Psychological Injury and Law (2020) 13:178–186
https://doi.org/10.1007/s12207-020-09381-y

The Dissociative Subtype of Posttraumatic Stress Disorder: Forensic Considerations and Recent Controversies

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Received: 1 October 2019 / Accepted: 19 May 2020 / Published online: 3 July 2020

Abstract
This article provides an overview of the evidence concerning the dissociative subtype of posttraumatic stress disorder (PTSD) and its relevance in forensic contexts. We discuss best practices for the assessment of the subtype in forensic settings, including consideration of malingering, and the impact of the subtype on witness presentation and potential award determinations. We review recent debate concerning the definition of the subtype and how multivariate analyses can be used to inform the understanding of the relationship between PTSD and dissociation. Altering the definition of the subtype (or of the core PTSD criteria), such as by including additional types of dissociative symptoms, would likely hold major implications for diagnostic prevalence and comorbidity and could substantially affect forensic cases involving the dissociative subtype of PTSD. We suggest that for *DSM-6*, it would be best to use structural evidence to decide how best to revise the subtype and accurately capture its relationship with the core PTSD symptoms. It is important for forensic experts to be well-versed in the state of the science concerning this condition so as to reliably and validly assess clients and inform triers of fact of the strengths and weaknesses of this body of work.

Keywords Dissociative subtype · PTSD · Dissociation · Symptoms · Forensic

The diagnosis of posttraumatic stress disorder (PTSD) underwent major changes with the publication of the fifth edition of the *Diagnostic and Statistical Manual* in 2013 (*DSM-5*; American Psychiatric Association [APA], 2013), including the addition of a dissociative subtype of PTSD to reflect a unique presentation of the disorder. The dissociative subtype is defined as meeting full criteria for PTSD plus demonstrating comorbid, clinically meaningful symptoms of derealization (i.e., a sense of unreality of surroundings, such as feeling dreamlike, distant, or distorted) and/or depersonalization (i.e., a sense that one is detached from and observing one's own mental processes or body as though an objective observer; APA, 2013). Although there is substantial evidence for the subtype, there is not yet consensus regarding how best to conceptualize the relationship between PTSD and dissociation or which dissociative symptoms to include in the diagnosis. These questions pose special considerations in forensic settings. In this article, we discuss general issues pertaining to evaluation of the dissociative subtype in forensic settings and then discuss how multivariate analyses, such as latent class and profile analyses (LCA and LPA, respectively) and factor analyses, can be used to inform our understanding of the subtype. Lastly, we consider the implications of this line of research for the diagnostic taxonomy and for forensic evaluations.

Initial Structural Support for the Dissociative Subtype

Derealization and depersonalization were used to define the subtype in *DSM-5* because the initial LCA/LPA studies suggested that scores on these items were uniquely elevated. Specifically, the first study to use LPA to examine the evidence for a dissociative subtype of PTSD was conducted in 492 trauma-exposed individuals (Wolf, Miller, et al., 2012). Results revealed a three-class solution defined by a low PTSD symptom severity group (51.42% of the total sample), a high PTSD symptom severity class (42.28%), and a class consisting of both high PTSD symptom severity and substantial dissociative symptoms (6.10%; 12.14% of the sample with current PTSD). Though three dissociation items were

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evaluated (reductions in awareness of experience, derealization, and depersonalization), only derealization and depersonalization showed evidence of a subtype structure (e.g., defining a distinct group of individuals). These dissociative symptoms were assessed with the Clinician-Administered PTSD Scale for *DSM-IV* (CAPS; Blake et al., 1995), a structured diagnostic interview. The reduction in awareness of experience item was related to both the high PTSD group (i.e., without elevations on derealization and depersonalization) and to the dissociative group. In contrast, derealization and depersonalization were prevalent only in the uniquely defined dissociative group. Since the publication of Wolf, Miller, et al. (2012), fifteen additional studies have replicated the existence of a dissociative subtype of PTSD using LCA or LPA (see Table 1). Furthermore, since the publication of the *DSM-5*, there have been numerous studies examining the phenomenology of the subtype, its neurobiology, and the implications for PTSD course and treatment (see, e.g., Dutra & Wolf, 2017; Hansen, Ross, & Armour, 2017; Lanius, Brand, Vermetten, Frewen, & Spiegel, 2012).

