

Research Article

Clinical Profiles of Survivors of Childhood Trauma and Neglect: Personality or Trauma Oriented?

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ABSTRACT

Background: This study is motivated by the observation that in the profile of survivors of childhood trauma, trauma-related disorders (TRD) and personality disorders (PD) might be more intertwined than assumed in DSM-IV and 5, since exposure to trauma in childhood might affect the development of personality. However, in clinical practice, differences in presentation of symptoms at admission may result in choosing interventions with an emphasis on different psychopathology.

Objective: This study tests the differences in clinical profiles between two patient groups in a naturalistic treatment setting, namely in a cohort of patients referred to a specialized mental health care facility.

Method: Patients had either been referred to a Trauma-Related Disorders Treatment Program (TRDP) or to a Personality Disorders Treatment Program (PDP). For study purposes, patients were systematically assessed with structured clinical interviews.

Results: TRDP patients ($n = 49$) reported significantly higher rates of severe childhood trauma than PDP patients ($n = 101$; 95.9% versus 54.5%). However, after controlling for other variables, the groups did not significantly differ in rates of TRD and in being diagnosed with a PD, except that logistic regression indicated that being diagnosed with borderline personality disorder (BPD) increased the risk of respondents to be referred to PDP vs. TRDP group (Odds Ratio = 9.57, Confidence Interval = 2.27 - 40.30, $p = .002$).

Conclusions: The two groups are highly similar in trauma-related and personality pathology. The findings imply that the probability of treatment success may decrease if part of the pathology in traumatized patients is overlooked.

Keywords: PTSD; Complex PTSD; dissociative disorders; personality disorders; adverse childhood experiences

Introduction

The severe disability and chronicity of TRD, dissociative disorders, PD, high comorbidity rates, and high levels of health care utilization give major clinical and public health significance to the question about their distinction in survivors of childhood trauma and neglect. Furthermore, in daily clinical practice, these groups of patients tend to be separated by diagnostic-driven treatment programs that focus either on posttraumatic stress disorder (PTSD), Complex PTSD, and dissociative disorders or PD. Treatment programs for TRD focus mainly on symptom oriented approaches, considering patients in short as suffering from complaints caused by being victimized. Treatment programs for PD focus mainly on person oriented treatment approaches, considering patients in short as being caught in unhealthy patterns of (interpersonal) behavior that have limited functioning for years. In this paper, we test the usefulness of the diffuse process that characterizes clinical decision making in the context of established, diagnostic-driven treatment programs

by investigating the similarities and differences between two naturalistic patient groups in a specialized mental health care setting (one department focusing on trauma-related pathology, the other department focusing on PD).

Shared etiology and overlapping clinical features are among the probable causes for substantial comorbidity rates for TRD and PD [1-2]. Therefore, the question about the distinction between these disorders is based on their frequent co-occurrence. For example, results of a recent meta-analysis show that PTSD stands out as clinically more heterogeneous in nature when it comes to PD compared to other anxiety disorders [3]. Among the PD, the interface between PTSD and BPD has received most attention [4]. There has been a lengthy discussion on the question whether Complex PTSD is distinct from BPD in cases where the latter is comorbid with PTSD [5]. Findings from a recent study supported the construct of Complex PTSD as a separate clinical entity from PTSD and BPD among women reporting a childhood trauma history [5]. Furthering the

understanding of the distinction between TRD and PD may aid in differential diagnosis and treatment indication.

Regarding shared etiology, since the 1980's, the potential link between childhood trauma and PD, especially BPD, has been examined [1,6,7]. An association of childhood sexual abuse (CSA) and BPD was not fully supported in a meta-analysis of 21 studies published between 1980 and 1995, reporting a moderate pooled r (.30) for the association [8]. Although the authors conclude that CSA is not a major psychological risk factor or a causal antecedent of BPD, they note that the heterogeneity in methodological factors limited their evaluation of the impact of these parameters on reported results.

