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# Posttraumatic Stress Disorder and Complex Posttraumatic Stress Disorder in *DSM-5* and *ICD-11*: Clinical and Behavioral Correlates

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The American Psychiatric Association and the World Health Organization provide distinct trauma-based diagnoses in the fifth edition of the *Diagnostic and Statistical Manual (DSM-5)*, and the forthcoming 11th version of the *International Classification of Diseases (ICD-11)*, respectively. The *DSM-5* conceptualizes posttraumatic stress disorder (PTSD) as a single, broad diagnosis, whereas the *ICD-11* proposes two "sibling" disorders: PTSD and complex PTSD (CPTSD). The objectives of the current study were to: (a) compare prevalence rates of PTSD/CPTSD based on each diagnostic system; (b) identify clinical and behavioral variables that distinguish *ICD-11* CPTSD and PTSD diagnoses; and (c) examine the diagnostic associations for *ICD-11* CPTSD and *DSM-5* PTSD. Participants in a predominately female clinical sample (N = 106) completed self-report scales to measure *ICD-11* PTSD and CPTSD, *DSM-5* PTSD, and depression, anxiety, borderline personality disorder, dissociation, destructive behaviors, and suicidal ideation and self-harm. Significantly more people were diagnosed with PTSD according to the *DSM-5* criteria (90.4%) compared to those diagnosed with PTSD and CPTSD according to the *ICD-11* CPTSD diagnosis by higher levels of dissociation (d = 1.01), depression (d = 0.63), and borderline personality disorder (d = 0.55). Diagnostic associations with depression, anxiety, and suicidal ideation and self-harm were higher for *ICD-11* CPTSD compared to *DSM-5* PTSD (by 10.7%, 4.0%, and 7.0%, respectively). These results have implications for differential diagnosis and for the development of targeted treatments for CPTSD.

The American Psychiatric Association (APA) and the World Health Organization (WHO) provide distinct descriptions of trauma-related psychopathology. In the fifth edition of the Diagnostic and Statistical Manual of Mental Disorders (DSM-5; APA, 2013), posttraumatic stress disorder (PTSD) is described by 20 symptoms across four symptom clusters: intrusions (five symptoms), avoidance (two symptoms), negative alterations in cognition and mood (NACM; seven symptoms), and arousal (six symptoms). A diagnosis of PTSD requires the presence of at least one intrusion, one avoidance, two NACM, and two arousal symptoms, plus evidence of functional impairment. In contrast, in the forthcoming 11th version of the International Classification of Diseases (ICD-11), the WHO proposes two "sibling" disorders: PTSD and complex PTSD (CPTSD; Maercker et al., 2013). In the ICD-11, PTSD is substantially refined relative to DSM-5, and includes six symptoms across three clusters:

reexperiencing in the here and now (two symptoms), avoidance (two symptoms), and sense of threat (two symptoms). A diagnosis of ICD-11 PTSD requires the presence of one symptom per cluster, plus evidence of functional impairment. Relative to PTSD, CPTSD in the ICD-11 is a broader diagnosis that includes the core PTSD symptoms plus an additional set of "disturbances in self-organization" (DSO) symptoms, which are intended to capture the pervasive psychological disturbances that can follow traumatic exposure. The DSO symptoms are expected to arise following exposure to traumatic events that are of an interpersonal nature, particularly those that occur during early development, and from which escape is difficult or impossible (e.g., childhood sexual abuse, torture, captivity). The DSO symptoms are distributed across three clusters: affective dysregulation, negative self-concept, and disturbances in relationships. A CPTSD diagnosis requires that the PTSD criteria be met in addition to the endorsement of symptoms from the three DSO clusters.

To date, numerous studies employing confirmatory factor analysis and latent class analysis have provided empirical support for the construct validity of *ICD-11* PTSD and CPTSD (see Brewin et al., 2017). Authors of several studies have also found that CPTSD, compared to PTSD, is associated with

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an increased incidence of childhood trauma (Cloitre, Garvert, Brewin, Bryant, & Maercker, 2013; Hyland, Murphy et al., 2017), and higher levels of functional impairment (Karatzias et al., 2017; Murphy, Elklit, Dokkedahl, & Shevlin, 2016). However, relatively less research has focused on the identification of clinical and behavioral correlates that are associated with an elevated risk of CPTSD. Emerging evidence has suggested that depression, negative trauma-related cognitions, reduced distress tolerance (Hyland, Shevlin et al., 2017), dissociation, anxiety, and aggression (Elklit, Hyland, & Shevlin, 2014) may be associated with an increased risk of CPTSD. At present, there are few psychological treatments specifically designed to treat CPTSD (Cloitre et al., 2010); therefore, the identification of clinical factors that meaningfully differentiate CPTSD from PTSD may have important implications not only for differential diagnosis but also for the development of targeted treatments for CPTSD.