The Dissociative Subtype: Considerations in Forensic Contexts

Evaluation of the dissociative subtype of PTSD in forensic settings raises several concerns with respect to assessment, potential for malingering, presentation in court proceedings, and expert testimony regarding the nature of the subtype. In forensic evaluation of dissociation in the context of PTSD and trauma, it is important to start by conducting a trauma-informed assessment by establishing a trusting working relationship and creating a safe and predictable environment for the client. However, even under the best of conditions, several issues may arise that interfere with valid assessment, including a client's experience of shame, distrust, avoidance, issues with memory, and the potential for malingering (Brand, Schielke, Brams, & DiComo, 2017). As Brand, Schielke, Brams, and DiComo (2017) noted, these challenges may lead the individual to discontinue a case or refuse to testify (e.g., avoidance), fail to answer questions, dissociate during the assessment, or provide inaccurate or exaggerated symptom reports. Each of these presentations would clearly complicate a forensic evaluation. Best practices for mitigating these concerns are to use a comprehensive approach for the assessment of both PTSD and the dissociative subtype that includes (1) self-report measures, ideally with markers of symptom over-reporting, such as those embedded in the Minnesota Multiphasic Personality Inventory-2-Restructured Form (Ben-Porath & Tellegen, 2008); (2) standardized clinician-administered interviews, such as the Clinician-Administered PTSD Scale for *DSM-5* (CAPS-5), which includes assessment of both the core PTSD and the dissociative symptoms that define the subtype (Weathers et al., 2018); (3) complete medical, psychological, legal, occupational, and educational history review; (4) clinician observation; and (5) collateral reports. As with any assessment, it is critical that interviewers ask for examples of each symptom, clarify vague responses, and are careful not to ask leading questions.

In assessing malingering in this population as part of a comprehensive evaluation, clinicians should be aware that individuals with extensive trauma histories and dissociative symptoms have been shown to produce elevated scores on validity scales of standardized assessments, but this may not be due to true symptom exaggeration (Brand, Schielke, Brams, & DiComo, 2017). Rather, this may reflect that symptom validity items, like dissociative phenomenology, are often comprised of odd and unusual symptoms. This is another reason why it is important to include multiple assessment modalities (e.g., interview, self-report, and clinical observation), as it allows the assessor to evaluate the consistency of response and consider how well symptoms align with typical presentations. No studies to date have examined the performance of existing malingering or symptom over-reporting measures in those with the dissociative subtype of PTSD specifically; thus, this remains an important area of research.

The presence of dissociative symptoms is not unique to PTSD, of course, as they appear in the core dissociative disorders, panic disorder, and borderline personality disorder, among others, and the clinical presentation may at times be difficult to differentiate from sleep disorders, inattention, epilepsy, and the acute effects of substance intoxication. Further complicating this is the observation that trauma histories are common across psychiatric diagnostic groups and not necessarily specific to PTSD (e.g., Brown et al., 2014; Sunderland et al., 2016). Thus, it is important for forensic assessments to be broad and comprehensive using well-validated measures and for the assessor to actively avoid clinician confirmation biases with respect to diagnosis. The dissociative subtype of PTSD cannot be diagnosed unless core PTSD criteria are also met, and this may be particularly important for distinguishing the subtype from a primary dissociative disorder. It is also important to attend to the *DSM* guidelines: for example, per *DSM-5*, dissociative amnesia should not be diagnosed if PTSD-related psychogenic amnesia better accounts for the clinical presentation (i.e., psychogenic amnesia is restricted to memories of traumatic events that meet Criterion A for PTSD). Thus, the trauma-relatedness of the amnesia is an important point of consideration. In general, there is a relative lack of research concerning differential diagnosis of the dissociative subtype relative to primary dissociative disorders and other conditions, and this remains an important area for future work.