TRD have been rather thoroughly investigated since the 1980's. Traditionally, dissociative disorders have been primarily associated with reports of early childhood trauma, while studies of (complex) PTSD also included trauma in adulthood [9,10]. Sometimes these two research-lines collide in research about the relationship between PD and dissociative disorders [11]. In clinical samples, severe personality pathology was highly prevalent among patients with dissociative disorders [12,13]. In a study of 135 inpatients with a clinical diagnosis of dissociative identity disorder (DID), Ross and colleagues found three or more PD in 63.1% of the subjects [13]. Based upon their finding of a high level of lifetime co-morbidity reported among DID patients, the researchers suggested that the patients' clinical profile might be best understood as part of an overall response to chronic, severe childhood trauma.

Compared to research on the co-occurrence of dissociative disorders and PD, it is more difficult to compare rates of childhood trauma reports in research between PD and (complex) PTSD. Most research in this area has focused on the overlap between PD and PTSD without distinguishing between childhood versus adult trauma, as for example, in studies among combat veterans [14]. Also, most of the research in this area has focused on several, but not all the PD [15].

Considering the existing literature on TRD and PD, there seems to be a wide variety in the measurement of TRD and PD, as well as in the measurement of childhood trauma and neglect, making the relationship between TRD and PD far from clear. To our knowledge, no study investigated clinical profiles in patients admitted to a specialized mental health care facility and subsequently referred to treatment for either TRD or PD using the same structured interviews to diagnose their sample with PTSD, Complex PTSD, dissociative disorders, and PD as well as to assess childhood trauma and neglect histories. The primary aim of the present study is to investigate whether patients referred to treatment for a TRD and patients referred to treatment for a PD in a naturalistic setting show considerable overlap in demographic characteristics and clinical features in terms of TRD, dissociative disorders, and PD as well as in trauma and neglect profile, using internationally acknowledged and well validated instruments.

Method

Participants

Participants ($n = 150$) were patients referred to a specialized mental health care facility, organized into diagnostic-driven

treatment programs, in The Netherlands. We collected data from two patient groups: one consisting of consecutively referred patients to a trauma-related disorders treatment program (TRDP), aimed specifically at adult survivors of prolonged early childhood trauma ($n = 49$); the other consisting of consecutively referred patients to a PD treatment program (PDP) ($n = 101$). The only exclusion criterion was insufficient mastery of the Dutch language. All decisions on referral to treatment had been made in the course of routine clinical care before the start of the study.

In total, 220 patients (84 in TRDP, 136 in PDP) were invited to participate in the study. Seventy patients refused to participate (35 in TRDP, 35 in PDP, i.e. 41.7% versus 25.7%, respectively; $\chi^2(2, N = 220) = 6.12, p = .014$). Respondents and non-respondents did not differ on demographical variables. In the group of non-respondents, PDP patients were more likely to be employed ($\chi^2(n = 70) = 7.01, p = .008$).

Measures

Socio-demographic variables. Demographic characteristics (sex, age, marital status, educational level, employment) were obtained using psychiatric records.

Clinical variables. The sample was diagnosed using four structured clinical interviews, designed to measure DSM-IV TRD, dissociative disorders, and PD. Additionally, dissociative symptoms were assessed using a self-report questionnaire. An interview and self-report questionnaire were used to assess childhood trauma and neglect histories.

Trauma-related disorders and symptoms. The *Clinician Administered PTSD Scale* (CAPS) is a structured interview with strong psychometric properties used to assess PTSD diagnostic status and dimensional PTSD symptom frequency and intensity [16].

The *Structured Interview for Disorders of Extreme Stress* (SIDES; 17) measures 27 criteria (arranged into 7 categories: regulation of affect and impulses, attention or consciousness, self-perception, relations with others, somatization and systems of meaning) often seen in response to extreme trauma and not addressed by DSM-IV PTSD criteria. Findings on the psychometrics of the SIDES indicate that it is a valid measure of the associated features of PTSD [17].

The *Structured Interview for DSM-IV Dissociative Disorders* (SCID-D; 18) is a semi-structured interview used to assess the dissociative disorders. The SCID-D has good psychometric qualities [12]. In addition to the SCID-D we used the *Dissociative Experiences Scale* to measure dissociative symptoms, for which good psychometric properties have been reported [19]. This scale consists of 28 items rated on a VAS scale (range 0-100).

