Early Traumatized Inpatients High in Psychoform and Somatoform Dissociation: Characteristics and Treatment Response

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This study examined the clinical relevance of differences in psychoform and somatoform dissociative symptoms in 55 early traumatized inpatients. The high psychoform and somatoform dissociative group (n = 18), somatoform dissociative group (n = 22), and nondissociative group (n = 15) did not differ on abuse severity, depressive symptoms, interpersonal problems, Axis I or II comorbidity, or deterioration rates. Compared to the other 2 groups, the highly dissociative group was characterized by younger age, living alone, higher levels of posttraumatic and general distress, more frequent reports of suicidality, self-mutilation, eating problems, and less favorable treatment response. The results highlight the clinical relevance of using dissociation measures for identifying subgroups of patients with severe psychopathology who may be more treatment resistant.

KEYWORDS early trauma, dissociation, comorbidity, personality disorders, treatment response

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In the *Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition (DSM–5)*, *dissociation* is defined as “a disruption of and/or discontinuity in the normal integration of consciousness, memory, identity, emotion, perception, body representation, motor control, and behavior” (American Psychiatric Association, 2013, p. 291). Disruptions in the integration and perception of memory, identity, affect, cognition, and behavior are referred to as *psychoform dissociation*. *Somatoform dissociation* includes disruptions in the integration and perception of bodily functions, sensations, and movement. Psychoform dissociation and somatoform dissociation are highly correlated in both clinical samples (Nijenhuis, 2009) and nonclinical samples (Farina, Mazzotti, Pasquini, & Mantione, 2011; Maaranen et al., 2005), suggesting that these types of dissociation are overlapping but not identical manifestations of a common process.

Several studies have indicated that high versus low levels of psychoform and somatoform dissociation are associated with different levels of severity of psychological functions and impairments. For example, previous studies showed that patients with high levels of psychoform dissociation present with a higher salience of posttraumatic stress symptoms and other psychopathology (Boon & Draijer, 1993), that patients with high levels of somatoform dissociation present with higher rates of somatoform disorders and subtypes of eating disorders (Nijenhuis, 2009), and that among individuals with dissociative disorders a variety of Axis I and Axis II disorders frequently co-occur (Ellason, Ross, & Fuchs, 1996; Fink, 1991; Lipsanen et al., 2004). In general, previous studies indicate that—compared to nondissociative individuals—patients with either high somatoform or high psychoform dissociation scores are significantly more likely to report disability, dysfunction, and (mental) health symptoms, with higher rates of suicidal ideation (Johnson, Cohen, Kasen, & Brook, 2006; Maaranen et al., 2005; Mueller-Pfeiffer et al., 2012). In addition, the severity of trauma self-reports has also been linked to both forms of dissociation (e.g., Boon & Draijer, 1993; Nijenhuis, 2009). An expertise-based prognostic model for the treatment of adult patients who experienced chronic childhood abuse and neglect recognizes that high levels of dissociation, serious Axis I comorbidity, serious Axis II comorbidity, and self-destructiveness negatively impact treatment outcome (Baars, Van der Hart, Nijenhuis, Chu, & Draijer, 2010).

Recently, increasing attention has been paid to the relevance of psychoform dissociation in the treatment of early traumatized patients with trauma-related disorders, for example, (complex) posttraumatic stress disorder (PTSD) and dissociative disorders (Brand et al., 2009; Brand & Stadnik, 2013; Cloitre, Petkova, Wang, & Lassell, 2012; Resick, Suvak, Johnides, Mitchell, & Iverson, 2012). However, there is a lack of research exploring the possible role of somatoform dissociation in the treatment of early traumatized patients.
We previously examined whether psychoform dissociation and somatization influenced the clinical course of patients in a specialized treatment program for adults with childhood sexual abuse (CSA) histories and mixed psychiatric disorders related to early and chronic abuse (i.e., complex PTSD and dissociative disorders: Jepsen, Langeland, Sexton, & Heir, 2014; Jepsen, Svagaard, Thelle, McCullough, & Martinsen, 2009). Findings indicated that patients with a diagnosis of a complex dissociative disorder (CDD; Dell, 2009), that is, a dissociative disorder involving memory and identity problems (Jepsen et al., 2014), or a somatization disorder, that is, a specific type of a somatoform disorder (Jepsen et al., 2009)—with or without an additional PTSD diagnosis—may display higher levels of distress and show poorer treatment outcomes than other patients. We did not, however, include data on somatoform dissociation.