Additional forensic concerns have to do with the presentation of clients with dissociative symptoms in the courtroom. Individuals with the dissociative subtype may not appear (to

Table 1 Structural studies of the dissociative subtype of PTSD using LCA/LPA

Study	Sample size	Sample description	Dissociation measure used	Support subtype?	DS prevalence
Armour, Elklit, et al. (2014)	351	European survivors of rape	TSC	Yes	13.11%
Armour, Karstoft, and Richardson (2014)	432	Treatment-seeking Canadian veterans	CAPS	Yes	13.66%
Bennett, Modrowski, Kerig, and Chaplo (2015)	225	Youth with PTSD	A-DES	Yes	8.89%
Blevins et al. (2014)	541	Trauma-exposed college students	MDI	Yes	12.20%
Burton et al. (2018)	200	Men and women with chronic PTSD	DES	Yes	12.00%
Choi et al. (2017)	3081	Trauma-exposed, treatment-seeking adolescents	TSCC-A	Yes	14.70%
Frewen et al. (2015)	557	People with at least moderate PTSD symptoms, collected via Amazon Mechanical Turk	TRASC	Yes	33.03%
Gidzgier et al. (2019)	258	Female patients with SUD and PTSD	DES	Yes	31.01%
Guetta et al. (2019)	209	Trauma-exposed veterans	DSPS	Yes	8.61%
Hansen, Műllerová, Elklit, and Armour (2016)	787	2 samples of MVA and incest survivors	TSC	Yes	37.40, 44.55%
Műllerová et al. (2016)	309	Trauma-exposed people, collected via Amazon Mechanical Turk	DSS	Yes	26.86%
Ross et al. (2018)	689	Trauma-exposed university students from Slovakia	DSS	Yes	3.48%
Steuwe et al. (2012)	135	Civilians with CSA histories	CAPS	Yes	25.19%
Wolf et al. (2017)	697	Trauma-exposed veterans and their trauma-exposed partners, online survey	DSPS	Yes	6.03%
Wolf, Miller, et al. (2012)	492	Trauma-exposed veterans and their trauma-exposed spouses or intimate partners	CAPS	Yes	6.10%
Wolf, Lunney, et al. (2012)	360; 284	Male Vietnam war veterans; female veterans	CAPS & TSI	Yes	15.00%, 29.93%

LCA/LPA, latent class analysis/latent profile analysis; DS prevalence, sample prevalence of the dissociative subtype of PTSD; PTSD, posttraumatic stress disorder; SUD, substance use disorder; MVA, motor vehicle accident; CSA, childhood sexual abuse; TSC, Trauma Symptom Checklist (Briere & Runtz, 1989); CAPS, Clinician-Administered PTSD Scale (Blake et al., 1995); A-DES, Adolescent Dissociative Experiences Scale (Armstrong, Putnam, Carlson, Libero, & Smith, 1997); MDI, Multiscale Dissociation Inventory (Briere, 2002); DES, Dissociative Experiences Scale (Bernstein & Putnam, 1986); DSPS, Dissociative Subtype of PTSD Scale (Wolf et al., 2017); TSCC-A, Trauma Symptom Checklist for Children—Alternate Version (Briere, 1996); TRASC, Trauma-Related Altered States of Consciousness (Frewen & Lanius, 2014); DSS, Dissociative Symptoms Scale (Carlson et al., 2018); TSI, Trauma Symptom Inventory (Briere, 1995)

