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Dissociative Symptoms in Traumatized Treatment-Seeking Refugees: Rate of the Dissociative Subtype of Posttraumatic Stress Disorder and Associations with Complex PTSD Symptoms

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ABSTRACT

DSM-5 and ICD-11 differ regarding their conceptualization of dissociation in relation to Posttraumatic Stress Disorder (PTSD). DSM-5 defines a subtype of PTSD characterized by dissociative symptoms (PTSD-DS), whereas ICD-11 only comprises some specific dissociative symptoms in their diagnosis of (complex) PTSD. To improve diagnostic assessments and treatment approaches, it is important to investigate the relationship between dissociation and (c)PTSD. Research on the relation of trauma and dissociation in refugees is very limited. The rate of PTSD-DS and the association of cPTSD symptoms and dissociation severity were investigated using the baseline data of treatment-seeking traumatized refugees participating in a multi-center randomized controlled clinical trial (registration: DRKS00019876). PTSD-DS was assessed with the Clinician-administered PTSD Scale for DSM-5 and cPTSD with the Complex PTSD Item Set additional to the CAPS. We used the Adolescent Dissociative Experiences Scale to assess dissociative symptoms. In a sample of $N = 104$, we found a rate of 36.54% for PTSD-DS. In an exploratory multiple regression analysis of dissociation severity, in which all cPTSD symptoms were entered as predictors, only reexperiencing and affective dysregulation emerged as relevant contributors. Our results support the notion that there is a subgroup of individuals with additional dissociative symptoms, while reexperiencing and affective dysregulation are

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associated with dissociation. We recommend to add a culturally sensitive assessment of dissociative symptoms to standard practices in clinical care of refugees so that appropriate interventions can be selected.

Introduction

Dissociation is frequent in trauma survivors (Dalenberg et al., 2012; Vonderlin et al., 2018). Generally, the prevalence of dissociative symptoms among all mental health disorders is second highest in patients with posttraumatic stress disorder (PTSD), surpassed only by patients with dissociative disorders (Lyssenko et al., 2018). Refugees often experience multiple traumatic events (Nesterko et al., 2020; Nickerson et al., 2021) and suffer more often from PTSD than the general population (~30%; Lechner-Meichsner et al., 2024; Patanè et al., 2022). Since trauma load is a predictor for both PTSD (Brewin et al., 2000) and dissociation (Carlson et al., 2012; Finklestein & Solomon, 2009; Stein et al., 2013; ter Heide et al., 2025), refugees might be especially prone to dissociative experiences. To inform assessments and treatment approaches, it is thus important to study the rates of dissociation and its association with trauma-related symptoms.

The conceptualization of PTSD differs significantly in the 11th edition of the International Classification of Diseases (ICD-11; WHO, 2019) and the 5th edition of the Diagnostic and Statistical Manual of Mental Disorders (DSM-5; APA, 2022; First et al., 2021). One point of divergence concerns the conceptualization of dissociative symptoms in relation to PTSD in ICD-11 and DSM-5. While the DSM-5 distinguishes between different subtypes of PTSD according to whether dissociative symptoms (i.e., depersonalization and derealization) are present (i.e. PTSD-DS), this is not the case in ICD-11. In the ICD-11, dissociation is only included within the criteria of flashbacks and affective dysregulation which can take the form of dissociative experiences. There is ongoing debate as to whether there are dissociative subtypes among individuals with PTSD or whether dissociation is an integral component of PTSD (Moller et al., 2020).

On the one hand, there is evidence supporting the view that dissociation is best conceptualized as a subtype of PTSD. Importantly, latent class analyses have identified a dissociative subtype of PTSD (Deen et al., 2022; Hansen et al., 2017). This subtype is characterized, for example, by a higher symptom severity and more sexual traumatic events. Hyland et al. (2024) investigated whether dissociation is a component of cPTSD. CPTSD and dissociation occurred independent of each other in a latent class analysis, supporting the subtype-approach of the DSM-5.