Several studies have found that prevalence of DSM-5 PTSD is significantly higher than ICD-11 PTSD and CPTSD (e.g., Hansen, Hyland, Armour, Elklit, & Shevlin, 2015; Hyland, Shevlin et al., 2017; O'Donnell et al., 2014). The introduction of the new NACM symptoms in DSM-5 has also prompted suggestions that DSM-5 PTSD may have more in common with ICD-11 CPTSD than it does with ICD-11 PTSD (Friedman, 2013). Only one study has directly compared the clinical correlates of DSM-5 PTSD and ICD-11 CPTSD. In a sample of 190 African American women, ICD-11 CPTSD was associated with significantly higher rates of comorbidity with depression, alcohol dependence, and substance dependence compared with DSM-5 PTSD (Powers et al., 2017). This suggests that despite the similarity in symptom content, ICD-11 CPTSD and DSM-5 PTSD may have distinct clinical presentations, with ICD-11 CPTSD being associated with higher levels of psychological distress.

The current study had three objectives. First, prevalence rates based on the *DSM-5* criteria (for PTSD) and the *ICD-11* guidelines (for PTSD and CPTSD) were statistically compared. On the basis of existing data, we hypothesized that significantly more people would meet diagnostic status according to the *DSM-5* criteria. Second, we compared participants who met diagnostic status for *ICD-11* CPTSD to those who met diagnostic status for *ICD-11* PTSD based on a range of clinical and behavioral variables, including symptoms of depression, anxiety, borderline personality disorder, dissociation, destructive behaviors, and suicidal ideation and self-harm. Third, we evaluated the association between *DSM-5* PTSD and *ICD-11* CPTSD diagnostic status for depression, anxiety, and suicidal ideation and self-harm.

#### Method

## **Participants and Procedure**

Participants were referred by general practitioners, psychiatrists, or psychologists to a National Health Service (NHS) trauma center in Scotland, United Kingdom for psychological therapy (N = 106). The sample consisted of participants who were primarily female (93.4%) and of British origin (91.3%), with a mean age of 39.25 years (SD = 10.94, range: 19-62). Most participants had finished postsecondary education (56.6%) and were currently unemployed (58.1%) and single (59.2%). All participants reported having experienced a traumatic life event. The mean number of traumatic life events reported per participant was 6.99 (SD = 2.80), and the most commonly reported traumatic experience was physical assault (95.1%). Data were collected as part of a routine assessment following informed consent. Although all measures were selfreport, an assistant psychologist was present during completion to answer any questions. The study was ethically approved by the local research committee (name not disclosed in order to protect the anonymity of the participants). No incentives were offered for participation.

#### Measures

ICD-11 PTSD and CPTSD. The International Trauma Questionnaire (ITQ, Version 1.2; Cloitre, Roberts, Bisson, & Brewin, 2015) is a self-report measure of the ICD-11 diagnoses of PTSD and CPTSD. The ITQ includes six items to measure the PTSD symptoms, 16 items to measure the DSO symptoms (nine "affective dysregulation" items, four "negative self-concept" items, and three "disturbances in relationship" items), and six items to measure functional impairment. Individuals are instructed to respond to each PTSD-related item in terms of how much they have been bothered by that symptom over the past month, whereas responses to each DSO item should reflect how one typically feels, thinks about oneself, and relates to others. All items are measured using a 5-point Likert scale ranging from 0 (not at all) to 4 (extremely). Based on standard conventions when using self-report measures (e.g., Elklit & Shevlin, 2007), endorsement of a symptom (and a measure of functional impairment) is assumed if a person responds with a score of 2 (moderately) or greater. The psychometric properties of the ITQ have been validated in number of studies (see Karatzias et al., 2016; Hyland, Shevlin et al., 2017). The internal reliability of the PTSD (Cronbach's  $\alpha = .74$ ) and DSO (Cronbach's  $\alpha = .89$ ) items in the current sample were satisfactory.