Overall, previous findings suggest that studying and treating early traumatized inpatients with mixed trauma-related disorders may be problematic when subgroups of patients are characterized by different baseline symptomatology (general psychiatric symptoms, PTSD symptoms, dissociative symptoms) and clinical diagnoses that may also play important roles in how the patient responds to treatment. Examining such variations in the nature and severity of patients’ clinical profiles is important in improving treatment design. With this in mind, we describe our patient population in this study based upon a combination of patients’ baseline somatoform and psychoform scores.

The aims of the current study were twofold. First, we investigated the association between psychoform dissociation and somatoform dissociation in a sample of early traumatized inpatients with polysymptomatology related to CSA. Second, we examined differences in demographic and clinical characteristics at admission and treatment response status between patient groups with high psychoform dissociation, high somatoform dissociation, or both forms of dissociation and those with low levels on both dissociation measures.

METHODS

Procedure and Participants

The current study used data gathered at admission, at discharge, and 1 year after discharge in a naturalistic follow-up study (Jepsen et al., 2014). The original study included 56 adult patients (52 women and 4 men) who reported chronic CSA histories including physical contact by a caregiver or a person in authority over them before the age of 16 years. The five most frequent clinical diagnoses were PTSD (91.1%), major depressive disorders (75.0%), agoraphobia (66.1%), somatization disorder (51.8%), and social phobia (50.0%). A total of 23 (41.1%) of the 56 patients had a CDD (Dell, 2009), such as dissociative identity disorder (DID) or dissociative disorder
with clinical features of DID (dissociative disorder not otherwise specified, subtype 1). Excluded were patients meeting criteria for a current psychotic episode, acute psychiatric and medical conditions requiring emergency hospitalization, and organic conditions interfering with dissociative symptoms (brain infarction \[n = 1\] or brain tumor \[n = 1\] in the follow-up period, persistent use of drugs \[n = 1\]). The patients provided informed consent for the study. The study was approved by the Regional Committee on Medical Ethics.

**Treatment**

The study was conducted at the Unit for Trauma Treatment at Modum Bad Psychiatric Clinic in Norway. The unit offered a national 3-month specialized inpatient trauma treatment program with a main focus on stabilization and symptom reduction (i.e., the first phase of phase-oriented trauma treatment for adults suffering from early and chronic traumatization; e.g., Herman, 1992). Individual and group therapies were combined. A multidisciplinary team provided two daily group sessions and two weekly individual sessions. The program involved psychoeducation, group therapy, movement therapy, expressive art and occupational therapy, and physical training. The therapy included psychodynamic, cognitive–behavioral, and supportive approaches. Alterations of consciousness involving changes in the level and field of consciousness (without identity alteration) were addressed in the program, whereas severe dissociation involving memory and identity alteration and somatoform dissociation were not. Treatment did not include assistance in the recovery of forgotten memories. For more details, see Jepsen et al. (2009).

**Measures**

Child abuse history was assessed using a standardized intake format. The intake format did not include a validated inventory for childhood abuse but rather included some items on the nature of the abuse. A sexual abuse severity index (range = 0–6) was utilized based on the items referring to age of onset (before 6 years of age or not), number of perpetrators (one or more), type of sexual act (penetration or not), father figure as perpetrator (yes or no), duration (1 year or more), and presence of childhood physical abuse in addition to CSA (yes or no). Higher scores reflected more severe abuse reports.

Furthermore, patients completed six self-report measures on which higher scores indicated greater levels of symptoms or distress. All measures except the Somatoform Dissociation Questionnaire–20 (SDQ-20) are described in more detail elsewhere (Jepsen et al., 2014). High and low dissociative symptoms were defined by validated cutoff scores for identifying cases of dissociative disorders and other mental disorders (Boon & Draijer, 1993; Şar, Kundakçı, Kızıltan, Bakim, & Bozkurt, 2000).
The SDQ-20 measures somatoform dissociative experiences using 20 items that are scored on a 5-point scale (anchors are 1 = not at all, 5 = extremely; Nijenhuis, Spinhoven, van Dyck, Van der Hart, & Vanderlinden, 1996). To obtain an index of symptom levels, we summed scores across the 20 items (range = 20–100). A score of 30 or more has been shown to indicate a possible dissociative disorder (Şar et al., 2000). Applying this cutoff to our sample that included a 0.45 prevalence of Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition (DSM–IV), dissociative disorders revealed a positive predictive value of 0.55. Cronbach’s alpha for the SDQ-20 ranged from .89 to .94 across the three measure points.