Estimates of PTSD-DS among patients with PTSD range between 6% and 44% (Schiavone et al., 2018). One systematic review and meta-analysis of

latent class analyses found a mean prevalence of 20.35% for PTSD-DS (Hansen et al., 2017). In another systematic review and meta-analysis by White et al. (2022), a prevalence of 35% was reported. In the World Mental Health Survey, 14.4% of patients with PTSD-DSM-IV fulfilled criteria for PTSD-DS (Stein et al., 2013).

Prevalences of PTSD-DS are assumed to be even higher in refugees because of the high trauma load (Nickerson et al., 2021) and the high rates of PTSD (Patanè et al., 2022). Therefore, our primary aim was to investigate the rate of PTSD-DS in a sample of treatment-seeking traumatized refugees. So far, only a limited number of studies have investigated dissociation and its co-occurrence with PTSD in refugees. Palic et al. (2015) assessed dissociation in treatment-seeking refugees and found clinician-rated pathological dissociation (i.e., a discrete latent variable representing symptoms that are not normally experienced by healthy individuals; Waller et al., 1996) in 30% of participants and self-rated dissociation in 15% of participants. Another study investigated refugees residing in a German reception center, selected for the observation of their psychological strain, and found posttraumatic stress symptoms to be the most frequently reported, while dissociation was the fourth most frequently reported symptom. In another study on refugees, 41% fulfilled criteria for PTSD and co-occurring dissociation. A very recent study investigated PTSD-DS in treatment-seeking refugees and found a prevalence of 28.6% (ter Heide et al., 2025). Studies have also shown that cumulative trauma exposure is correlated with dissociation severity in refugees (Kira et al., 2019; Mollica et al., 1998). Therefore, our secondary aim was to add to the current evidence by investigating the association between trauma load and dissociation severity, and we hypothesized a positive relationship between those constructs.

On the other hand, there is also evidence that supports the view that dissociation is an integral part of some PTSD symptoms. It includes studies showing strong associations between PTSD symptoms and dissociation. Results include high associations between reexperiencing and dissociation (Hyland et al., 2024; Moller et al., 2020; Stein et al., 2013), higher levels of dissociation in participants with more complex PTSD symptoms (Dorahy & van der Hart, 2015) and relatively strong correlations between PTSD and dissociative symptom severity (Carlson et al., 2012; ter Heide et al., 2025). Relatedly, we also aimed to investigate the association between (c)PTSD and dissociation severity, and we hypothesized a positive relationship. In a structural equation model, all symptom clusters of cPTSD predicted psychiform (i.e., symptoms like depersonalization and derealization) and somatoform dissociation (i.e., symptoms like analgesia and location-specific pain), while affective dysregulation and difficulties in relationships were especially influential for the dissociative severity (Moller et al., 2020). Patients with cPTSD also had a higher dissociation severity than patients with PTSD-ICD

-11 and healthy participants, while there was no difference regarding dissociation between patients with PTSD-ICD-11 and no disorder. Network approaches also support associations between dissociative and PTSD-symptoms, e.g., Kangaslampi et al. (2021) concluded that the strong association they found between amnesia and concentration problems and the centrality of emotional numbing may reflect a manifestation of dissociative symptoms within their network approach to PTSD-symptoms in refugees. In other populations, network analyses of PTSD and dissociative symptoms found associations between flashbacks and dissociation (Cramer et al., 2020; Knefel et al., 2016; Kratzer et al., 2022; McBride et al., 2020), thus supporting flashbacks as a dissociative symptom. However, an alternative theory posits that dissociation functions as an avoidance mechanism to mitigate the distress associated with experiencing flashbacks (Dalenberg & Carlson, 2012). The high associations between flashbacks and dissociation could also be interpreted as evidence toward this theory. To the best of our knowledge, there are no publications on associations between all cPTSD symptoms and pathological dissociation. Therefore, to date, the relationships between those symptoms, when controlling for all other symptoms, remain unclear. Accordingly, we lastly aimed to explore which cPTSD symptoms show the strongest association with dissociation using multiple regression analysis to be able to examine the ICD-11 framework of the inclusion of dissociation in cPTSD symptoms more closely.