judges and juries) to fit the PTSD prototype, and their affect in the courtroom may be misunderstood. Lanius et al. (2012) demonstrated that the subtype is defined, from a neurobiological perspective, by blunted or inhibited affect and arousal, even in the context of exposure to what would otherwise be distressing details or reminders of trauma (see also, Brand, Schielke, & Brams, 2017). An individual with the subtype who does not become visibly distressed when discussing traumatic experiences may be misinterpreted as calm and unbothered, and this could negatively impact the perceived credibility of the witness or the damages awarded in a civil trial for pain and suffering. Research suggests that this presentation violates common jury schemas that victims will show suffering through a highly emotional presentation (Kaufmann, Drevland, Wessel, Overskeid, & Magnussen, 2003; Menaker & Cramer, 2012). Thus, it is important for the expert in the courtroom to inform the triers of fact of this presentation to reduce the likelihood that individuals with the subtype will be misinterpreted.

The dissociative subtype of PTSD may also be an issue in defense arguments. Defendants in tort cases could argue that a plaintiff's dissociative subtype diagnosis mitigates the defendant's liability for losses or damages as a result of accident or injury (e.g., the index trauma) because some models of dissociation frame these symptoms as a preexisting or premorbid factor, rather than a consequence of the trauma (see Brand, Schielke, & Brams, 2017, and Brand, Schielke, Brams, & DiComo, 2017, for reviews addressing trauma-related dissociation in the forensic context; see Dalenberg et al., 2012, and Lynn et al., 2014, 2019, for debate concerning models of the etiology of dissociation). Specifically, it could be argued that the presence of dissociative symptoms indicates that there was preexisting psychopathology due to childhood trauma (Dalenberg et al., 2012) or a more basic biological vulnerability, such as stable traits (e.g., fantasy proneness, suggestibility) or cognitive deficits (Lynn et al., 2014). Thus, in a case in which a defendant is accused of causing harm to the plaintiff (e.g., by negligently causing a motor vehicle accident that

became an index trauma) that resulted in the plaintiff developing the dissociative subtype of PTSD, the defense could argue that the plaintiff's dissociative symptoms are not a function of the index trauma exposure, but rather they represent a preexisting condition. This may then mitigate the defendant's liability for the plaintiff's pain and suffering (e.g., dissociative symptoms). The counterargument to this is that the diathesis-stress model posits that the development of psychopathology is a function of an interaction between environmental stressors and underlying biological predisposition. Indeed, major models of dissociation agree that stress potentiates dissociation (see Lynn, Lilienfeld, Merckelbach, Giesbrecht, & van der Kloet, 2012). Thus, a new traumatic stressor could exacerbate premorbid dissociative tendencies, leading an individual to meet criteria for the dissociative subtype.

Multivariate Analyses to Inform Diagnostic Taxonomy: What is in a Name

An important issue in forensic settings is the consideration of which dissociative symptoms are present because not all forms of dissociation meet the diagnostic criteria for the dissociative subtype of PTSD, and there is substantial debate concerning which symptoms should be included in the subtype. In examining the structural evidence for the dissociative subtype, we focus on the use of LCA, LPA, and factor analyses. LCA and LPA can be used to identify a distinct subgroup of individuals with PTSD and dissociative symptoms, while factor analyses can be used to identify the associations between symptoms (e.g., items on surveys and interviews) and their underlying constructs. Knowledge of these multivariate analytic approaches is critical for evaluating the validity of the published literature, particularly in forensic contexts, in which the expert witness might be called upon to explain the scientific basis of this body of research and the analytic approach.

LCA (for binary items) and LPA (for dimensional items) are a type of a multivariate mixture model in which individuals are grouped empirically into classes based on the similarity of their responses across multiple items (classes are not known a priori; see Nylund-Gibson & Choi, 2018, for a review of LCA/LPA). This analytic approach assumes that once group or class membership is accounted for, the items submitted to the analysis are no longer correlated with each other (which is often an untenable assumption in psychiatric symptom data). Class models conceptually align with the concept of a subtype. The term "subtype" is used to define discrete subgroups from a larger heterogenous population. Subgroups differ from each other qualitatively in meaningful ways, not just by degree. In contrast, dimensional models assume that there is an underlying or latent dimensional construct(s), such as a severity gradient, that is common across items. The terms "class," "cluster," and "factor" are not interchangeable.