The 28-item Dissociative Experiences Scale–II (DES-II) measures the frequency of psychoform dissociative experiences on a 0–100 scale (Bernstein & Putnam, 1986; Carlson & Putnam, 1993). A score of 25 or more indicates a possible dissociative disorder and a reasonable cutpoint for identifying potential cases of dissociative disorders (Boon & Draijer, 1993). Applying this cutoff value in our sample that included a 0.45 prevalence of dissociative disorders revealed a positive predictive value of 0.86. The DES-II measures the severity of three facets of psychoform dissociation (amnesia, absorption/imaginative involvement, depersonalization/derealization). Cronbach’s alphas were satisfactory (all $\alpha$s $>.88$). We used the validated cutoff score ($\geq 20$) on the 8-item taxonomic version of the DES-II (Waller & Ross, 1997) to identify individuals with severe dissociative symptoms.

The Impact of Event Scale (IES) consists of 15 items scored on a 5-point scale measuring posttraumatic stress–related symptoms of intrusion and avoidance (Horowitz, Wilner, & Alvarez, 1979). A cutoff score of 35 or more indicates a symptom severity level that is consistent with a PTSD diagnosis (Neal et al., 1994). Cronbach’s alpha was .74 at admission.

General psychiatric symptoms were measured with the Symptom Check List 90 Revised (SCL-90-R), a 90-item scale (Derogatis, Lipman, & Covi, 1973). We used the global severity index (GSI) of the SCL-90-R to measure general distress. A cutoff of 0.85 has been used to differentiate between normal and clinical levels of symptoms (Pedersen & Karterud, 2004). Cronbach’s alpha was .96 at admission.

The 21-item Beck Depression Inventory–II (BDI-II) measured the severity of depressive symptomatology (Beck, Steer, & Brown, 1996). We used a cutoff of 13 to differentiate between depressed and not depressed individuals (Dozois, Dobson, & Ahnberg, 1998). Cronbach’s alpha was .81 at admission.

The Inventory of Interpersonal Problems (IIP-C; Norwegian version; Pedersen, 2000) was used to measure interpersonal problems. Mean values above 1 indicate significant interpersonal problems. Cronbach’s alpha was .89 at admission.

The Structured Clinical Interview for Dissociative Disorders–Revised (SCID-D-R; Steinberg, Hall, Lareau, & Cicchetti, 2000) and the semistructured Mini-International Neuropsychiatric Interview (Sheehan et al., 1998) were used to assess Axis I disorders.
The Structured Clinical Interview for DSM–IV Axis II disorders (First, Spitzer, Gibbon, & Williams, 1995) was used to assess personality disorders (PDs).

Statistical Analyses

Pearson’s correlations test was used to examine associations between somatoform and psychoform dissociative symptoms. To test differences in background and clinical variables between subgroups of patients we used the chi-square test or Fisher’s exact test for categorical variables and one-way between-groups analysis of variance with post hoc test (Tukey’s honestly significant difference test). In addition, effect sizes were calculated (phi coefficient and eta squared, respectively), with values <0.20 indicating no effect, 0.20–0.49 a small effect, 0.50–0.79 a moderate effect, and ≥0.80 a large effect (Cohen, 1988).

Response status was analyzed in terms of reliable improvement or deterioration on at least one of the six self-report measures as per Jacobson and Truax (1991) at discharge and 1-year follow-up. Statistically reliable improvement on the SDQ-20 required a decrease in scores of at least 8.4. The following decreases in scores on the other instruments were required to indicate reliable improvement: IES = 6.47, SCL-90-R GSI = 0.27, BDI-II = 6.55, IIP-C = 0.33, and log-transformed DES-II = 0.73. For further details, see Jepsen et al. (2014).

The significance level was set at \( p < .05 \) (two-tailed). Data were analyzed using SPSS for Windows 19.0.

RESULTS

Types of Dissociation and Forming of Subgroups

Baseline somatoform dissociation scores were strongly correlated with baseline psychoform dissociation (subscale) scores (\( r_s = .63–.76, ps < .01 \)). Based upon cutoff scores for both dissociation measures, three groups of patients were obtained: 18 patients (32.1%) with high somatoform and psychoform dissociation scores (HBoth), 22 patients (39.3%) with high somatoform and low psychoform dissociation scores (HSDQ), and 15 patients (26.8%) with low somatoform and psychoform dissociation scores (LBoth). One patient (1.8%) with a combination of low somatoform and high psychoform dissociation scores was excluded from the analyses, leaving 55 patients in three groups (HBoth, HSDQ, and LBoth).