To summarize, we aimed to investigate (1) the rate of PTSD-DS, (2) the association between trauma load and dissociation severity, (3) the association between trauma-related symptom and dissociation severity and (4) the associations between all cPTSD symptoms and pathological dissociation in a sample of treatment-seeking traumatized refugees.

Materials and methods

Participants and procedure

We used baseline data collected from treatment-seeking refugees in a large multi-center randomized-controlled trial investigating the efficacy of Imagery Rescripting (ImRs) compared to usual care plus treatment advice (UC+TA) for PTSD (Steil et al., 2021). All participants provided written informed consent and the study was approved by the ethics committee of the German Psychological Association (SteilRegina2019-10-18-VA, SteilRegina2020-02-26AM). Inclusion criteria for the trial were a primary diagnosis of PTSD according to DSM-5 (APA, 2013), having come to Germany as a refugee (independent of current asylum status), age between 18 and 65 years, ability to communicate with a therapist with or without the help of an interpreter, motivation to undergo trauma-focused treatment, and perspective to stay within reasonable distance of

the study center for at least another six months. Patients were excluded from the trial if they had a life-time diagnosis of psychosis, bipolar disorder, or substance dependence, if they reported acute suicide risk or risk of harming others, or if they started a new psychopharmacological medication within the previous month. For the current analyses, we used data from all screened patients who had completed the clinician assessment of PTSD symptoms, regardless of whether they met all inclusion criteria. At baseline, patients were assessed with clinical interviews and completed a set of questionnaires. Clinical interviews were conducted in English and German or with the help of a trained interpreter for participants not fluent in either language. There were different language versions of the questionnaires (i.e., English, German, Arabic, and Farsi). If a patient's literacy was insufficient to complete the questionnaire or if the questionnaire was not available in the patient's native language, a trained interpreter read the items aloud and recorded the responses.

Measures

PTSD symptom severity

Diagnosis and severity of posttraumatic stress symptoms in the past month were assessed with the Clinician-administered PTSD Scale for DSM-5 (CAPS-5; Weathers et al., 2018) which is a structured clinical interview. Trained raters assessed 20 symptoms of PTSD and two dissociative symptoms (i.e., depersonalization and derealization) on a 5-point Likert scale ranging from 0 (absent) to 4 (extreme) with ratings ≥ 2 indicating that the symptom is present and considered for the diagnosis. For PTSD-ICD-11, CAPS items were matched to the core symptoms (i.e. reexperiencing, avoidance, and persistent perception of heightened current threat) of PTSD in ICD-11.

We used the Complex PTSD Item Set additional to the CAPS (COPISAC; Lechner-Meichsner & Steil, 2021) to assess cPTSD diagnosis and symptom severity. COPISAC includes three items pertaining to disorders of self-regulation (i.e., affect dysregulation, negative self-concept, and disturbed relationships). Structure and scoring closely follow the CAPS-5. Internal consistency for PTSD-DSM-5 items, PTSD-ICD-11 items, and cPTSD items were McDonald's $\Omega = 0.88$, $\Omega = 0.76$ and $\Omega = 0.86$, respectively.