**Borderline personality disorder.** Borderline personality disorder (BPD) symptoms were measured using a 14-item self-report scale that is a component of the ITQ (Cloitre et al., 2015). This measure is based on the Borderline Personality Disorder module of the Structured Clinical Interview (SCID-II) for *DSM-IV*. Individuals respond to the 14 items using a "yes" (1) or "no" (0) response format. A summed total score of borderline personality disorder symptoms ranges from 0 to 14, with higher scores reflecting greater symptomatology. The internal reliability of the BPD items, calculated using the

Kuder-Richardson 21 formula for binary items, was .56, indicating acceptable internal consistency.

**DSM-5 PTSD.** The PTSD Checklist for *DSM-5* (PCL-5; Weathers et al., 2013) is a self-report measure that assesses the 20 *DSM-5* symptoms of PTSD. The PCL-5 uses the same 5point Likert scale as the ITQ ( $0 = not \ at \ all$  to 4 = extremely), and respondents are instructed to answer each question in terms of how much they have been bothered by a given symptom over the past month. As with the ITQ, symptom endorsement is indicated by a score of 2 (*moderately*) or greater for each item. The PCL-5 has good psychometric properties (Blevins, Weathers, Davis, Witte, & Domino, 2015) and the reliability of the scale in the current sample was satisfactory (Cronbach's  $\alpha = .86$ ).

**Depression and anxiety.** The Hospital Anxiety and Depression Scale (HADS; Zigmond & Snaith, 1983) is a 14-item, self-report measure of anxiety and depressive symptoms. Seven items measure depression (Cronbach's  $\alpha = .65$ ) and seven items measure anxiety (Cronbach's  $\alpha = .78$ ). Each item is scored on a 4-point Likert scale (0 to 3) with higher scores indicating greater symptomatology. Scores of 11 or greater on each subscale can be used to indicate clinical cases of anxiety and depression (Zigmond & Snaith, 1983).

**Dissociation.** The Dissociative Symptoms Scale (DSS-B; Carlson, Waelde, et al., 2013) is an 8-item measure used to assess trauma-related intrusions, gaps in awareness or memory, and distortions in perceptions of oneself or surroundings that persist after a person experiences a traumatic event. Participants respond to each item using a 5-point Likert scale ranging from 0 (*not at all*) to 4 (*more than once a day*), and higher scores reflect higher levels of dissociative symptoms. The internal reliability the DSS-B in the current sample was satisfactory (Cronbach's  $\alpha = .80$ ).

Destructive behaviors and suicidal ideation and self-harm. A self-rated version of the Structured Interview of Self-Destructive Behaviors (SI-SDB; Carlson, McDade-Montez, Armstrong, Dalenberg, & Loewenstein, 2013) was used to measure destructive behaviors, and suicidal ideation and self-harm. Items were designed to inquire about behaviors in a neutral way and do not assume intentionality, with the exception of self-harm and suicidal behavior. A total score of "destructive behaviors" is calculated from four "yes" (1) or "no" (0) questions that ask respondents if they have ever engaged in illicit drug use, overspending, risky sexual behavior, and reckless driving. Scores range from 0 to 4, and higher scores reflect higher levels of destructive behavior. Additionally, respondents were asked if they have ever had thoughts of ending their own life, and if they had ever harmed themselves in some way on purpose. Both questions were answered on a "yes" (1) or "no" (0) basis. Individuals were classified as scoring positive

for suicidal ideation and self-harm if they responded "yes" to both questions.

# **Data Analysis**

We used a z test to compare the proportion of individuals who met diagnostic status for *DSM-5* PTSD to the number of individuals who met diagnostic status for *ICD-11* PTSD and CPTSD. Independent samples t tests were used to compare participants who met *ICD-11* PTSD diagnostic status to those who met *ICD-11* CPTSD diagnostic status on each dependent variable. Cohen's d effect sizes were used to determine the magnitude of group differences (small effect size, d < 0.5; moderate effect size, d = 0.5–0.8; large effect size, d > 0.8). We used a Pearson chi-square test to assess the associations between *DSM-5* PTSD and *ICD-11* CPTSD diagnostic status, and clinical status for depression, anxiety, and suicidal ideation and self-harm. Odds ratios (OR) with 95% confidence intervals (CI) were used to quantify the level of association.