Demographic and Abuse Characteristics

Table 1 shows the demographic and abuse characteristics for the study sample (\( N = 55 \)) as well as each subgroup. There was a significant difference
**TABLE 1** Means (SD) or Frequencies (%) of Demographic and Abuse Characteristics Among Early Sexually Abused Inpatients, Total Sample and Subgroups of Patients at Admission

| Measure                                | Total  \((N = 55)\) | HBoth  \((n = 18)\) | HSDQ  \((n = 22)\) | LBoth  \((n = 15)\) | abc \(\chi^2\) or dF | Pairwise contrast |
|----------------------------------------|---------------------|---------------------|---------------------|---------------------|---------------------|------------------|
| **Demographic characteristics**        |                     |                     |                     |                     |                    |                  |
| Age, M (SD)                            | 39.45 (8.28)        | 35.17 (7.44)        | 41.82 (7.74)        | 41.13 (8.48)        | d4.02*             | 1 < 2            |
| Married/cohabitant, n (%)              | 33 (60.0)           | 7 (38.9)            | 16 (72.7)           | 10 (66.7)           | a4.64* b2.53 cns   | 1 < 2            |
| Has own children, n (%)                | 37 (67.3)           | 8 (44.4)            | 17 (77.3)           | 12 (80.0)           | a4.55* b4.33* cns | 1 < 2, 3         |
| **Abuse characteristics**              |                     |                     |                     |                     |                    |                  |
| Abuse severity (range = 1–6), M (SD)   | 4.42 (1.21)         | 4.89 (0.96)         | 4.05 (1.33)         | 4.40 (1.18)         | d2.53              |                  |
| Sexually abused in adulthood, n (%)   | 25 (45.5)           | 9 (50.0)            | 12 (54.5)           | 4 (26.7)            | a0.08 b1.87 c2.82  |                  |

Notes: HBoth = patients high in both somatoform and psychoform dissociation; HSDQ = patients high in somatoform dissociation and low in psychoform dissociation; LBoth = patients low in both somatoform and psychoform dissociation; ns = nonsignificant Fisher’s exact test.

*\(\chi^2\) = HBoth vs. HSDQ, 40 df. b\(\chi^2\) = HBoth vs. LBoth, 33 df. c\(\chi^2\) = HSDQ vs. LBoth, 37 df. dOne-way analysis of variance, F(2, 52).

*p < .05
in age at admission for the three subgroups, but in terms of effect size, this difference was small ($\eta^2 = 0.13$). Post hoc comparisons indicated that the HBoth group was significantly younger than the HSDQ group ($p = .027$). Compared to the HBoth patients, the HSDQ patients more often were married or cohabiting, and HSDQ and LBoth patients more often had children, but the effect sizes were small (all $\text{phis} < 0.37$).

The subgroups did not differ significantly in self-reports of abuse severity or adult sexual victimization.

Clinical Characteristics

Tables 2 and 3 show the clinical characteristics for the study sample ($N = 55$) as well as for the subgroups.

As shown in Table 2, the most prevalent Axis I diagnoses were depressive disorders, PTSD and other anxiety disorders, and somatoform disorders. All patients had two or more Axis I diagnoses, and 94.5% had three or more (including dissociative disorders). Complete data on Axis II diagnoses were available for 47 (85.5%) of the 55 patients. The most prevalent Axis II diagnoses were avoidant, paranoid, obsessive-compulsive, and schizoid PDs. No patients had a narcissistic, schizotypal, histrionic, or antisocial PD. More than half (53.2%) of the patients had at least one PD (27.7% one, 25.5% two or more).

As shown in Table 3, the subgroups significantly differed in symptom levels of posttraumatic stress and general distress (effect sizes <0.25) and on dissociation levels (effect sizes = 0.50–0.78). Post hoc comparisons showed that HBoth patients reported higher levels of posttraumatic stress and general distress compared to HSDQ patients ($p = .031$ and $p = .019$, respectively) and LBoth patients ($p = .0001$, and $p = .001$, respectively). Also, the HBoth group reported significantly higher dissociation scores ($ps < .001$) and more often severe pathological dissociation (HSDQ $\text{phi} = -0.95$, LBoth $\text{phi} = -1.00$) and a CDD diagnosis (HSDQ $\text{phi} = -0.76$, LBoth $\text{phi} = -0.81$). Furthermore, with moderate effect sizes, the HBoth patients more often than the other patients reported self-mutilation (HBoth $\text{phi} = -0.50$, LBoth $\text{phi} = -0.56$) and ongoing eating problems (HSDQ $\text{phi} = -0.43$, LBoth $\text{phi} = -0.70$). Compared to HSDQ patients, HBoth patients more often reported suicidal ideation ($\text{phi} = -0.37$). Furthermore, the HSDQ patients more often met criteria for a somatoform disorder than the LBoth patients ($\text{phi} = -0.37$).