Trauma load

We used the Life Events Checklist for the Diagnostic and Statistical Manual of Mental Disorders – Interview Version (LEC-5; Weathers et al., 2013) to assess trauma load. The interviewer asked the patient about the 16 traumatic events originally included in the LEC-5 and eight additional potentially traumatic events related to the ICD-11 guideline for cPTSD. The interviewer assessed whether a potentially traumatic event met the A-criterion for PTSD and then asked the patients how often they had been exposed to each event (1 = one

time, 2 = 2–3 times, 3 = 4–10 times, 4 = uncountable times). We then computed a total frequency score, a sexual trauma frequency score (i.e., items e, f, p; see Table 1), a multiple trauma frequency score (i.e., items a, b, c, d, e, f, g, l, n, s, t, u if reported ≥ 2 ; see Table 1), and an interpersonal trauma frequency score (i.e., items a, b, c, d, e, f, g, l, n, p, q, r, s, t, u; see Table 1) based on all traumatic events that met criterion A as sum scores of these frequency values (Wilker et al., 2015).

Table 1. Demographic and clinical characteristics of the sample.

Variable	Total Sample <i>N</i> = 104			
	<i>n</i>	%	<i>M</i>	<i>SD</i>
Gender ^a				
Male	67	64.42%		
Female	33	31.73%		
Other	3	2.88%		
Age (years) ^b			32.74	11.4
Country of origin ^c				
Afghanistan	34	32.69%		
Syria	22	21.15%		
Iraq, Iran	8 each	7.69% each		
Nigeria	5	4.81%		
Sierra Leone	4	3.85%		
Eritrea, Guinea, former Yugoslavia, Pakistan, Palestine, Turkey	2 each	1.92% each		
Cameroon, Egypt, Jordan, Morocco, Paraguay, Saudi-Arabia, stateless, Tajik, Tanzania	1 each	0.96% each		
Religion ^c				
Islam	74	71.15%		
Christian	15	14.42%		
Non-denominational	10	9.62%		
Other	2	1.92%		
Marital Status ^b				
Single, living with family	12	11.54%		
Single, living alone	43	41.35%		
Married	23	22.12%		
Divorced	8	7.69%		
Separated	4	3.85%		
Widowed	2	1.92%		
In Partnership	10	9.62%		
Residence status ^b				
Permanent Residence Permit	39	37.50%		
Temporary Residence Permit	34	32.69%		
Tolerance Permit	23	22.12%		
Other	6	5.77%		
Time since arrival in Germany (years) ^b			5.21	4.62
Formal education (years) ^a			8.94	4.28
Housing situation ^b				
Own apartment	40	38.46%		
Living with friends/family	3	2.88%		
Community housing facility	48	46.15%		
Initial reception facility	4	3.85%		
Other	7	6.73%		
Currently employed ^b	34	32.69%		
Perception of financial situation ^c				
Very weak	26	25.00%		
Weak	37	35.58%		
Medium	26	25.00%		
Good	12	11.53%		
Wealthy	0	0.00%		

(Continued)

Table 1. (Continued).

