

Posttraumatic Stress Disorder (PTSD) and Complex PTSD (CPTSD) in DSM-5 and ICD-11:  
Clinical and Behavioural Correlates

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### Abstract

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 11<sup>th</sup> version of the *International Classification of Diseases* (ICD-11), respectively. DSM-5 conceptualises posttraumatic stress disorder (PTSD) as a single, broad diagnosis, whereas ICD-11 proposes two ‘sibling-disorders’ of PTSD and Complex PTSD (CPTSD). The objectives of the current study were to (1) compare prevalence rates based on each diagnostic system, (2) identify clinical and behavioural variables that distinguish ICD-11 CPTSD and PTSD diagnoses, and (3) examine the diagnostic associations for ICD-11 CPTSD and DSM-5 PTSD. A predominately female, clinical sample ( $N = 106$ ) completed self-report scales to measure ICD-11 PTSD and CPTSD, DSM-5 PTSD, depression, anxiety, borderline personality disorder, dissociation, destructive behaviours, and suicidal ideation and self-harm. Significantly more people were diagnosed with PTSD according to the DSM-5 criteria compared to those diagnosed with PTSD and CPTSD according to the ICD-11 guidelines (90.4% vs 79.8%). An ICD-11 CPTSD diagnosis was distinguished from an ICD-11 PTSD diagnosis by higher levels of dissociation ( $d = 1.01$ ), depression ( $d = .63$ ), and borderline personality ( $d = .55$ ). Diagnostic associations with depression (by 10.7%), anxiety (by 4.0%) and suicidal ideation and self-harm (by 7.0%) were higher for ICD-11 CPTSD compared to DSM-5 PTSD. These results have implications for differential diagnosis and for the development of targeted treatments for CPTSD.

**Keywords:** Posttraumatic stress disorder (PTSD); Complex PTSD (CPTSD); ICD-11; DSM-5; dissociation; comorbidity.

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### Posttraumatic Stress Disorder (PTSD) and Complex PTSD (CPTSD) in DSM-5 and ICD-11: Clinical and Behavioural Correlates

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 (5 symptoms), avoidance (2 symptoms), negative alterations in cognition and mood (NACM: 7 symptoms), and arousal (6 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 11<sup>th</sup> version of the *International Classification of Diseases* (ICD-11), WHO propose two ‘sibling’ disorders: PTSD and Complex PTSD (CPTSD: Maercker et al., 2013). ICD-11 PTSD is substantially refined relative to DSM-5 and includes six symptoms across three clusters: re-experiencing in the here and now (2 symptoms), avoidance (2 symptoms), and sense of threat (2 symptoms). Diagnosis of PTSD requires the presence of one symptom per cluster, plus evidence of functional impairment. CPTSD is a broader diagnosis that includes the core PTSD symptoms plus an additional set of ‘disturbances in self-organisation’ (DSO) symptoms which are intended to capture the pervasive psychological disturbances that can follow traumatic exposure. DSO symptoms are expected to arise following exposure to traumatic events that are of an interpersonal nature, particularly occurring 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 endorsement of symptoms from the three DSO clusters.

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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). Several studies have also found that CPTSD, compared to PTSD, is associated with an increased incidence of childhood trauma (Cloitre et al., 2013; Hyland et al. 2017a), and higher levels of functional impairment (Karatzias et al., 2017; Murphy et al., 2016). Relatively less research however has focused on the identification of clinical and behavioural correlates that are associated with an elevated risk of CPTSD. Emerging evidence suggests that depression, negative trauma-cognitions, reduced distress tolerance (Hyland et al., 2017b), 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/CPTSD (e.g., Hansen et al., 2015; Hyland et al., 2017b; 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 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 to DSM-5 PTSD (Powers et al., 2017). This suggest 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.

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The current study had three objectives. First, prevalence rates based on the DSM-5 criteria (PTSD) and the ICD-11 guidelines (PTSD and CPTSD) were statistically compared. On the basis of existing data, it was hypothesised that significantly more people would meet diagnostic status according to the DSM-5 criteria. Second, those meeting diagnostic status for ICD-11 CPTSD were compared to those meeting diagnostic status for ICD-11 PTSD on a range of clinical and behavioural variables including symptoms of depression, anxiety, borderline personality disorder, dissociation, destructive behaviours, and suicidal ideation and self-harm. Third, the association between DSM-5 PTSD and ICD-11 CPTSD diagnostic status, respectively, and likelihood of satisfying diagnostic status for (i) depression, (ii) anxiety, and (iii) suicidal ideation and self-harming behaviours were evaluated.

