.</p>
<b>3. Aggressive parts preventing positive emotion</b>	<p>(k) 'A resistance that is difficult to explain. Something that says it is not okay/allowed, applies to all points'; 'Having a bad conscience when resting. It is not allowed until I grow old, the same holds true if I am sick'; 'Not allowed to feel safer, increased angry voices. It is not allowed. It can always be better. It is not good enough'; 'It is very unpleasant to receive praise. A STRONG part of me pushes it away/gets annoyed'; 'A voice says one is not allowed, voice of the abuser'; 'EPs wake me up at night'.</p> <p>(l) 'Must deserve it first and get permission'; 'I panic if I treat myself to something that costs (expensive/ vacation) for just pleasure without permission'; 'Conflict for not deserving, not having permission'.</p> <p>(m) 'Sometimes this leads to conflict when the voices are devaluing and seemed to be occupied with the fact that I should be punished in different ways'; 'I do not deserve the world and then I must balance the world with punishment – increasing angry voices'; 'Am terrified of being punished for something I like/need'; 'Don't deserve food, equals punishment'; 'Internal critics and saboteurs prevent me from being present – focus on traumatic memories and those who will prevent and punish me from coming forward'; 'I think that those who say positive things are talking about someone else. The voices often want to balance what is conveyed by coming up with a negative response'.</p> <p>(n) 'This feels threatening for some parts if getting better is presented as if the parts should get less space/removed/ not met. Explanations are often needed in relation to what I think it means to be better'; 'A little ... because the parts are afraid to be gone if I get better'; 'Are we not good enough? And some do not want to be better/good. Some think it is dangerous/exterminating'. 'The parts are afraid of the support system'.</p> <p>(o) 'One (part) feels that I do not deserve to do things I like. Others (parts) feel that it is quite OK that I do things I like'. 'A part comes in the way of others (parts) that desire good experiences'; 'It is fatal to sleep, or that the night is actually the only time we can do things. Rest/sleep is associated with numbness, no movement, zero control, or that we fall asleep for good. Some parts want to sleep/rest, other parts struggle strongly against it'; 'Several agree that we should try to sleep, but do not think that is something we can control'; 'Often I feel increased fear and shame without knowing why when I'm actually fine'; 'Feeling good is unfamiliar and gives a feeling of chaos'; 'Peter<sup>a</sup> likes praise, Benjamin<sup>a</sup> handles it okay, Theresa<sup>a</sup> likes it, the other one does not like it and makes a lot of chaos when it happens, but it only happens when he is present'; 'There are always conflicting opinions and quarrels about food'; 'Some want to be better, while others more want us to manage by ourselves, one thinks that we will never be better and thinks that we should just give up'.</p>

CDD = complex dissociative disorder; <sup>a</sup>Name is changed for confidentiality reasons.

personality parts, a study on NAI in CDD patients before entering a CDD-focused treatment is recommended. The inconsistent findings related to the HD subscale indicate a need for further evaluation of the HDIS, particularly the HD subscale, and the relationship between NAI and HD in CDD patients.

#### 4.7. Implications for clinical practice

Our mixed findings indicate the relevance of focusing on CDD patients' experiences of positive events and

stimuli. They also indicate that clinicians need to be aware of the conflicting feelings CDD patients may have regarding interventions that assume that engaging in 'pleasurable' activities will result in straightforward positive success with these complicated patients (see also Frewen et al., 2012).

As positive experiences may be conditioned to trauma-related fear, shame, and aggressive dissociative identities, which maintain the dissociative organization of the personality and pathology, interventions should help CDD patients identify,

reduce, and eliminate such conditioned responses. Therefore, a qualitative and quantitative assessment and identification of patients' trauma-derived phobias of positive events and stimuli should be included early in a CDD treatment, and treatment should include specific interventions that help patients reduce and overcome these phobias as recommended by, for example, Van Der Hart et al. (2006) and in line with the international guidelines for CDD treatment (ISSTD, 2011).

## 5. Conclusion

The present study indicates a group of CDD patients with childhood trauma experienced significant problems of anhedonia, including hedonic deficits and negative affective interference. The latter was correlated with low levels of positive emotionality and high levels of (complex) trauma-related symptoms and interpersonal functioning. Our findings suggest negative affective interference is related to a broader range of trauma-related symptoms than hedonic deficits in this patient group.

The qualitative themes of fear, shame, and aggressive dissociative identities preventing positive emotions provide a possible interpretation of the quantitative findings. The patients have experienced that positive events and stimuli (social and non-social) were associated with abuse and therefore evoke fear, shame, and a need to protect themselves. Early abuse is also assumed to be the reason they experience a lack of integration between distinct dissociative identities. This seems to lead to activation of inner conflicts between dissociative identities that desire positive experiences and identities that experience fear, shame, or aggression in response to positive experiences. These conflicts may interfere with progress in therapy. The findings are exploratory and need to be validated and clarified.

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## Data availability statement

A data set is associated with the study but is not publicly available due to ethical restrictions. Data/information is available upon request.