Variable	Total Sample <i>N</i> = 104			
	<i>n</i>	%	<i>M</i>	<i>SD</i>
Index Traumatic Event ^a				
a- Combat or exposure to a war-zone (in the military or as a civilian)	19	18.27%		
b- Captivity (for example, being kidnapped, abducted, held hostage, prisoner of war)	4	3.85%		
c- Sudden violent death (for example, homicide, suicide)	13	12.50%		
d- Sudden accidental death	6	5.77%		
e- Sexual assault (rape, attempted rape, made to perform any type of sexual act through force or threat of harm)	15	14.42%		
f- Other unwanted or uncomfortable sexual experience	2	1.92%		
g- Serious injury, harm, or death you caused to someone else	0	0.00%		
h- Natural disaster (for example, flood, hurricane, tornado, earthquake)	1	0.96%		
i- Fire or explosion	2	1.92%		
j- Transportation accident (for example, car accident, boat accident, train wreck, plane crash)	1	0.96%		
k- Serious accident at work, home, or during recreational activity	0	0.00%		
l- Physical assault (for example, being attacked, hit, slapped, kicked, beaten up)	10	9.62%		
m- Exposure to toxic substance (for example dangerous chemicals, radiation)	0	0.00%		
n- Assault with a weapon (for example, being shot, stabbed, threatened with a knife, gun, bomb)	5	4.81%		
o- Life-threatening illness or injury	3	2.88%		
p- Repeated childhood sexual abuse	2	1.92%		
q- Repeated childhood physical abuse	1	0.96%		
r- Prolonged domestic violence	3	2.88%		
s- Torture	4	3.85%		
t- Genocide campaigns	0	0.00%		
u- being enslaved	0	0.00%		
v- Repeated medical trauma during childhood	1	0.96%		
w- Severe human suffering	1	0.96%		
x- Any other prolonged event or series of events of an extremely threatening or horrific nature from which escape was difficult or impossible	6	5.77%		
y- Any other stressful event or experience	4	3.84%		
Total number of traumatic events that meet the A-Criterion (LEC) ^d			8.15	2.96
Total frequency of interpersonal traumatic events (LEC) ^d			14.57	7.61
Total frequency of sexual traumatic events (LEC) ^d			1.56	2.41
Total frequency of multiple traumatic events (LEC) ^d			10.92	7.05
Clinician-rated PTSD _{DSM-5} (CAPS) ^d	101	97.12%	39.80	10.92
Clinician-rated PTSD-DS (CAPS) ^d	38	36.54%		
Clinician-rated PTSD _{ICD-11} (CAPS & COPISAC) ^d	66	63.46%	11.71	4.34
Clinician-rated cPTSD (CAPS & COPISAC) ^d	15	14.42%	17.22	6.87
Dissociative Symptoms (ADES-8, mean score) ^d			3.14	2.44

Note. LEC = Life Event Checklist; CAPS = Clinician-Administered PTSD Scale for DSM-V; COPISAC = Complex PTSD Item Set additional to the CAPS; ADES-8 = Adolescent Dissociative Experiences Scale. Patients had missing values on some measures.

^a*n* = 103.

^b*n* = 102.

^c*n* = 101.

^dWe used multiple imputation for missing values on these instruments.

Dissociative symptoms

We used the eight-item version of the Adolescent Dissociative Experiences Scale to assess dissociative symptoms (ADES-8; Martínez-Taboas et al., 2004). The scale focuses on pathological dissociative experiences and its items correspond in content to items from the Dissociative Experiences Scale-Taxon for adults (DES-T; Bernstein & Putnam, 1986). Therefore, eight dissociative experiences,

which have been identified as most relevant to pathological dissociation, are assessed on an 11-point Likert response scale from 0 (never) to 10 (always). The ADES-8 appeared well suited for our sample because items and instructions are simpler and briefer than in the adult version which facilitated translations as well as comprehension in patients with limited German or English language skills. As compared to the DES-T, the ADES-8 always only uses one sentence per item and all items are formulated in the first person making it easier to translate and easier to understand for participants with lower educational levels. In the present sample, McDonald's Ω was 0.91.

Data analysis

All analyses were conducted in R version 4.3.3 (R Core Team, 2025). McDonald's Omega was calculated using the package psych version 2.4.1 (Revelle, 2023). There were between 0.7% and 4.8% missing values per scale. We applied multiple imputation for missing values using fully conditional specification with the maximum of 10 iterations with the package mice version 3.16.0 (Van Buuren & Groothuis-Oudshoorn, 2011). We used predictive mean matching with five possible donors for all non-dichotomous variables and logistic regression imputation for all dichotomous variables. We imputed all missing values 20 times and pooled the results for all analyses.

We first evaluated how many patients fulfilled one of the two dissociative symptoms in the CAPS-5 (i.e., derealization and depersonalization) in addition to meeting the diagnosis for PTSD-DSM-5 to assess the rate of PTSD-DS. We then calculated the severity of PTSD-DSM-5, PTSD-ICD-11, and cPTSD as sumscores of the respective CAPS-5 and COPISAC-items and the severity of pathological dissociation as the mean of the ADES-8 items. We used Spearman correlations to examine the associations between pathological dissociation severity and the frequency of traumatic events (total, interpersonal, sexual, and multiple), as well as the associations between pathological dissociation severity and PTSD severity (based on PTSD-DSM-5, PTSD-ICD-11, cPTSD, and DSO symptoms).