### **Method**

#### **Participants and procedures**

Participants were referred by general practitioners, psychiatrists, or psychologists for psychological therapy at a National Health Service trauma centre in Scotland ( $N = 106$ ). The sample 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 post-secondary education (56.6%), were currently unemployed (58.1%), and single (59.2%). All participants reported experiencing a traumatic life event. The mean number of traumatic life events 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 self-report, an assistant psychologist was present during completion to answer any questions. The study was ethically approved by the local research committee. No incentives were offered for participation.

#### **Measures**

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**ICD-11 PTSD and CPTSD:** The *International Trauma Questionnaire* (ITQ Version 1.2, Cloitre et al., 2015) is a self-report measure of the ICD-11 diagnoses of PTSD and Complex-PTSD. The ITQ includes six items to measure the PTSD symptoms, 16 items to measure the Disturbance in Self Organization 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 item in terms of how much they have been bothered by that symptom over the past month, whereas each Disturbance in Self Organization item is responded to in terms of how one typically feels, think about themselves, and relate to others. All items are measured using a five-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  $\geq 2$  (‘Moderately’). The psychometric properties of the ITQ have been validated in number of studies (see Karatzias et al., 2016; Hyland et al., 2017). The internal reliability (Cronbach’s alpha) of the PTSD ( $\alpha = .74$ ) and Disturbance in Self Organization ( $\alpha = .89$ ) items in the current sample were satisfactory.

**Borderline Personality Disorder:** Borderline personality disorder 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. The 14 items are responded to using a ‘Yes’ (1) or ‘No’ (0) response format. A summed total score of borderline personality disorder symptoms ranges from 0-14 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).

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**DSM-5 PTSD:** The PTSD Checklist for DSM-5 (PCL-5: Weathers et al., 2013) is a self-report measure of the 20 DSM-5 symptoms of PTSD. The PCL-5 uses the same five-point 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  $\geq 2$  ('Moderately') for each item. The PCL-5 has good psychometric properties (Blevins et al., 2015) and the reliability of the scale in the current sample was satisfactory ( $\alpha = .86$ ).

**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 ( $\alpha = .65$ ) and seven items measure anxiety ( $\alpha = .78$ ). Each item is scored on a four-point Likert scale (0-3) with higher scores indicating greater symptomatology. Scores  $\geq 11$  on each subscale can be used to indicate clinical cases of anxiety and depression, respectively (Zigmond & Snaith, 1983).

**Dissociation:** The Dissociative Symptoms Scale (DSS-B: Carlson et al., 2013a) 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 traumatic stress. Participants respond to each item using a five-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 ( $\alpha = .80$ ).

**Destructive behaviours and suicidal ideation and self-harm:** A self-rated version of the Structured Interview of Self-Destructive Behaviours (SI-SDB: Carlson et al., 2013b) was used to measure destructive behaviours, and suicidal ideation and self-harm. Items were designed to inquire about behaviours in a neutral way and do not assume intentionality, with the exception of self-harm and suicidal behaviour. A total score of 'destructive behaviours'

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was calculated from four ‘yes’ (1) or ‘no’ (0) based questions that enquire if respondents had ever engaged in (i) illicit drug use, (ii) overspending, (iii) risky sexual behaviour, and (iv) reckless driving. Scores ranged from 0-4 and higher scores reflect higher levels of destructive behaviour. 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) and ‘no’ (0) basis. Individuals were classified as scoring positive for suicidal ideation and self-harm if they responded ‘yes’ to both questions.