Personality disorders. The *Structured Interview for DSM-IV Personality Disorders* (SIDP-IV; 20) is a semi-structured interview, in which PD criteria are organized into different facets of the patient's life. The SIDP-IV has good inter-rater reliability and is distinguished from other PD measures by the quality of the clinical inquiries [21].

Reports of trauma and neglect. For the measurement of trauma history and neglect the *Structured Trauma Interview* (STI; 22) was used. This instrument addresses the experience of loss of primary caretakers, witnessing violence between caretakers, neglect by caretakers based on parental dysfunction, physical abuse, sexual abuse and other shocking events during childhood and adulthood (defined as age 16 and older). Outcomes range from 'absent' to 'severe', depending on variables such as age of onset, frequency, number of perpetrators and if the trauma occurred within the family. Validity of the STI has been shown by comparisons with other instruments for the assessment of childhood trauma and neglect [23,24].

We used the *Parental Bonding Instrument* (PBI; 25) as a proxy to operationalize emotional neglect before age 12. The PBI assesses two dimensions of parenting: emotional warmth ('care' – 12 items) and control ('overprotection' – 13 items), scored separately for mother and father figure. Each item is scored on a 4-point Likert scale from 1 ('very like') to 4 ('very unlike'). For mothers care scores equal or higher than 27 and overprotection scores equal or higher than 13.5 are considered high, whereas for fathers care scores equal or higher than 24 and overprotection scores equal or higher than 12.5 are considered high. Used together, the two scores allow 4 types of bonding per parent to be examined: high care – low overprotection ('optimal bonding'), low care – low overprotection ('absent or weak bonding'), high care – high overprotection ('affectionate constraint') and low care – high overprotection ('affectionless control'). Only the optimal bonding type is not considered as a proxy to operationalize emotional neglect. Reliability and validity of the scales appear to be acceptable and are independent of the parent's sex [25].

Procedure

The study protocol was approved by The Institutional Review Board of Mental health Institutions (Instellingen Geestelijke Gezondheidszorg - METiGG; registration no. 11.121). Patients were contacted by an interviewer after referral to treatment had been made in the course of routine clinical care, usually by a general practitioner, to one of the two treatment programs and informed on the study. If a patient agreed to participate informed consent was obtained. Patients were assured that the outcome of the diagnostic battery would only affect the choice of treatment program if they would allow the diagnostic information to be shared with their assigned therapist during the regular admission procedure.

The interviews were administered by four trained and supervised psychologists within the context of the treatment settings. The total assessment battery took about eight hours to administer, divided over two or three sessions per patient. The trauma-interviews were administered first, followed by the PD interview. Most patients filled out the questionnaires at home, between sessions. Interviews were videotaped and evaluated during supervision sessions if a patient agreed to this. Two randomly selected videos per interview, scored by the four psychologists, were used to calculate the percentage of agreement between them. For each interview, inter-rater agreement was based on the percentage of equally scored

categories (25 trauma categories on the STI, 34 categories on the CAPS (all PTSD symptoms and symptom clusters), 7 categories on the SIDES (all symptom clusters), 5 categories on the SCID-D (all symptoms), and 12 categories on the SIDP-IV (the number of personality traits on all 12 PD)). Inter-rater agreement for the interviews was high (ranging from 90% to 95%). Internal consistency as measured by Cronbach's alpha's for self-report questionnaires was also high (ranging from .78 to .92).

Considering the number of patients referred to both treatment programs, it was possible to include all patients consecutively referred to the TRDP (providing outpatient care only). Due to the larger set-up of the PDP (with intensive outpatient treatment for 3 or 4 days a week as well as inpatient facilities), we included all consecutively referred in- and outpatients at a time-frame of several months in one department and then moved on to the next. Referral criteria for intensive treatment in the PDP are symptom severity and the (in)ability to engage in a form of meaningful daily activities.

Even though there are some differences, our PDP sample can be considered a representative reflection of the whole population admitted to the PD programs during the study period. Compared to our PDP sample ($n = 101$), patients in the population referred to PD programs ($n = 1563$) during the study period were significantly older ($M = 35.70$, $SD = 11.52$ versus $M = 33.20$, $SD = 12.51$, $p = .016$), but the effect size was small ($r = .07$), and more likely to be married (30.4% versus 22.8%, $p < .001$).