To explore the relationship between cPTSD symptoms and dissociation severity, we conducted a multiple regression analysis using a stepwise approach with the Bayesian Information Criterion (BIC) for model selection. Specifically, we computed a correlation matrix from a stacked dataset of all imputations using Pearson correlations. We then applied a matrix-based stepwise multiple regression approach implemented in the mantar package (version 0.1.0; Nehler, 2025), which follows a procedure similar to the node-wise regression – based network estimation approach described by Nehler and Schultze (2024). Because stacking imputations artificially inflates the sample size for information-criterion calculations and may therefore lead to an overinclusion of predictors, we followed the authors' methodological recommendation to instead use the

number of observed cases on the dependent variable as the effective sample size. As the ADES-8 mean was not normally distributed, we applied a Box-Cox transformation using the DescTools package (version 0.99.49; Signorell, 2023) to normalize the distribution before the described analysis.

Results

Sample characteristics and rate of PTSD-DS

Sample characteristics are depicted in Table 1. Most patients identified as male ($n = 67$, 64.42%) and came from Afghanistan ($n = 34$, 32.69%) or Syria ($n = 22$, 21.15%). The age ranged between 18 and 62 years ($M = 32.74$, $SD = 11.4$).

Thirty-eight patients (36.54%) met criteria for PTSD-DS. In the total sample, 101 patients met criteria for PTSD-DSM-5 (97.1%), 66 patients met criteria for PTSD-ICD-11 (63.46%), and 15 patients met criteria for cPTSD (14.42%).

Association of dissociation severity with trauma load and trauma-related symptom severity

Dissociation severity, calculated as the mean of the ADES-8 (see Table 1), was significantly and positively associated with the total frequency of traumatic events ($\rho = .33$, $p < .001$), as well as the frequency of interpersonal ($\rho = .35$, $p < .001$), and multiple traumatic events ($\rho = .31$, $p < .01$). Dissociation severity was not significantly associated with the frequency of sexual traumatic events ($\rho = .17$, $p = .08$). Additionally, dissociation severity was positively and significantly associated with trauma-related symptom severity, calculated as the sum of PTSD-DSM-5-symptoms ($\rho = .30$, $p < .01$), PTSD-ICD-11-symptoms ($\rho = .25$, $p < .05$), cPTSD-symptoms ($\rho = .33$, $p < .001$), and DSO-symptoms ($\rho = .31$, $p < .01$).

Associations of cPTSD symptoms with dissociation severity

The exploratory stepwise model search using the BIC identified two cPTSD symptoms as predictors of the Box-Cox-transformed ADES-8 score (see Table 2). While the regression coefficients are based on the stacked imputed data sets, the effective sample size used for computing the information criteria corresponds to the number of observed values for the dependent variable, which in this study is 93. Specifically, reexperiencing ($\beta = .22$) and affective dysregulation ($\beta = .33$) were retained in the final model, both showing a positive association with dissociation severity. The final model explained 17.04% of the variance in dissociation severity.

Table 2. Results of the exploratory stepwise regression model.

Potential Predictors	β
Re-Experiencing	.22
Nightmares	-.1
Avoidance of Thoughts Feelings, or Places	-.1
Sense of Current Threat	-.1
Affective Dysregulation	.31
Negative Self-Concept	-.1
Disturbed Relationships	-.1

Note. ¹Predictor was not chosen in the model optimization via Bayesian Information Criterion.
 R^2 for the final model was 17.04%.