When executing a class model, it is important to note that a class model will be returned to the user even if a dimensional solution would fit the data better. A common example of this problem is when classes differ from each other by degree, in what is affectionately referred to as a "salsa pattern" (e.g., classes follow a similar pattern but differ from each other by symptom severity, like mild, medium, and hot salsa). This pattern of results implies that a subtype configuration is not supported, but rather yields evidence of a linear relationship (see Hallquist & Wright, 2014). The relative fit of a class model can be statistically compared to that of a dimensional model to determine which best represents the associations among the data. Evidence for a dimensional structure is evidence against a subtype.

Symptoms that Define the Subtype: Examining the Evidence

Although forensic experts must follow the current diagnostic criteria, regardless of whether they agree with them, understanding the meaning of structural models and consideration of the implications of potential changes to the criteria for forensic work is critical for conducting high quality assessments and delivering expert testimony. Several researchers (Armour, Karstoft, & Richardson, 2014; Choi et al., 2017; Műllerová, Hansen, Contractor, Elhai, & Armour, 2016; Ross, Baník, Dědová, Mikulášková, & Armour, 2018) have suggested that the inclusion of only derealization and depersonalization in the dissociative subtype criteria may be insufficient. These authors also suggested that more research is needed to determine the optimal subtype definition. Műllerová et al. (2016) and Armour, Karstoft, and Richardson (2014) collectively suggested that reduction or loss of awareness, disengagement, memory disturbance, identity dissociation, time loss, trance, amnesia, and absorption be considered for inclusion in the subtype. Further, some researchers have argued that PTSD symptoms are actually dissociative at a most basic level (see Dalenberg & Carlson, 2012; Dorahy & van der Hart, 2015; Nijenhuis, 2014; Ross, 2018). As such, Dorahy and van der Hart (2015) and Ross et al. (2018) suggested that separating derealization and depersonalization from symptoms linked to dissociation that are already embedded in the core PTSD criteria (e.g., dissociative flashbacks, amnesia, emotional numbing) was problematic and argued for the inclusion of more dissociative symptoms as core features of the PTSD diagnosis (as opposed to a separate subtype). These competing approaches to defining both PTSD and PTSD-related dissociation contain implications for clinicians, patients, and

forensic evaluators alike, highlighting the importance of developing an evidenced-based model that is reliable and valid.

Studies have explicitly examined the nature of the association between dissociation and PTSD using a range of dissociative symptoms to evaluate which best distinguished the subtype from the core PTSD symptoms. Guetta et al. (2019) and Wolf et al. (2017) evaluated a new assessment tool to assess the dissociative subtype: the Dissociative Subtype of PTSD Scale (DSPS). Both found that the new measure, when administered as a self-report or interview, replicated the classic subtype structure with symptoms of derealization and depersonalization showing the strongest discrimination for the subtype as compared to various other dissociative symptoms. Specifically, Wolf et al. (2017) found that probability of membership in the dissociative subtype correlated with the Derealization/Depersonalization DSPS subscale at $r = 0.84$, while probability of membership in the dissociative subtype correlated with the Loss of Awareness and Psychogenic Amnesia DSPS subscales at rs = 0.50 and 0.20, respectively. The Derealization/Depersonalization subscale contributed far greater variance to subtype membership than did the other forms of dissociation included in the DSPS. Kerig et al. (2016) also found that only depersonalization and derealization (and not amnesia or loss of conscious control) significantly predicted assignment to the dissociative subtype in a logistic regression model among detained trauma-exposed youth.