#### Results

#### **Prevalence Rates and Descriptive Statistics**

A significantly greater proportion of respondents satisfied diagnostic criteria for *DSM-5* PTSD (90.4%) compared to *ICD-11* PTSD and CPTSD (79.8%), z = 2.14, SE = 0.05, p = .016. The taxonomic structure of the *ICD-11* only permits a diagnosis of PTSD or CPTSD, not both. Accordingly, more individuals satisfied the diagnostic criteria for CPTSD (62.5%) than PTSD (17.3%). Descriptive statistics for each continuously measured variable in the study are reported in Table 1. Additionally, 23.2% of the sample possessed a history of suicidal ideation and self-harm.

## Factors That Differentiate ICD-11 PTSD and CPTSD

Results of the independent samples *t* tests that compared participants who met diagnostic status for *ICD-11* PTSD to those who met diagnostic status for *ICD-11* CPTSD on each clinical and behavioral variable are reported in Table 2. Individuals with *ICD-11* CPTSD reported significantly (ps = .004-.044) higher levels of dissociation (d = 1.01), depression (d = 0.63), and borderline personality disorder symptoms (d = 0.55) than those with *ICD-11* PTSD. Participants who met diagnostic status for *ICD-11* CPTSD were almost 3 times more likely than those who met *ICD-11* PTSD diagnostic status to have a history of suicidal ideation and self-harm, OR = 2.87, 95% CI [0.59, 13.99]; however this effect was not statistically significant,  $\chi^2(1, N =$ 77) = 1.83, p = .177.

# Associations Among *DSM-5* PTSD, *ICD-11* CPTSD, and Clinical Variables

In Table 3, we report the levels of association among both *ICD-11* CPTSD and *DSM-5* PTSD and depression, anxiety,

Variable	Mean	SD	95% CI <sup>a</sup>	Median	Range
Depression	10.93	5.13	[9.95, 11.92]	11.00	0–20
Anxiety	14.63	5.18	[13.64, 15.63]	15.50	0-21
Borderline personality disorder	10.47	2.34	[9.99, 10.95]	11.00	4–14
Dissociation	12.06	6.51	[10.74, 13.38]	11.00	4-35
Destructive behaviors	0.97	0.94	[0.78, 1.16]	1.00	0–4

 Table 1

 Descriptive Statistics for All Continuous Variables

*Note.* <sup>a</sup>95% CI of the mean.

and suicidal ideation and self-harm; we also report diagnostic overlap. There was a significant association between meeting diagnostic criteria for *ICD-11* CPTSD and meeting clinical requirements for depression, OR = 3.98, 95% CI [1.68, 9.41]; anxiety, OR = 5.28, 95% CI [1.66, 16.77]; and suicidal ideation and self-harm, OR = 3.42, 95% CI [1.06, 11.07]. Contrastingly, meeting diagnostic criteria for *DSM-5* PTSD was significantly associated with meeting clinical status for anxiety, OR = 11.32, 95% CI [2.76, 46.49]. A higher number of patients with *ICD-11* CPTSD met the diagnostic requirements for depression, anxiety, and suicidal ideation and self-harm than those with *DSM-5* PTSD (by 10.7%, 4.0%, and 7.0%, respectively); however, these differences were not statistically significant (ps = .796-.916).

#### Discussion

The primary aim of the current study was to identify clinical and behavioral correlates of PTSD/CPTSD, as described by the two major diagnostic classification systems, within a clinical sample characterized by a history of frequent traumatic exposure. In doing so, we sought to identify clinically relevant factors that serve to distinguish *ICD-11* CPTSD from *ICD-11* PTSD, and to provide preliminary evidence regarding the relative severity of *ICD-11* CPTSD and *DSM-5* PTSD. Consistent with prior findings (Hansen et al., 2015; Hyland et al., 2017; O'Donnell et al., 2014), a significantly greater proportion of individuals in our sample met diagnostic criteria for *DSM-5* PTSD compared to *ICD-11* PTSD/CPTSD. There is now consistent evidence, derived from a range of clinical samples characterized by distinct traumatic histories, cultural identities, and methods of data collection, indicating that the *ICD-11* provides stricter criteria than the *DSM-5* for diagnosis of trauma-related psychopathology.