Discussion

Even though dissociation is frequent in trauma survivors (Dalenberg et al., 2012; Vonderlin et al., 2018) and refugees often experience traumatic events (Nesterko et al., 2020; Nickerson et al., 2021), there is not much research on dissociative symptoms in refugees. Relatedly, not many studies have investigated the relationship between cPTSD and dissociation even though dissociation is assumed to be more prevalent in more complex PTSD presentations (Dorahy & van der Hart, 2015). Therefore, the aim of the present study was to investigate the rate of PTSD-DS in a sample of treatment-seeking refugees as well as the association between dissociation severity and trauma load and PTSD severity, respectively. Furthermore, we examined which cPTSD symptoms were most strongly associated with dissociation severity.

We found that slightly more than one-third of patients met criteria for PTSD-DS, while most patients with PTSD did not report depersonalization or derealization. Our results are in line with the findings of ter Heide et al. (2025) who found an only slightly lower prevalence of PTSD-DS in their sample of treatment-seeking refugees. However, dissociation severity was positively associated with both the trauma load and PTSD-severity. This is in line with many studies showing trauma load (e.g., Stein et al., 2013; ter Heide et al., 2025) and PTSD severity (Dorahy & van der Hart, 2015; ter Heide et al., 2025) to be associated with dissociation. Additionally, we found reexperiencing and affective dysregulation to have the strongest associations with dissociation severity which corresponds to the definition of those symptoms in the ICD-11. Reexperiencing in ICD-11 is defined as including a here-and-now quality and can include losing all awareness of the present surroundings which is in line with dissociative experiences. Similarly, affect dysregulation includes feeling emotionally numbed or experiencing dissociation in response to stress (WHO, 2019). It is also in line with the summary by Hyland et al. (2024) regarding which cPTSD symptoms are most strongly associated with dissociation. Conversely, disturbed relationships, which were also identified as an important link to dissociation, were not retained in our exploratory multiple

regression model. Our results are further in line with network analyses which found strong connections between flashbacks and dissociative symptoms (e.g., Knefel et al., 2016; McBride et al., 2020).

Therefore, there seems to be a subtype of PTSD-DSM-5 with additional dissociative symptoms and also an association between dissociation and reexperiencing as well as affective dysregulation in cPTSD. This association could be explained differently. Firstly, our results may align with a theoretical perspective on the association of PTSD and dissociation, which posits dissociation as a form of avoidance (Dalenberg & Carlson, 2012). Therefore, dissociation might be a reaction to flashbacks or strong emotions. Secondly, the association could be confounded by the definition of the cPTSD criteria of flashbacks and affective dysregulation, which mention dissociative reactions. Lastly, the association could also be confounded by third variables that are not present in the current analyses. We also found a subgroup of patients meeting criteria for PTSD-DS.

While reexperiencing and affective dysregulation are frequently addressed by evidence-based trauma-focused treatments (Hoppen et al., 2023; van Vliet et al., 2024), typical dissociative symptoms such as depersonalization and derealization may require additional treatment components. These may include interventions such as a training in skills that are related to dialectical behavioral therapy (Kleindienst et al., 2025; Prillinger et al., 2024). Skills are defined as behaviors and self-instructions that can interrupt problematic cognitions or behaviors and are usually tailored to the patient's needs (Bohus et al., 2019). They are designed to help in the short term and not damage in the long term, e.g. smelling intense smells or using a spiky massage ball to stay focused. We recommend that regardless of whether the DSM-5 or ICD-11 is used for diagnosis, typical dissociative experiences should be routinely assessed in patients with PTSD. Even though one meta-analysis did not find dissociation to be a moderator of PTSD treatment effectiveness (Hoeboer et al., 2020), another study reported that early reductions in dissociative symptoms have been associated with improved PTSD treatment outcome, despite baseline dissociation being associated with poorer treatment response (Kleindienst et al., 2025). The latter study also addressed the fact that PTSD and the severity of dissociation correlate at the beginning of the study and that these individuals show the greatest potential for improvement, which may also apply to our sample with more complex trauma presentations.