Alternate conclusions were reached by Ross et al. (2018), who examined a sample of trauma-exposed university students in Eastern Europe with the PTSD checklist for *DSM-5* (PCL-5; Weathers et al., 2013). Dissociation was measured with the four subscales from the self-report Dissociative Symptoms Scale (DSS; Carlson et al., 2018), which includes symptoms of depersonalization/derealization, breaks or gaps in memory and awareness, sensory distortions, and reexperiencing. Results supported a four-class solution: an asymptomatic class (55.30%), a moderate PTSD class (30.48%), a high PTSD class (10.74%), and a class marked by both high PTSD and elevations across all four dissociative scales (3.48%). All four DSS subscales were significantly higher in the dissociative class compared to the high PTSD class, with Cohen's *d* effect sizes for score differences across the two high PTSD classes ranging from 1.77 (reexperiencing) to 2.62 (sensory misperceptions). The effect size for the subscale capturing symptoms of derealization and depersonalization was not reported. Based on this pattern of results, Ross et al. (2018) concluded: "…limiting the dissociative PTSD subtype to symptoms of depersonalization and derealization may be inaccurate …if the results are replicated in future studies, a revision to the *DSM-5* diagnostic criteria for PTSD may be necessary" (p. 94).

Choi et al. (2017) directly tested the effect of including additional dissociative symptoms on the results of class analyses and extended research on the subtype to a clinical sample of trauma-exposed adolescents. In one model that exclusively used depersonalization and derealization items (assessed with the self-report Trauma Symptom Checklist for Children—Alternate Version; TSCC-A; Briere, 1996), they found that five classes best fit the data: a low symptom severity class (21.39%), a class marked by anxious arousal PTSD symptoms (20.90%), one marked by dysphoric arousal PTSD symptoms (16.20%), one with overall high levels of PTSD symptom severity (27.10%), and a dissociative subtype/high PTSD class (14.41%). However, when adding the other items from the TSCC-A Dissociation scale (i.e., fantasy, daydreaming, emotional numbing, dissociative amnesia, dissociative avoidance, and dizziness), the class solution changed and was defined by a high dissociative/high PTSD class and a second moderate dissociation/moderate PTSD class. Choi et al. concluded that assessment of derealization and depersonalization was insufficient for capturing dissociative phenomenology associated with PTSD among adolescents, citing daydreaming, amnesia, and dissociative avoidance as important additional symptoms to assess. However, these researchers did not compare the fit of these results to that of a factor analysis, and it is possible that the resulting moderate PTSD/dissociation and high PTSD/dissociation classes more simply represented a dimension of symptom severity when nonspecific dissociative symptoms were included in the model.

One argument for including other types of dissociation in the subtype is that these additional symptoms tend to be elevated in those with the subtype (e.g., Műllerová et al., 2016; Ross et al., 2018). However, studies that have directly compared the severity of multiple forms of dissociation across the dissociative group and the PTSD-only group have found no significant differences in severity of reductions in awareness (Steuwe, Lanius, & Frewen, 2012; Wolf, Lunney, et al., 2012),"blanking out" (Eidhof et al., 2019), amnesia (Wolf et al., 2017; Eidhof et al., 2019), loss of conscious control (Kerig et al., 2016), emotional constriction and numbing (Frewen, Brown, Steuwe, & Lanius, 2015; Eidhof et al., 2019), and identity confusion (Eidhof et al., 2019). Thus, these symptoms failed to uniquely differentiate the dissociative subtype from those with PTSD only and instead appear to be associated with level of PTSD severity (i.e., may reflect a shared underlying dimension or common construct with core PTSD features).

The results of factor analyses suggest that symptoms of depersonalization and derealization are relatively independent from the core PTSD symptoms, indicating that they do not share a common underlying factor with PTSD (Frewen et al., 2015; Steuwe et al., 2012). Related to this, depersonalization and derealization tend to be, at best, modestly correlated with core PTSD symptom severity (Armour, Karstoft, & Richardson 2014; Burton, Feeny, Connell, & Zoellner,

2018; Eidhof et al., 2019; Guetta et al., 2019; Wolf, Miller, et al., 2012), whereas reductions and loss of awareness have been found to more strongly correlate with PTSD than with the dissociative subtype (Armour, Karstoft, & Richardson, 2014; Guetta et al., 2019; Wolf, Miller, et al., 2012). Taken together, the evidence to date suggests that although individuals with the subtype may have greater dissociative symptoms overall, symptoms of derealization and depersonalization show the most robust and consistent evidence of uniquely defining a subgroup.