Response Status

The numbers and percentages of patients showing reliable improvement at discharge and follow-up, respectively, were 30 (54.5%) and 29 (51.8%) on the IES, 28 (50.9%) and 27 (49.1%) on the SCL-90-R GSI, 21 (38.2%) and...
TABLE 2 Frequencies (%) or Means (SD) of Axis I and II Diagnoses Among Early Sexually Abused Inpatients, Total Sample and Subgroups of Patients at Admission

| Measure                              | Total (N = 55) | HBoth (n = 18) | HSDQ (n = 22) | LBoth (n = 15) | \(a,b,c\) \(\chi^2\) or \(dF\) | Pairwise contrast |
|--------------------------------------|----------------|----------------|----------------|----------------|---------------------------------|------------------|
| **Axis I diagnoses**                 |                |                |                |                |                                 |                  |
| **DSM–IV PTSD, n (%)**               | 50 (90.9)      | 18 (100.0)     | 20 (90.0)      | 12 (80.0)      | \(a,b,c\) HS                    |                  |
| **DSM–IV depressive disorder, n (%)**| 52 (94.5)      | 17 (94.4)      | 20 (90.9)      | 15 (100.0)     | \(a,b,c\) HS                    |                  |
| **DSM–IV anxiety disorder (excluding PTSD), n (%)** | 46 (83.6) | 16 (88.9) | 17 (77.3) | 13 (86.7) | \(a,b,c\) HS |                  |
| **DSM–IV somatoform disorder, n (%)** | 37 (67.3) | 13 (72.2) | 18 (81.8) | 6 (40.0) | \(a\) ns, \(b\) 3.48, \(c\) 6.84** | 2 > 3 |
| **DSM–IV somatization disorder, n (%)** | 28 (50.9) | 9 (50.0) | 13 (59.1) | 6 (40.0) | \(a\) 0.33, \(b\) 0.33, \(c\) 1.50 |                  |
| **DSM–IV eating disorder, n (%)**    | 8 (14.5)       | 3 (16.7)       | 4 (18.2)       | 1 (6.7)        | \(a,b,c\) HS                    |                  |
| **DSM–IV substance abuse/dependence, n (%)** | 3 (5.5) | 1 (5.6) | 0 (0.0) | 2 (13.3) | \(a,b,c\) HS |                  |
| **Number of Axis I diagnoses (excluding DD), M (SD)** | 4.96 (1.90) | 6.67 (2.00) | 4.95 (1.70) | 4.60 (1.96) | \(d\) 2.31 |                  |
| **CDD, n (%)**                       | 23 (41.8)      | 17 (94.4)      | 4 (18.2)       | 2 (13.3)       | \(a,b,c\) 23.09***, \(b\) 22.04***, \(c\) ns | 1 > 2,3          |
| **Axis II diagnoses**                |                |                |                |                |                                 |                  |
| **Avoidant PD, n (%)**               | 21 (44.7)      | 8 (50.0)       | 7 (38.9)       | 6 (46.2)       | \(a\) 0.42, \(b\) 0.04, \(c\) 0.16 |                  |
| **Dependent PD, n (%)**              | 4 (8.5)        | 2 (12.5)       | 1 (5.6)        | 1 (7.7)        | \(a,b,c\) HS                    |                  |
| **Obsessive-compulsive PD, n (%)**   | 5 (10.6)       | 2 (12.5)       | 2 (11.1)       | 1 (7.7)        | \(a,b,c\) HS                    |                  |
| **Paranoid PD, n (%)**               | 7 (14.9)       | 3 (18.8)       | 2 (11.1)       | 2 (15.4)       | \(a,b,c\) HS                    |                  |
| **Schizoid PD, n (%)**               | 5 (10.6)       | 2 (12.5)       | 2 (11.1)       | 1 (7.7)        | \(a,b,c\) HS                    |                  |
| **Borderline PD, n (%)**             | 1 (2.1)        | 1 (6.3)        | 0 (0.0)        | 0 (0.0)        | \(a,b,c\) HS                    |                  |
| **Number of Axis II diagnoses, M (SD), (n = 47)** | 1.08 (0.91) | 1.13 (1.20) | 0.78 (1.06) | 0.85 (0.99) | 0.46 |                  |

Notes: HBoth = patients high in both somatoform and psychoform dissociation; HSDQ = patients high in somatoform dissociation and low in psychoform dissociation; LBoth = patients low in both somatoform and psychoform dissociation; DSM–IV = Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition; PTSD = posttraumatic stress disorder; DD = dissociative disorders; CDD = complex dissociative disorder; PD = personality disorder; ns = nonsignificant Fisher’s exact test.