How such findings should be interpreted has become an issue of contention. Wisco et al. (2016) argued that the DSM-5 should be favored, as it maximizes the likelihood that traumatized individuals will qualify for a diagnosis. The authors expressed concern that adoption of the stricter ICD-11 criteria would have substantial public health implications, as it would limit access to healthcare services for traumatized individuals. This argument can be challenged on two grounds. First, the concern that individuals would require a diagnosis in order to receive access to health care is a culturally specific issue. Unlike all other developed nations, the United States operates an insurance-based health care system where formal diagnosis is a prerequisite for access to care. Second, Wisco (2016) argument makes the implicit assumption that the "orphans" of the ICD-11 system would not qualify for another psychiatric diagnosis. Given the extensive literature attesting to the high levels of comorbidity associated with PTSD (Flory & Yehuda, 2015), it may well be the case that such individuals would satisfy the diagnostic criteria for another psychiatric disorder. To date, there is simply no evidence that has examined the clinical

Table 2

Independent Samples t Tests Comparing Participants With ICD-11 Posttraumatic Stress Disorder (PTSD) and Those With ICD-11 Complex PTSD (CPTSD) on Each Continuously Measured Variable

	ICD-11 PTSD		ICD-11 CPTSD			df	d
Variable	Mean SD		Mean SD		t		
Depression	9.73	3.71	12.43	4.76	2.05	78	0.63*
Anxiety	14.20	3.23	16.14	4.55	1.56	78	0.49
Borderline personality disorder	9.69	3.01	11.09	1.94	2.10	68	$0.55^{*}$
Destructive behaviors	0.80	0.78	1.13	1.01	1.19	74	0.37
Dissociation	9.00	3.36	14.37	6.76	2.98	73	$1.01^{**}$

*Note. ICD-11* = *International Classification of Diseases* (11th version); df = degrees of freedom; d = Cohen's d effect size. \*p < .05. \*\*p < .01.

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	Depression			Anxiety			Suicidal ideation and self-harm		
Diagnosis	%	OR	95% CI	%	OR	95% CI	%	OR	95% CI
<i>ICD-11</i> CPTSD <i>DSM-5</i> PTSD	69.2 58.5	3.98 2.12	[1.68, 9.41] <sup>**</sup> [0.56, 8.00]	92.3 88.3	5.28 11.32	$[1.66, 16.77]^{**}$ $[2.76, 46.49]^{***}$	30.6 23.6	3.42 1.08	[1.06, 11.07] <sup>*</sup> [0.21, 5.61]

Associations Among Clinical Variables and DSM-5 Posttraumatic Stress Disorder (PTSD) and ICD-11 Complex PTSD (CPTSD)

Note. ICD-11 = International Classification of Diseases (11th ver.); DSM-5 = Diagnostic and Statistical Manual of Mental Diseases (5th ed.); OR = odds ratio. \*p < .05. \*\*p < .01. \*\*\*p < .001.

characteristics of those individuals who meet the diagnostic criteria for DSM-5 PTSD but not ICD-11 PTSD or CPTSD. A systematic body of work is now required to determine if the ICD-11 orphans would qualify for another diagnosis. If these individuals display significant daily-life distress and impairment, and fail to qualify for another diagnosis, the ICD-11 could be reasonably viewed as being overly restrictive and prone to yielding a higher number of false negative diagnoses relative to the DSM-5. Alternatively, if it is the case that these individuals display low levels of daily-life distress and impairment, or qualify for another psychiatric diagnosis, the ICD-11 could be viewed as providing a more specific diagnostic profile that is more accurately aligned to the symptomatology of a given patient. Until the pertinent empirical data is available, it may be said that the DSM-5, with its broad symptom profile and inclusive diagnostic threshold, favors diagnostic sensitivity (minimizing the probability of false negative diagnoses), whereas the ICD-11, with its narrow symptom profile and stricter diagnostic threshold, favors diagnostic specificity (minimizing the probability of false positive diagnoses).

Table 3

With a growing body of empirical support for the construct validity of ICD-11 CPTSD as a unique disorder, the need for clinical interventions tailored to address the specific symptom profile of the disorder becomes increasingly necessary (Ford, 2015). Identification of unique clinical and behavioral features associated with a diagnosis of ICD-11 CPTSD may help to guide clinical interventions. Our findings indicated that those individuals who qualified for an ICD-11 CPTSD diagnosis, as compared to an ICD-11 PTSD diagnosis, were distinguished most clearly on the basis of experiencing higher levels of dissociation, a finding that is consistent with those reported by Elklit et al. (2014). How to most accurately conceptualize dissociative experiences within theoretical models of PTSD has been a matter of debate (see Dalenberg & Carlson, 2012); nonetheless, extant results have suggested that dissociation is a meaningful distinguishing factor between ICD-11 CPTSD and ICD-11 PTSD. Additionally, individuals in our study with a CPTSD diagnosis also displayed significantly higher levels of depression and borderline personality disorder symptoms than those without the same diagnosis. Our findings add to a large body of evidence which demonstrates that CPTSD is associated with substantial psychological distress and impairments in daily living (e.g., Elklit et al., 2014; Karatzias et al., 2017).