Diagnostic and Forensic Implications of Changes to the Dissociative Subtype

If the definition of the subtype were expanded to include a broader array of dissociative symptoms, then the nature of the association between PTSD and the dissociative symptoms would not align with the definition of a subtype. Forensic psychologists need to be aware of this possibility because if symptoms are included in the subtype that do not empirically support a subtype structure, competing expert witnesses could cite this evidence to argue against the meaning and validity of the subtype and thus its relevance to a given case at hand. In the event that a subtype structure is not supported, some investigators have suggested that it would follow that dissociative symptoms would need to be included in the core definition of PTSD, along with psychogenic amnesia, emotional numbing, and flashbacks (Dorahy & van der Hart, 2015; Ross, 2018). However, it is unclear where dissociative symptoms would best align. Dalenberg and Carlson (2012) suggested that dissociative experiences belong with the reexperiencing symptoms; however, placing dissociative symptoms into this criterion would be problematic as the reexperiencing symptoms are fundamentally anchored to the reliving of traumatic experiences (APA, 2013), which is not a feature of dissociative symptoms (other than flashbacks). Alterations to the core definition of PTSD would require empirical investigation first to determine if the implied structure is supported and if so, the impact of this approach on the prevalence of the PTSD diagnosis, the heterogeneity of the disorder, and its comorbidity with other diagnoses.

An additional issue is that dissociation is a broad construct encompassing symptoms that range from rare to common experiences. For instance, Armour, Karstoft, and Richardson (2014) reported that just 16.11% and 27.96% of their PTSD sample met the dissociative subtype criteria for depersonalization and derealization on the CAPS, respectively. In contrast, 64.45% of their sample met criteria for reductions in awareness of experience, which has also been shown to be a common experience in the general population (estimated at 29% per Ross, Joshi, & Currie, 1990). This is problematic for inclusion in the subtype criteria as, by definition, common symptoms cannot be used to identify a unique group of individuals. Related to this, reductions in awareness of experiences correlate moderately to strongly with normal-range traits, such as absorption and fantasy proneness (Giesbrecht, Lynn, Lilienfeld, & Merckelbach, 2008; Waller, Putnam, & Carlson, 1996). Factor analyses have also found considerable overlap between reductions in awareness and absorption (Carleton, Abrams, & Asmundson, 2010). Collectively, this suggests that reductions in awareness of experience and trait absorption reflect a shared underlying construct. Based on the estimates of the prevalence of reductions in awareness of experience and its association with non-pathological traits, the inclusion of this symptom either as a core PTSD feature (in the event that the dissociative subtype was eliminated in favor of incorporating dissociative symptoms into the core PTSD criteria as suggested by Dalenberg & Carlson, 2012; see above) or as part of the definition of the dissociative subtype would likely increase the prevalence of these conditions. The subtype would not be particularly informative if these criteria were met by virtue of a nonspecific and common experience.

With respect to forensic implications, the inclusion of common dissociative experiences in the dissociative subtype would raise concerns that normal-range dissociative symptoms (i.e., feeling "checked out") could be used as mitigating factors (e.g., as an index of extreme psychopathology) in criminal cases when this is unwarranted. We suspect that inclusion of normal-range traits in the definition of the subtype could also make it easier for individuals to malinger such symptoms given the familiarity that the general population has with these common experiences. This would be expected to simultaneously make it more difficult for evaluators to identify valid symptoms from malingering. Furthermore, the presence of the dissociative subtype would lose its clinical utility and obscure a unique subgroup of individuals with a different constellation of problems, such as greater comorbidity (Stein et al., 2013; Steuwe et al., 2012), substance use (Blevins, Weathers, & Witte, 2014; Gidzgier et al., 2019; Mergler et al., 2017; Tsai, Armour, Southwick, & Pietrzak, 2015), suicidality (Eidhof et al., 2019; Mergler et al., 2017; Stein et al., 2013), functional impairment (Boyd et al., 2018; Stein et al., 2013), and blunted affect (Lanius et al., 2012).