Based on our clinical impressions during the later stages of treatment in the trial, we would have expected a higher rate of PTSD-DS at baseline. The low rate may reflect cultural influences on the experience and expression of trauma and dissociation (de Maraldi et al., 2017; Krüger, 2020), which warrant further investigation. For example, the diagnostic criteria for trance disorder in the ICD-11 specify that the symptoms need to be involuntary, distressing, and occur outside of religious and culturally accepted contexts (WHO, 2019). Şar

(2022) stresses that depersonalization and derealization are often underreported across different cultural settings and that a culturally sensitive assessment of dissociation is complicated by the variability of dissociative experiences. Therefore, future research should focus on culturally sensitive assessment methods for dissociation, and treatment approaches for dissociation in refugees should incorporate culture-specific adaptations (Chessell et al., 2019). Stakeholders and experts by experience could be interviewed on their views of dissociation in diverse cultural settings to help inform culturally sensitive assessments and interventions. Similarly, health care workers should be trained to assess and detect dissociation with cultural sensitivity – these trainings could even be carried out by experts from within the communities. Taken together, it might be especially important to assess dissociation in refugees since there are normally rather small effects in the PTSD treatment (Turrini et al., 2025) and future research could investigate whether dissociation might complicate the treatment of refugees with PTSD. Also, handling dissociation in the treatment of refugees might be aggravated if there are language barriers, if translators are needed during the treatment or by cultural aspects. Dissociation could further lead to dropouts if it is not assessed, addressed in psychoeducation, and potentially reduced.

There are some limitations to our findings that need to be discussed. First, the generalizability of our results is limited by the inclusion of only treatment-seeking refugees, the cross-sectional nature of our data and the relatively small sample size. Additionally, the CAPS-5, COPISAC, and the ADES-8 are not culturally adapted. Even though their reliability and validity have been proven in previous studies (e.g., Martínez-Taboas et al., 2004; Mueller-Engelmann et al., 2020), it is possible that their use underestimated the frequency and severity of dissociation (Şar, 2022). Data were drawn from the baseline assessment of a large randomized controlled trial that relied on standard assessments in the field with the disadvantage of lacking cultural adaptation. Future studies should investigate dissociation and PTSD in refugees with culturally sensitive measures. However, our findings extend the currently very limited literature on the association of dissociation and cPTSD in general and in refugees specifically. To the best of our knowledge, this is the first study that investigated both the PTSD-DS rate and the associations of cPTSD symptoms with dissociation severity in refugees. In addition, we used clinician-assessments for all measures except the ADES-8, which probably enhances the validity of the diagnostic results (Kramer et al., 2023).

To conclude, our results suggest that there is a significant subgroup of individuals with PTSD who experience classical depersonalization and derealization symptoms. We suggest to routinely assess dissociative symptoms and consider them in treatment planning to be able to choose appropriate interventions, especially when working with refugees.

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Author contributions

Mirjam Sophie Rueger: Conceptualization, Data curation, Formal analysis, Methodology, Project administration, Writing – original draft **Kai Jannik Nehler:** Data curation, Formal analysis, Methodology, Writing – review and editing **Franziska Lechner-Meichsner:** Project administration, Writing – review and editing **Thomas Ehring:** Funding acquisition, Writing – review and editing **Hannah Preiss (nee Schumm):** Investigation, Writing – review and editing **Nexhmedin Morina:** Funding acquisition, Writing – review and editing **Ahlke Kip:** Investigation **Ricarda Mewes:** Writing – review and editing **Julia Giesebrecht:** Investigation **Cornelia Weise:** Writing – review and editing **Regina Steil:** Conceptualization, Data curation, Funding acquisition, Methodology, Supervision, Writing – review and editing

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Data availability statement

The participants of this study did not give written consent for their data to be shared publicly, so due to the sensitive nature of the research raw data is not available.

Declaration of generative AI and AI-assisted technologies in the writing process

During the preparation of this work, the authors used ChatGPT 5.0 in order to improve readability and language. After using this tool, the authors reviewed and edited the content as needed and take full responsibility for the content of the publication.

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