Data-analysis

We employed Chi-squares and t-tests (including 95% Confidence Intervals (CI)) to compare socio-demographic and clinical variables in the sample ($n = 150$, with no missing data). Subsequently, we used logistic regression analysis to determine associations between socio-demographic and clinical variables and the care setting indicator (TRDP (0) versus PDP (1)). Variables significant in univariate comparisons were included in the regression model to evaluate the importance of these variables to distinguish between the patients referred to the two treatment programs. First, a model with socio-demographic variables (including reports of the occurrence of traumatic experiences in child- and adulthood) was run. A second model included only clinical variables. Finally, variables that had a $p < 0.10$ in previous models were joined in a third model to analyze the importance of these variables to discriminate between both patient groups in the sample. We used the cut-off of $p < 0.10$ to minimize the chance of missing relevant variables in multivariate analyses.

Results

Concerning socio-demographic characteristics, several significant differences between the two groups were found (Table 1). Compared to PDP patients, TRDP patients were more often women, older, and more often living with a partner.

As shown in Table 1 significantly higher rates of STI variables - including neglect by primary caregivers, childhood

Table 1. Socio-demographic Variables and Childhood and Adult Trauma and Neglect (STI, PBI) by Diagnostic Group.

	TRDP (n = 49)	PDP (n = 101)	p ^a
Sex (n / % female)	44(89.8)	72(71.3)	.011
Age (mean years, SD)	38.65 (9.98)	32.09 (12.27)	<.001
Educational level (n / % high)	16(32.7)	34(33.7)	.902
Employment (n / % yes)	14(28.6)	25(24.8)	.617
Marital status (n / % with partner)	24(49.0)	23(22.8)	.001
Children (mean, SD)	1.14 (1.43)	0.76 (1.18)	.086
STI Childhood trauma:			
Separation from caretakers (n / %)	13(26.5)	23(22.8)	.613
Violence between caretakers (n / %)	18(36.7)	25(24.8)	.128
Neglect by caretakers (n / %)	47(95.9)	70(69.3)	<.001
Physical abuse (n / %)	35(71.4)	32(31.7)	<.001
Sexual abuse (n / %)	40(81.6)	48(47.5)	<.001
Other traumatic experiences (n / %)	32(65.3)	76(75.2)	.203
Severe childhood trauma^b (n / %)	47(95.9)	55(54.5)	<.001
STI Trauma adulthood:			
Physical abuse by partner (n / %)	18 (36.7)	26 (25.7)	.166
Physical abuse by other (n / %)	21 (42.9)	30 (29.7)	.111
Sexual abuse by partner (n / %)	17 (34.7)	19 (19.0)	.036
Sexual abuse by other (n / %)	23 (46.9)	25 (24.8)	.006
Other traumatic experiences (n / %)	36 (73.5)	81 (80.2)	.351
Severe adult trauma (n / %)	30 (61.2)	46 (45.5)	.072
PBI Care mother (mean, SD)	13.65 (8.77)	17.71 (9.47)	.013
PBI Care father (mean, SD)	14.08 (10.28)	15.30 (9.35)	.471
PBI Overprotection mother (mean, SD)	19.51 (6.85)	15.71 (6.76)	.002
PBI Overprotection father (mean, SD)	17.78 (7.80)	14.07 (6.92)	.004

^a p-value based on chi-square statistics for categorical variables and analyses of variance for continuous variables.

^b severe trauma is operationalized as having reported two or more traumatic events or having reported one type of traumatic event for a prolonged period of time.

STI = Structured Trauma Interview; PBI = Parental Bonding Instrument

physical abuse (CPA), CSA, and severe childhood trauma - were reported in the TRDP group. TRDP patients also reported significantly higher rates of sexual abuse in adulthood than PDP patients. As for emotional neglect measured with the PBI, both diagnostic groups had low means on 'care' (< 27 for mother, < 24 for father) and elevated means on 'overprotection' (> 13.5 for mother, > 12.5 for father), which combination is conceptualized as 'affectionless control' (Table 1). Compared to PDP patients, TRDP patients had significantly lower rates on care from mother and significantly higher rates on overprotection (control) from both mother and father.