## Ethics

The study was approved by the hospital's ethical review board (Personvernombud), in line with the Norwegian Health Research Act of 2008 (see Helse- og omsorgsdepartementet, 2010). The participants provided informed consent to participate in the study. All assessments were part of the standard clinical practice at the hospital.

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## Appendix A

**Hedonic Deficit & Interference Scale (HDIS; Frewen et al., 2012)**

Please answer each question in terms of **how true** or **frequent** it has been of your experience **over the past month**. When answering each question, please give a number **from 0 (zero) to 10 (ten)**, where '0' indicates the statement has been **'Not At All or Never True'**, '5' indicates the statement has been **'Moderately True or Moderately Frequent'**, and '10' indicates the statement has been **'Completely True or Very Frequent' (Always or Almost Always the Case) of your experience over the past month**. There are no right or wrong answers.

The first set of questions asks about how often you have experienced different positive emotions and positive feelings over the past month. Over the past month, would you say that you have experienced ...

- (1) ... feelings of true happiness, cheerfulness, and joy? \_\_\_\_\_
- (2) ... feelings of physical or sensory enjoyment, like pleasure, euphoria, and 'bliss'? \_\_\_\_\_
- (3) ... feelings of interest, enthusiasm, and excitement? \_\_\_\_\_
- (4) ... pleasant and serene feelings like relaxation and peacefulness? \_\_\_\_\_
- (5) ... feelings of inner contentment, self-esteem, and pride? \_\_\_\_\_

The next set of questions ask to what extent you think you **CAN'T**, that is, you are **NOT able to** experience positive feelings in general.

Would you say that you *can't* (you are *not able to*) experience ... even when you try, and even when good things in your life happen? (Remember: 0 indicates this is **NOT TRUE**, that you **CAN** experience positive feelings, and 10 indicates this **IS TRUE**, you **CAN'T** experience positive feelings)

- (6) feelings of true happiness, cheerfulness, and joy, ... ? \_\_\_\_\_
- (7) feelings of physical or sensory enjoyment, like pleasure, euphoria, and 'bliss', ... ? \_\_\_\_\_
- (8) feelings of interest, enthusiasm, and excitement, ... ? \_\_\_\_\_
- (9) pleasant and serene feelings like relaxation and peacefulness, ... ? \_\_\_\_\_
- (10) feelings of inner contentment, self-esteem and pride, ... ? \_\_\_\_\_

For some people, negative feelings tend to get in the way of their experiencing positive feelings. For these people, when something positive happens in their life, they tend to experience negative feelings. The next set of questions ask about the extent to which you experience various negative

feelings when positive events happen in your life.

**When positive events happen in your life: (examples of positive events include social praise, getting a reward or gift, or physical/sensory pleasures like taking a bath, walking on the beach)...**

- (11) do you feel 'numb', like you *can't feel* emotions and feelings? \_\_\_\_\_
- (12) do you feel '*out-of-touch*' with your emotional response, as if you are detached, separated, or disconnected from your feelings? \_\_\_\_\_
- (13) do you experience anxiety (nervousness, agitation)? \_\_\_\_\_
- (14) do you experience fear or panic? \_\_\_\_\_
- (15) do you experience guilt (for example, *wondering* if you are worthy or deserving of)? \_\_\_\_\_
- (16) do you experience self-criticalness? (for example, *clearly feeling* unworthy, undeserving of)? \_\_\_\_\_
- (17) do you experience shame and humiliation? \_\_\_\_\_
- (18) do you experience disgust (strong aversion, 'grossness', like feeling 'sick to your stomach')? \_\_\_\_\_
- (19) do you feel emotional emptiness, or feel empty inside? \_\_\_\_\_
- (20) do you feel lifeless inside, as if there's nothing positive there *to feel*? \_\_\_\_\_
- (21) do you purposely attempt to suppress positive emotions and feelings? (trying to 'stop', 'push away', 'turn off', 'not feel', 'distance yourself from' positive feelings, e.g. by distracting yourself, denying what is happening, or controlling your feelings)? \_\_\_\_\_

## Appendix B

**Inner Conflict in Response to Positive Events and Stimuli – Qualitative Form**

(Ellen K. K. Jepsen and Gorm Hol, Modum Bad, 2018)  
Some people may experience (the feeling of) inner conflict in relation to positive experiences.

Please indicate whether the following statements have applied to you in the past month, and if the answer is 'yes', please describe (the way in which they apply to you personally).

*I experience or feel strong disagreement or conflict within myself with regard to*

- Becoming safer
  - o No
  - o Yes, please describe:
- Feeling good or having good experiences?
  - o No
  - o Yes, please describe:
- Deserving help
  - o No
  - o Yes, please describe:
- Getting help
  - o No
  - o Yes, please describe:
- Getting better or recovering
  - o No
  - o Yes, please describe:

- Doing things I like
  - o No
  - o Yes, please describe:
- Eating regularly and healthy
  - o No
  - o Yes, please describe:
- Resting or getting a good night's sleep regularly
  - o No

o Yes, please describe:

- Receiving praise or positive feedback
  - o No
  - o Yes, please describe:

*Thank You!*