Additionally, the associations between meeting diagnostic status for ICD-11 CPTSD and meeting diagnostic status for depression, anxiety, and suicidal ideation and self-harm were all positive, statistically significant, and of a robust magnitude. Furthermore, compared with respondents who met the diagnostic criteria for DSM-5 PTSD, a greater proportion of respondents who met the diagnostic status for ICD-11 CPTSD also met clinical criteria for depression, anxiety, and self-harm and suicidal ideation (by 10.7%, 4.0%, and 7.0%, respectively). Congruent with findings from Powers et al. (2017), it appears that ICD-11 CPTSD is associated with a higher level of psychiatric burden than DSM-5 PTSD. These findings are noteworthy for several reasons. First, higher levels of diagnostic association between ICD-11 CPTSD and other mental health disorders, relative to DSM-5 PTSD, is inconsistent with a goal of the ICD-11 to reduce comorbidity with other diagnoses. Second, irrespective of whether a clinician or researcher uses the DSM-5 or ICD-11 model of PTSD/CPTSD, the rate of diagnostic association within clinical populations is likely to be very high. While high levels of diagnostic overlap are incompatible with the categorical model of psychiatric disorders advanced by both the ICD-11 and the DSM-5, these findings can be easily understood through the perspective of a dimensional model of psychopathology (see Kotov et al., 2016). According to the dimensional model of psychopathology, "disorders" such as PTSD, CPTSD, depression, and anxiety are all observable manifestations of an underlying "internalizing" latent variable. Consequently, these disorders are expected to covary, and the more precisely any given "disorder" is measured, the higher its association with any other internalizing "disorder" will be.

There are several limitations associated with the current study that should be recognized. First, our analyses were based on a small, predominately female, United Kingdom–based clinical sample, which limits the overall generalizability of the findings to a wider trauma population. Second, the diagnostic status of the disorders was based on self-report assessments rather than clinician-administered interviews. It is possible that the selfreport nature of the data may have biased results and led to higher prevalence rates than would be observed if we had used clinician-administered measures. Nonetheless, this limitation was constant across all aspects of the current study, meaning that any biases that may have resulted from the use of self-report assessments are unlikely to have influenced the main findings of the study. Finally, we included a limited number of clinical and behavioral variables in this study, and future work would benefit by examining other relevant clinical variables associated with traumatic exposure, such as psychosis, substance misuse, and somatic distress.

In conclusion, several important findings and directions for future research have emerged from the current study. The findings showed, once again, that the ICD-11 produces fewer clinical cases of PTSD and CPTSD relative to DSM-5 PTSD. Given the consistency of this finding, it is necessary to focus on the characteristics of those individuals who do not qualify for a trauma-related diagnosis under ICD-11, in order to ascertain if they are being more accurately diagnosed with another psychiatric disorder or if they are losing a diagnosis despite experiencing psychological distress. This should help to resolve the debate as to whether or not the ICD-11 provides overly strict criteria for PTSD/CPTSD diagnosis. Additionally, our findings indicate that ICD-11 CPTSD can be distinguished from ICD-11 PTSD on the basis of higher levels of dissociation, depression, and borderline personality disorder symptoms. Such findings may aid clinicians in making a differential diagnosis and planning clinical interventions. Relative to both ICD-11 PTSD and DSM-5 PTSD, there also appears to be an association between ICD-11 CPTSD and higher levels of psychiatric burden. This highlights the need for specialized clinical interventions targeted specifically at the unique symptoms of CPTSD.