Table 2 shows data on the number of TRD and PD in both diagnostic groups. Significantly higher rates and numbers (range 0 to 3) of TRD were found in TRDP patients than in PDP patients. In addition, TRDP patients had a significantly higher DES score than PDP patients. No differences in rates of PD were found between the two diagnostic groups. However, PDP patients had a significantly higher number (range 0 to 5) of PD than TRDP patients, and a significantly higher rate of BPD.

Table 3 displays pooled relative risks (95% CI) for the study variables in TRDP versus PDP setting. The variables marital status, neglect by caretakers, CSA, dissociative experiences,

and BPD remain significant predictors of care setting after Model 3 is run. CPA, sexual abuse by a person other than the intimate partner in adulthood, and PTSD remain of marginally significance ($p < .10$).

Discussion

We wanted to assess in a naturalistic setting, whether patients referred to either a PD treatment program or a TRD treatment program differ in socio-demographic characteristics and clinical features in terms of TRD, dissociative disorders, PD, and in reported (childhood) trauma and neglect history. In the present study, we found that living with a partner, reports of neglect by caregivers, reports of CSA, and dissociative symptoms are predictive of being referred to TRDP, whereas being diagnosed with BPD is predictive of being referred to PDP. Reports of CPA, sexual abuse by a person other than the partner, and being diagnosed with PTSD are marginally associated with TRDP referral status.

High rates of severe childhood trauma were reported in both groups: for patients in the TRDP this was an expected finding, however, also in the PDP more than half of the patients reported severe childhood trauma as well. In addition, patients in both groups characterized their primary caregiver's style of parenting as 'affectionless control'.

Table 2. Clinical Variables (CAPS, SIDES, SCID-D, DES, SIDP-IV) by Diagnostic Group.

	TRDP (n = 49)	PDP (n = 101)	p ^a
Any trauma-related disorder^b (n / %)	44 (89.8)	50 (49.5)	<.001
Number trauma-related disorders (mean, SD)	1.79 (1.00)	0.95 (1.10)	<.001
CAPS Current PTSD (n / %)	41 (83.7)	43 (42.6)	<.001
SIDES Complex PTSD (n / %)	26 (53.1)	32 (31.7)	.012
SCID-D Dissociative disorder (n / %)	21 (42.9)	21 (20.8)	.005
DES Dissociative experiences (mean, SD)	81.88 (48.24)	48.69 (39.91)	<.001
SIDP-IV Any PD (n / %)	37 (75.5)	85 (84.2)	.202
SIDP-IV Number of PD (mean, SD)	1.20 (1.02)	1.60 (1.14)	.039
Paranoid PD ^c (n / %)	1 (2.0)	8 (7.9)	.155
Schizotypal PD (n / %)	1 (2.0)	2 (2.0)	.980
Borderline PD (n / %)	9 (18.4)	35 (34.7)	.040
Avoidant PD (n / %)	9 (18.4)	33 (32.7)	.067
Dependent PD (n / %)	6 (12.2)	6 (5.9)	.182
Obsessive Compulsive PD (n / %)	3 (6.1)	17 (16.8)	.070
PD not otherwise specified (n / %)	30 (61.2)	60 (59.4)	.831

^a p-value based on chi-square statistics or Fisher's Exact Test for categorical variables and analyses of variance for continuous variables; ^b based on the scores on the CAPS, SIDES and SCID-D; ^c patients with Schizoid, Antisocial, Histrionic, and Narcissistic PD were not found in our sample; CAPS = Clinician Administered PTSD Scale; SIDES = Structured Interview for Disorders of Extreme Stress; SCID-D = Structured Interview for DSM-IV Dissociative Disorders; DES = Dissociative Experiences Scale; SIDP-IV = Structured Interview for DSM-IV Personality Disorders; PD = Personality Disorder

Table 3. Pooled relative risks (95% confidence intervals) for TRDP versus PDP (n = 150).