\(\ast \chi^2 = H\)Both vs. HSDQ, \(40 \text{ df}\). \(\ast \chi^2 = H\)Both vs. LBoth, \(35 \text{ df}\). \(\ast \chi^2 = HSDQ \text{ vs. } L\)Both, \(37 \text{ df}\). \(\ast\)One-way analysis of variance, \(F(2, 52)\). \(\ast\)HBoth: \(n = 16\), HSDQ: \(n = 18\), LBoth: \(n = 13\).

\*\* \(p < .01\)
\*\*\* \(p < .001\)
TABLE 3 Means (SD) or Frequencies (%) of Clinical Characteristics Among Early Sexually Abused Inpatients, Total Sample and Subgroups of Patients at Admission

| Measure                                      | Total (N = 55) | HBoth (n = 18) | HSDQ (n = 22) | LBoth (n = 15) | abc χ² or dF | Pairwise contrast |
|----------------------------------------------|----------------|----------------|---------------|----------------|--------------|------------------|
| **Symptom measures (self-report)**          |                |                |               |                |              |                  |
| IES, M (SD)                                  | 57.49 (10.53)  | 64.22 (8.15)   | 56.50 (8.80)  | 50.87 (11.13)  | d8.66**      | 1 > 2, 3        |
| SCL-90-R GSI, M (SD)                         | 1.86 (0.57)    | 2.23 (0.45)    | 1.78 (0.56)   | 1.53 (0.49)    | d8.41**      | 1 > 2, 3        |
| BDI-II, M (SD)                               | 26.89 (8.11)   | 30.56 (10.47)  | 25.18 (6.67)  | 25.00 (5.32)   | d2.93        |                  |
| IIP-C, M (SD)                                | 1.83 (0.38)    | 1.94 (0.32)    | 1.78 (0.44)   | 1.78 (0.34)    | d1.14        |                  |
| SDQ-20, M (SD)                               | 39.11 (13.58)  | 51.83 (13.67)  | 38.00 (6.65)  | 25.47 (2.97)   | d35.27**     | 1 > 2, 3 and 2 > 3 |
| DES total, M (SD)                            | 21.45 (17.04)  | 42.77 (12.04)  | 12.52 (5.26)  | 8.95 (4.97)    | d94.21**     | 1 > 2, 3        |
| DES-AMN, M (SD)                              | 9.72 (13.74)   | 23.51 (16.52)  | 3.75 (4.14)   | 1.92 (2.31)    | d26.24**     | 1 > 2, 3        |
| DES-ABS, M (SD)                              | 26.71 (18.45)  | 48.71 (13.41)  | 17.83 (7.44)  | 13.41 (8.63)   | d64.81**     | 1 > 2, 3        |
| DES-DD, M (SD)                               | 21.88 (22.16)  | 49.35 (14.65)  | 10.98 (9.17)  | 4.89 (6.40)    | d89.09**     | 1 > 2, 3        |
| DES-T membership, n (%)                      | 19 (34.5)      | 18 (100.0)     | 1 (4.5)       | 0 (0.0)        | a36.17***; b33.00***; c 1 > 2, 3 |
| **Other clinical characteristics**           |                |                |               |                |              |                  |
| Use of psychotropic medication, n (%)        | 39 (70.9)      | 14 (77.8)      | 15 (68.2)     | 10 (66.7)      | a ns; b1.87  |                  |
| Suicidality, n (%)                           | 41 (74.5)      | 17 (94.4)      | 14 (63.6)     | 10 (66.7)      | a5.39; bns; c0.04 | 1 > 2 |
| Self-mutilation, ongoing, n (%)              | 15 (27.3)      | 11 (61.1)      | 3 (13.6)      | 1 (6.7)        | a9.81***; b10.48***; c ns | 1 > 2, 3 |
| Eating problems, ongoing, n (%)              | 26 (47.3)      | 15 (83.3)      | 9 (40.9)      | 2 (13.3)       | a7.42***; b16.05***; c ns | 1 > 2, 3 |
| Age at first contact with health service, M (SD) | 27.53 (9.72)  | 23.89 (7.39)  | 29.09 (9.67)  | 29.60 (11.51)  | d1.95 | 1 > 2, 3 |
| **Response status**                          |                |                |               |                |              |                  |
| Reliably improved on at least one self-report measure, n (%) |              |                |               |                |              |                  |
| At discharge                                 | 40 (72.7)      | 9 (50.0)       | 19 (86.4)     | 12 (80.0)      | a6.23; b3.18; c ns | 1 < 2 |
| At follow-up                                 | 42 (76.4)      | 11 (61.1)      | 19 (86.4)     | 12 (80.0)      | a HS; c ns    |                  |
| Reliably deteriorated on at least one self-report measure, n (%) |              |                |               |                |              |                  |
| At discharge                                 | 20 (36.4)      | 10 (55.6)      | 6 (27.3)      | 4 (26.7)       | a3.30; b2.80; c ns |                  |
| At follow-up                                 | 20 (36.4)      | 8 (44.4)       | 6 (27.3)      | 6 (40.0)       | a0.07; b0.66; c ns |                  |