#### References

- American Psychiatric Association (2013). *Diagnostic and statistical manual of mental disorders* (5th ed). Washington, DC: Author.
- Blevins, C. A., Weathers, F. W., Davis, M. T., Witte, T. K., & Domino, J. L. (2015). The Posttraumatic Stress Disorder Checklist for DSM-5 (PCL-5): Development and initial psychometric evaluation. Journal of Traumatic Stress, 28, 489–498. https://doi.org/10.1002/jts.22059
- Brewin, C. R., Cloitre, M., Hyland, P., Shevlin, M., Maercker, A., Bryant, R. A., ... Reed, G. M. (2017). A review of current evidence regarding the *ICD-11* proposals for diagnosing PTSD and Complex PTSD. *Clinical Psychology Review*, 58, 1–15. https://doi.org/10.1016/j.cpr.2017.09.001
- Carlson, E. B., McDade-Montez, E., Armstrong, J., Dalenberg, C., & Loewenstein, R. J. (2013). Development and initial validation of the Structured Interview for Self-Destructive Behaviors. *Journal of Trauma & Dissociation*, 14, 312–327. https://doi.org/10.1080/15299732.2012.762822
- Carlson, E. B., Waelde, L. C., Palmieri, P. A., Smith, S., McDade-Montez, E., & Macia, K. (2013). Development and validation of the Dissociative Symptoms Scale. Unpublished manuscript.
- Cloitre, M., Garvert, D. W., Brewin, C. R., Bryant, R. A., & Maercker, A. (2013). Evidence for proposed *ICD-11* PTSD and complex PTSD: A latent profile analysis. *European Journal of Psychotraumatology*, 4, 20706. https://doi.org/10.3402/ejpt.v4i0.20706
- Cloitre, M., Garvert, D. W., Weiss, B., Carlson, E. B., & Bryant, R. A. (2014). Distinguishing PTSD, complex PTSD, and borderline personality disorder: A latent class analysis. *European Journal of Psychotraumatology*, 5, 25097. https://doi.org/10.3402/ejpt.v5.25097
- Cloitre, M., Roberts, N. P., Bisson, J. I., & Brewin, C. R. (2015). *The ICD-11 Trauma Questionnaire. Self-Report Community Version 1.2.* Unpublished manuscript.

- Cloitre, M., Stovall-McClough, K. C., Nooner, K., Zorbas, P., Cherry, S., Jackson, C. L., ... Petkova, E. (2010). Treatment for PTSD related to childhood abuse: A randomized controlled trial. *American Journal of Psychiatry*, 167, 915–924. https://doi.org/10.1176/appi.ajp.2010.09081247.
- Dalenberg, C., & Carlson, E. B. (2012). Dissociation in posttraumatic stress disorder: Part II. How theoretical models fit the empirical evidence and recommendations for modifying the diagnostic criteria for PTSD. *Psychological Trauma: Theory, Research, Practice, & Policy, 4*, 551–559. https://doi.org/10.1037/a0027900
- Elklit, A., Hyland, P., & Shevlin, M. (2014). Evidence of symptom profiles consistent with posttraumatic stress disorder and complex posttraumatic stress disorder in different trauma samples. *European Journal of Psychotraumatology*, 5, 24221. https://doi.org/10.3402/ejpt.v5.24221
- Elklit, A., & Shevlin, M. (2007). The structure of PTSD symptoms: a test of alternative models using confirmatory factor analysis. *British Journal* of Clinical Psychology, 46, 299–313. https://doi.org/10.1348/014466506X 171540
- Flory, J. D., & Yehuda, R. (2015). Comorbidity between post-traumatic stress disorder and major depressive disorder: Alternative explanations and treatment considerations. *Dialogues in Clinical Neuroscience*, 17, 141–150.
- Ford, J. D. (2015). Complex PTSD: Research directions for nosology/assessment, treatment, and public health. *European Journal of Psychotraumatology*, 6, 27584. http://doi.org/10.3402/ejpt.v6.27584
- Friedman, M. J. (2013). Finalizing PTSD in DSM-5: Getting here from there and where to go next. Journal of Traumatic Stress, 26, 548–556. https://doi.org/10.1002/jts.21840
- Hansen, M., Hyland, P., Armour, C., Elklit, A., & Shevlin, M. (2015). Less is more? Assessing the validity of the *ICD-11* model of PTSD across multiple trauma samples. *European Journal of Psychotraumatology*, 6: 28766. https://doi.org/10.3402/ejpt.v6.28766
- Hyland, P., Murphy, J., Shevlin, M., Vallières, F., McElroy, E., Elklit, A., ... Cloitre, M. (2017). Variation in post-traumatic response: The role of trauma type in predicting *ICD-11* PTSD and CPTSD symptoms. *Social Psychiatry and Psychiatric Epidemiology*, 52, 727–736. https://doi.org/10.1007/s00127-017-1350-8
- Hyland, P., Shevlin, M., Brewin, C. R., Cloitre, M., Downes, A. J., Jumbe, S., ... Roberts, N. P. (2017). Factorial and discriminant validity of *ICD-11* PTSD and CPTSD using the new International Trauma Questionnaire. *Acta Psychiatrica Scandinavica*, 136, 313–322. https://doi.org/10.1111/acps.12771
- Karatzias, T., Shevlin, M., Fyvie, C., Hyland, P., Efthimiadou, E., Wilson, D., ... Cloitre, M. (2016). An initial psychometric assessment of an *ICD-11* based measure of PTSD and Complex PTSD (ICD-TQ): Evidence of construct validity. *Journal of Anxiety Disorders*, 44, 73–79. http://doi.org/10.1016/j.janxdis.2016.10.009
- Karatzias, T., Shevlin, M., Fyvie, C., Hyland, P., Efthimiadou, E., Wilson, D., ... Cloitre, M. (2017). Evidence of distinct profiles of posttraumatic stress disorder (PTSD) and complex posttraumatic stress disorder (CPTSD) based on the new *ICD-11* Trauma Questionnaire (ICD-TQ). *Journal of Affective Disorders*, 207, 181–187. http://doi.org/10.1016/j.jad.2016.09.032
- Kotov, R., Krueger, R. F., Watson, D., Achenbach, T. M., Althoff, R. R., Bagby, R. M., ... Zimmerman, M. (2017). The Hierarchical Taxonomy of Psychopathology (HiTOP): A dimensional alternative to traditional nosologies. *Journal of Abnormal Psychology*, 126, 454–477. https://doi.org/10.1037/abn0000258
- Maercker, A., Brewin, C. R., Bryant, R. A., Cloitre, M., Ommeren, M., Jones, L. M., ... Somasundaram, D. J. (2013). Diagnosis and classification of disorders specifically associated with stress: proposals for ICD-11. World Psychiatry, 12, 198–206. https://doi.org/10.1002/wps.20057