	TRDP versus PDP					
	Model 1		Model 2		Model 3	
	OR (CI)	p	OR (CI)	p	OR (CI)	p
<i>Demographic variables:</i>						
Sex	0.43 (0.11- 1.70)	.226			0.97 (0.92- 1.01)	.114
Age	0.93 (0.89- 0.98)	.003			0.22 (0.08- 0.65)	.006
Marital status	0.31 (0.11- 0.86)	.025				
Children	1.14 (0.76- 1.72)	.536				
<i>STI Childhood trauma^a:</i>						
Neglect by caretakers	0.12 (0.02- 0.91)	.040			0.13 (0.02- 0.95)	.045
Physical abuse	0.20 (0.07- 0.58)	.003			0.37 (0.13- 1.03)	.057
Sexual abuse	0.30 (0.10- 0.87)	.027			0.27 (0.08- 0.89)	.031
<i>STI Trauma adulthood:</i>						
Sexual abuse by partner	0.52 (0.16- 1.64)	.261				
Sexual abuse by other	0.39 (0.13- 1.16)	.091				
Other traumatic exp.	2.20 (0.61- 7.91)	.229			0.32 (1.00- 1.07)	.064
<i>PBI:</i>						
Care mother	0.97 (0.90- 1.03)	.296				
Overprotection mother	0.93 (0.85- 1.01)	.081				
Overprotection father	1.01 (0.94- 1.08)	.814			0.94 (0.87- 1.02)	.125
<i>Clinical variables^b:</i>						
CAPS Current PTSD			0.17 (0.06- 0.47)	.001		
SIDES Complex PTSD			0.74 (0.28- 1.95)	.537	0.32 (0.10- 1.01)	.052
SCID-D Dissociative dis.			0.59 (0.21- 1.67)	.324		
DES Dissociative exp.			0.99 (0.97- 1.00)	.006		
SIDP-IV Number of PD			1.53 (0.80- 2.94)	.202	0.98 (0.97- 0.98)	.017
Borderline PD			5.48 (1.67-17.96)	.005		
Avoidant PD			0.95 (0.27- 3.32)	.936	9.57 (2.27-40.30)	.002
Obsessive Compulsive PD			1.69 (0.30- 9.51)	.550		

^a due to a high correlation (>.70) with STI CSA, we removed STI Severe childhood trauma from the logistic regression; ^b due to a high correlation (>.70) with CAPS Current PTSD, we removed Any and Number of trauma-related disorder(s) from the logistic regression; CAPS = Clinician Administered PTSD Scale; SIDES = Structured Interview for Disorders of Extreme Stress; SCID-D = Structured Interview for DSM-IV Dissociative Disorders; DES = Dissociative Experiences Scale; SIDP-IV = Structured Interview for DSM-IV PD; PD = Personality Disorder; The care setting indicator (TRDP versus PDP) is the dependent variable. Logistical regression models tests the predictive value of socio-demographic variables (Model 1), of clinical variables (Model 2), and Model 3 includes all variables with a p-value < .10 in the previous models.

Although rates of TRD were significantly higher in the TRDP, we did find substantial rates of current PTSD, Complex PTSD, and dissociative disorders in the PDP. Rather surprisingly, after controlling for socio-demographic variables, reports of trauma and neglect, and personality pathology, the differences between both groups in rates of TRD no longer maintained significant. A reason for this might be that in general trauma-related pathology is underestimated, and, consequently, underdiagnosed by clinicians in patients presenting primarily with interpersonal or behavioral problems in primary care.

Considering rates of PD in both TRDP and PDP we found a similar picture. High rates of PD were found in both groups indicating that the presence of a (specific) PD does not distinguish between patients in both treatment programs, except for the presence of BPD. BPD is the only PD that is significantly more common among PDP patients in the logistic regression, after controlling for socio-demographic variables, reports of trauma and neglect, TRD, and dissociative symptoms. This may seem an unexpected finding, since BPD is the PD usually thought of being associated with histories of severe childhood trauma and / or neglect [1]. However, the finding is consistent with a recent literature review on comorbidity between PTSD and BPD, which concluded that the risk of PTSD among BPD subjects is not regularly higher than in subjects with another PD [4].