Notes: HBoth = patients high in both somatoform and psychoform dissociation; HSDQ = patients high in somatoform dissociation and low in psychoform dissociation; LBoth = patients low in both somatoform and psychoform dissociation; IES = Impact of Event Scale; SCL-90-R GSI = Symptom Check List 90 Revised global severity index; BDI-II = Beck Depression Inventory–II; IIP-C = Inventory of Interpersonal Problems, Norwegian version; SDQ-20 = Somatoform Dissociation Questionnaire–20; DES = Dissociative Experiences Scale–II; DES-AMN = amnesia subscale; DES-ABS = absorption/imaginative involvement subscale; DES-DD = depersonalization/derealization subscale; DES-T = DES taxon; ns = nonsignificant Fisher’s exact test.

χ² = HBoth vs. HSDQ, a ≠ df; b = HBoth vs. LBoth, 33 df; c = HSDQ vs. LBoth, 37 df; d = One-way analysis of variance, F(2, 52).

*p < .05
**p < .01
***p < .001
23 (41.8%) on the BDI-II, 16 (29.1%) and 20 (36.4%) on the IIP-C, seven (14.9%) and 12 (21.8%) on the SDQ-20, and eight (14.5%) and 14 (25.5%) on the DES-II.

The numbers and percentages of patients showing reliable deterioration at discharge and follow-up, respectively, were four (7.3%) and six (10.9%) on the IES, eight (14.5%) and nine (16.4%) on the SCL-90-R GSI, five (9.1%) and seven (12.7%) on the IIP-C, 13 (23.6%) at both timepoints on the SDQ-20, and two (3.6%) and three (5.5%) on the DES-II.

As shown in Table 3, the HSDQ patients more often had reliably improved on at least one outcome measure at discharge compared to the HBoth patients (phi = 0.40). The groups did not differ significantly in rates of reliable deterioration on at least one self-report measure at discharge or at follow-up.

DISCUSSION

Our results suggest that clinically meaningful subgroups of early traumatized patients may be identified based on type and severity of dissociation. Post hoc analyses revealed that patients high on somatoform as well as psychoform dissociation scales were clinically more distressed compared to the other patients not only with regard to dissociation but also in features of PTSD, general distress, self-mutilation, and eating problems. In addition, the patients high on both dissociation scales were younger at admission, less frequently married or cohabitating, and more frequently suicidal compared to the patients with high somatoform dissociation but low psychoform dissociation. These findings are in line with earlier studies (Boon & Draijer, 1993; Nijenhuis, 2009; Steinberg, Barry, Sholomskas, & Hall, 2005). Contrary to what we had expected, the highly dissociative patients reported neither more severe abuse histories nor higher levels of depression or interpersonal problems or higher Axis I and II comorbidity rates.

Furthermore, the patients high on both dissociation scales responded less well to the treatment program when assessed at discharge compared to patients with only high somatoform dissociation. There were no differences at follow-up, though, and they did not deteriorate more frequently than the other patients. These findings support suggestions of earlier studies that patients high in dissociation respond differently to treatment. They may benefit from (inpatient) trauma treatment but may need a longer time for symptom improvement (Brand et al., 2009; Jepsen et al., 2014). The cutoff points used to indicate response status are arbitrary and must be interpreted with some caution. The findings indicate that at admission, patients should be screened for level of dissociation. For those high in dissociation, treatment should specifically address dissociative pathology.
Furthermore, it is worth noting that the self-report dissociation scores correlated highly with clinician-administered structured interviews. Results also support the use of screening instruments for the identification of severe dissociative conditions in clinical settings when a full diagnostic interview is not feasible.