In line with this, Burton et al. (2018) recently provided evidence that the subtype is associated with differential treatment response (consistent with a finding by Wolf, Lunney, & Schnurr, 2016). Burton et al. conducted a latent transition analysis to examine class structure over the course of a randomized controlled treatment trial among 200 men and women with chronic PTSD. Dissociation was assessed with the Depersonalization/Derealization subscale of the self-report Dissociative Experiences Scale (DES; Bernstein & Putnam, 1986). A four-class solution emerged in the baseline data, which the authors labeled: moderate pathology (52.50%), non-dissociative avoidant (19.00%), non-dissociative

dysphoric (16.50%), and dissociative-reexperiencing (12.00%), the last of which corresponded to the dissociative subtype. The study also examined individual class transitions in response to PTSD treatment (prolonged exposure [PE] versus sertraline): four classes of treatment response emerged, consisting of a high-response (i.e., greatest reductions in PTSD symptoms), a low response, and two moderate response groups. Membership in the dissociative-reexperiencing class at baseline was related to a reduced likelihood of transitioning to the high-response class over time, and this effect was moderated by treatment type. Specifically, only 16.67% of those with the subtype who were assigned to the sertraline condition transitioned to the high-response class (i.e., showed marked improvement in PTSD symptoms), while a majority of those in the PE condition (68.97%) transitioned to the high-response class. This implies that treatment matching (i.e., personalized medicine) may be critical to effective treatments for those with the dissociative subtype of PTSD, especially when considering the use of trauma-focused therapy versus medication. This unique treatment response highlights the utility of the subtype nomenclature and may hold implications for awards for damages in civil suits, given that these symptoms may be associated with a more intractable symptom course.

Conclusions

A substantial number of studies have yielded consistent evidence of a dissociative subtype of PTSD. Though there is some variability in the prevalence estimates of the subtype and the structure of the core PTSD symptoms, all LCA/LPA studies of dissociation and PTSD that we reviewed found evidence of a dissociative group that was uniquely defined by these symptoms. The inclusion of the dissociative subtype in the *DSM* means that it will be further vetted in forensic settings, where dissociative symptoms raise unique considerations with respect to assessment, presentation in the courtroom, and determination of damages.

Forensic experts need to be well-versed in the current state of the literature on the dissociative subtype of PTSD, including how different analytic approaches can inform understanding of the diagnostic criteria and how best to assess the subtype in order to evaluate the potential for malingering and to inform triers of fact regarding both the presentation of the subtype in the courtroom and the state of the science concerning this condition. A comprehensive and multimodal psychological evaluation, inclusive of assessment of trauma exposure, PTSD, a broad range of dissociative symptoms and of other psychiatric disorders, and malingering, is critical for ensuring the validity of diagnostic determinations.

Although forensic experts must follow the established diagnostic criteria, regardless of whether they agree with them, we argue that it is important to consider how potential changes to the *DSM* could impact their work. Looking forward to *DSM-6*, we suggest that structural evidence should dictate whether or not additional dissociative symptoms are added to the diagnostic criteria for the dissociative subtype. If additional symptoms result in a structure that does not correspond to a subtype, then the subtype should no longer be included as a diagnostic specifier. The benefits of eliminating the subtype to add more dissociative symptoms would need to be weighed against the risks associated with the inability to identify a unique group of individuals with PTSD who may have a distinct neurobiology, symptom presentation, and course of symptoms. Now is the time to conduct the high-quality investigations that will ultimately inform such changes with the aim of making the *DSM* as robust, reliable, and accurate as possible.

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