Until now, research comparing comorbid psychiatric conditions or clinical features across TRD, dissociative disorders, and PD has been limited, including lack of methodologically sound studies specifically focusing on survivors of early childhood trauma and neglect in which all trauma-related disorders and all PD are considered [26]. A strength of our study is that we used structured clinical interviews by trained psychologists to establish valid clinical diagnoses, considering all TRD and all PD. Furthermore, we were able to conduct our comprehensive assessment within a naturalistic setting, consisting of patients seeking help in a specialized mental health care facility.

Conducting research in a naturalistic clinical setting has limitations. First, the interviewers were not blind to which treatment program the patients were referred. Secondly, a substantial number of patients in the TRDP refused to participate, because part of the assessment battery was already embedded in the Routine Outcome Monitoring system of this treatment program. Patients in the PDP did not have this option: they could be thoroughly assessed by participating in the study or not at all. As a result, the TRDP group is rather small compared to the PDP group, but this does reflect a real difference in size of both programs within the organization. And thirdly, we cannot rule out that results are mostly reflective of the way patients are being referred to a certain treatment program instead of reflecting real differences between diagnostic groups, even though we found more similarities than differences between groups.

Since data collection started 4 years ago, we were unable to incorporate a measurement that assesses PD according to

DSM-5. However, since differences between DSM-IV and DSM-5 in classifying PD are rather limited, we do not expect much difference in outcome if we had the opportunity to use DSM-5. Furthermore, we depended on retrospective data and self-report measures, whereas a longitudinal design using other sources besides self-report, would be the ideal way to measure traumatic life events. However, the accuracy and reliability of recall among survivors of child maltreatment, as corroborated by protective service records, has been substantial [27].

Finally, we realize that our sample to variable ratio is a concern. Our study evaluates a large set of characteristics within a relatively small sample of psychiatric patients referred to two treatment programs. We used variables significant in univariate comparisons in 3 logistic regression models, with a third model including only variables with a p-value <0.10 in the two previous models to carefully approach our data [28]. However, future research should contain larger samples to investigate whether the similarities and differences we found between both groups are robust.

In conclusion, our results indicate that in a naturalistic clinical setting, patients referred to a PD program and patients referred to a TRD program are in fact highly similar in terms of their clinical profile. This leads us to a similar hypothesis as Ross et al. [13], namely that our patients' clinical profile might be best understood as part of an overall response to severe childhood trauma and neglect, and challenges the usefulness of categorizing these patients in terms of diagnostic constructs, especially in daily clinical practice. We believe that our results are clinically relevant in illustrating the diffuse process that characterizes clinical decision making in the context of established, diagnostic-driven treatment programs. Furthermore, our results have implications for assessment and treatment indication. Considering assessment, the DES is a short and valid screener for dissociation. Luxenberg, Spinazolla, and Van der Kolk recommend the DES to be included in a comprehensive assessment battery for Complex PTSD [29]. However, its usage within treatment settings aimed specifically at PD is unknown to us. In those settings, the DES might be especially useful in identifying patients with comorbid trauma-related pathology.

Considering treatment indication, in, for example, *The Haunted Self* [30], a textbook on treatment of chronic traumatization, no strong reference to PD or the treatment of personality pathology is being made. Consequently, the probability of treatment success may decrease if this relevant part of the pathology is overlooked. Generally speaking, PD patients with comorbid trauma-related pathology run the risk of being undertreated for varied symptoms (re-experiencing symptoms) that are the results of exposure to trauma, while patients with a trauma-related or dissociative disorder and comorbid PD run the risk of being undertreated for their interpersonal and behavioral problems. Diagnostic-driven treatment programs might especially increase this risk.

Our results show that a sharp distinction between the two patient groups or even diagnostic categories does not do justice to

the amount of shared pathology and psychological / psychiatric impairment suffered by both patient groups. This finding is in line with several publications on the detrimental effects of trauma [31,32]. This also means that clinicians working in the field of severe childhood trauma do need a proper training in the management of PD and clinicians working in the field of PD do need a proper training in the management of trauma-related pathology. Additionally, the present findings suggest several important research directions for furthering the understanding of the link between trauma, TRD and PD and implications for treatment, amongst them further investigation of psychological profiles of individuals reporting early childhood trauma and neglect with larger samples, and examining the psychological profiles of the two groups using a dimensional model of the impact of trauma and emotional neglect, rather than focusing on separate disorders [26,33].

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