Journal of Traumatic Stress DOI 10.1002/jts. Published on behalf of the International Society for Traumatic Stress Studies.

- Murphy, S., Elklit, A., Dokkedahl, S., & Shevlin, M. (2016). Testing the validity of the proposed *ICD-11* PTSD and complex PTSD criteria using a sample from Northern Uganda. *European Journal of Psychotraumatology*, 7, 32678. https://doi.org/10.3402/ejpt.v7. 32678
- O'Donnell, M. L., Alkemade, N., Nickerson, A., Creamer, M., McFarlane, A. C., Silove, D., ... Forbes, D. (2014). Impact of the diagnostic changes to post-traumatic stress disorder for *DSM-5* and the proposed changes to *ICD-11. British Journal of Psychiatry 205*, 230–235. https://doi.org/ 10.1192/bjp.bp.113.135285
- Powers, A., Fani, N., Carter, S., Cross, D., Cloitre, M., & Bradley, B. (2017). Differential predictors of *DSM-5* PTSD and *ICD-11* complex PTSD among African American women. *European Journal of Psychotraumatology*, 8: 1338914. https://doi.org/10.1080/20008198.2017. 1338914
- Resick, P. A., Bovin, M. J., Calloway, A. L., Dick, A. M., King, M. W., Mitchell, K. S., ... Wolf, E. J. (2012). A critical evaluation of the complex PTSD literature: Implications for DSM-5. Journal of Traumatic Stress, 25, 241–251. http://doi.org/10.1002/jts.21699
- Weathers, F. W., Litz, B. T., Keane, T. M., Palmieri, P. A., Marx, B. P., & Schnurr, P. P. (2013). *The PTSD Checklist for DSM-5 (PCL-5)*. Retrieved from the National Center for PTSD website: https://www. ptsd.va.gov/professional/assessment/adult-sr/ptsd-checklist.asp
- Wisco, B. E., Miller, M. W., Wolf, E. J., Kilpatrick, D., Resnick, H. S., Badour, C. L., ... Friedman, M. J. (2016). The impact of proposed changes to *ICD-*11 on estimates of PTSD prevalence and comorbidity. *Psychiatry Research*, 240, 226–233. http://doi.org/10.1016/j.psychres.2016.04.043
- Zigmond, A. S., & Snaith, R. P. (1983). The Hospital Anxiety and Depression Scale. *Acta Psychiatrica Scandinavica*, 67, 361–370.