As clinical profiles of subgroups based on the specific combination of level and type of dissociative symptoms have not previously been studied among clinical samples, a comparison of demographic and clinical characteristics among the subgroups in our sample with those reported in other studies is not possible. Furthermore, comparisons of clinical profiles across studies of early traumatized patients are impeded by inconsistency in reports of sample characteristics and sample selection (Spinazzola, Blaustein, & van der Kolk, 2005).

However, we may compare rates of Axis I diagnoses and Axis II diagnoses among our subgroup of highly dissociative patients with those of DID patients admitted to a specialized inpatient treatment program for their dissociative disorder (Ellason & Ross, 1997). We found that our patients, compared to the DID patients, had a similar average number of Axis I diagnoses (6.7 and 7.3, respectively) but a much lower average number of Axis II diagnoses (1.1 and 3.6, respectively).

Avoidant PD was the most frequent PD among the patients in the current sample compared to other PDs, with high rates in all subgroups. This finding is consistent with studies of chronic PTSD as well as dissociative disorders (e.g., Dorrepaal et al., 2012; Ellason et al., 1996), and these features of avoidance could be a direct response to trauma and betrayal (e.g., Briere, 1992).

Based on the literature we would have expected the rate of other PDs, in particular borderline PD, to be higher. A body of literature has indicated that borderline PD is common in patients with DID (e.g., Dell, 1998; Ellason et al., 1996) and that clinically important rates of psychoform dissociation are common in patients with borderline PD reporting childhood abuse (e.g., Zanarini, Ruser, Frankenburg, & Hennen, 2000). It is possible that our findings reflect a referral or selection bias. Perhaps early traumatized patients with severe PDs are not typically referred or admitted to our specialized inpatient treatment program, although we used very few exclusion criteria. It is not clear whether these findings also reflect a more general selection process in referrals of early traumatized patients to specialized treatment programs focusing on trauma-related disorders (Axis I perspective), excluding patients with clear-cut PDs (Axis II perspective) from trauma-focused treatment.

Furthermore, patients reporting only high somatoform dissociation, often with a somatoform disorder, were the largest subgroup in the current sample of inpatients referred to a specialized first-phase treatment. If we assume that somatoform dissociation is a stable characteristic of somatoform
dissociative disorders, whereas psychoform dissociation is not (Nijenhuis, 2009), the HSDQ group (as well as the HBoth group) might include a nontrivial number of patients with unrecognized somatoform dissociative disorders (e.g., DSM–5 conversion disorder, corresponding to International Classification of Diseases–10 dissociative disorder of movement and sensation). In addition, findings indicating that some patients with low scores on the DES and/or SDQ were diagnosed with a CDD should alert one to the risk of missing CDD when solely relying upon the cutoff scores of the screening instruments.

Although our study improves on prior research in several ways, it has a number of limitations, so the findings should be viewed with caution. Our sample was small, reducing power to detect a medium effect size to 0.40. Other concerns are that interrater reliabilities for the clinical interviews (except for the SCID-D-R) are absent, that there was no control group, and that we used retrospective self-report that may have been vulnerable to recall or bias. Furthermore, the assessment of childhood abuse did not include a validated measure, and most patients reported severe abuse histories. The relatively limited variability of self-reported abuse severity may have contributed to the finding that the groups did not differ in this respect.

More research is needed in more complex patient populations in order to improve treatment indications. Comorbidity on both Axis I and II was high in all subgroups of patients and may predict worse treatment outcome in patients with more complex trauma-related disorders, such as complex PTSD and DID (Baars et al., 2010). Therefore, comparisons of treatment outcome in patients with comorbid clinical syndromes and PDs are warranted.

To further knowledge of the importance of variations in the nature and severity of patients’ clinical profiles, in particular differences in psychoform and somatoform dissociative symptoms for treatment indication and treatment design, a thorough assessment is basic. Such assessment should include trauma and neglect history and all DSM–5 trauma-related disorders, complex PTSD, and Axis I and II disorders using validated instruments recommended in international guidelines (Cloitre, Courtois, et al., 2012; International Society for the Study of Trauma and Dissociation, 2011).

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