### Data Analysis

The proportion of individuals meeting diagnostic status for DSM-5 PTSD was compared to the number of individuals meeting diagnostic status for ICD-11 PTSD and CPTSD using a z-test. Independent samples t-tests were used to compare those meeting ICD-11 PTSD diagnostic status to those meeting ICD-11 CPTSD diagnostic status on each dependent variable. Cohen’s *d* effect sizes were used to determine the magnitude of group differences ( $< .5$  small effect size,  $.5 - .8$  moderate effect size,  $> .8$  large effect size). The associations between DSM-5 PTSD and ICD-11 CPTSD diagnostic status, and clinical status for depression, anxiety, and suicidal ideation and self-harm were assessed using a Pearson chi-square test ( $\chi^2$ ). Odds ratios with 95% confidence intervals (OR 95% 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%) ( $z = 2.14$ ,  $SE = .05$ ,  $p = .016$ ). 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



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(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 comparing those meeting diagnostic status for ICD-11 PTSD to those meeting diagnostic status for ICD-11 CPTSD on each clinical and behavioural variable are reported in Table 2. Those with ICD-11 CPTSD reported significantly ( $p$ 's < .05) higher levels of dissociation ( $d = 1.01$ ), depression ( $d = .63$ ), and borderline personality disorder symptoms ( $d = .55$ ). Those meeting diagnostic status for ICD-11 CPTSD were almost three times more likely than those meeting 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 between DSM-5 PTSD, ICD-11 CPTSD and clinical variables

Table 3 reports the level of association, and diagnostic overlap, for ICD-11 CPTSD and DSM-5 PTSD, with depression, anxiety, and suicidal ideation and self-harm. ICD-11 CPTSD was significantly associated with 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, 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 (by 10.7%), anxiety (by 4.0%), and suicidal ideation and self-harm (by 7.0%) compared to those with DSM-5 PTSD, however, these differences were not statistically significant ( $p$ 's > .05).

## Discussion

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The primary aim of the current study was to identify clinical and behavioural correlates of PTSD/CPTSD, as described by the two major diagnostic classification systems, within a clinical sample characterised 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., 2017b; O'Donnell et al., 2014), a significantly greater proportion of individuals 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 characterised 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. It has been argued that the DSM-5 should be favoured as it maximizes the likelihood that traumatized individuals will qualify for a diagnosis (Wisco et al., 2016). 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 traumatised persons. This argument can be challenged on two grounds. First, the concern regarding diagnosis in order to receive access to healthcare is a culturally-specific issue. Unlike all other developed nations, the United States operates an insurance-based healthcare system where formal diagnosis is a prerequisite for accessing care. Second, Wisco et al.'s argument makes the implicit assumption that the 'orphans' of the ICD-11 system will 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 will satisfy the diagnostic criteria for another psychiatric disorder. To date, there is simply no evidence that has examined the clinical characteristics of those individuals who

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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 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, favours diagnostic sensitivity (minimizing the probability of false negative diagnoses), whereas the ICD-11 with its narrow symptom profile and stricter diagnostic threshold, favours diagnostic specificity (minimizing the probability of false positive diagnoses).

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 behavioural 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 conceptualise dissociative experiences within theoretical models of PTSD has been a matter of debate (see Dalenberg & Carlson, 2012); nonetheless, extant results suggest that dissociation is a meaningful distinguishing factor between ICD-11 CPTSD and ICD-11 PTSD. Additionally, those with a CPTSD diagnosis also displayed significantly

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higher levels of depression and borderline personality disorder symptoms. Current 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, a greater proportion of respondents who met the diagnostic status for ICD-11 CPTSD, relative to DSM-5 PTSD, also met clinical criteria for depression (by 10.7%), anxiety (4.0%), and suicidal ideation and self-harm (7.0%). 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 for ICD-11 CPTSD, relative to DSM-5 PTSD, is inconsistent with the goal of the ICD-11 to reduce the correlation 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.

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There are several limitations associated with the current study that should be recognised. First, the analyses were based on a small, predominately female, UK clinical sample which limits the overall generalizability of the findings to wider trauma population. Second, the clinical/diagnostic status of the disorders were based on self-report assessments rather than clinician-administered interviews. It is possible that the self-report nature of the data may have biased results and led to higher prevalence rates than would be observed if clinician administered measures had been used. 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, a limited number of clinical and behavioural variables were included 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 emerge from the current study. Once again it was found that the ICD-11 produces fewer clinical cases relative to the DSM-5. 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 an overly strict criteria for diagnosis of PTSD/CPTSD. Additionally, current 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. ICD-11 CPTSD also appears to be associated with higher levels of psychiatric burden relative to both

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ICD-11 PTSD and DSM-5 PTSD. This highlights the need for specialised clinical interventions targeted specifically at the unique symptoms of CPTSD.

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## References

- American Psychiatric Association (2013). *Diagnostic and Statistical Manual of Mental Disorders*, 5th ed. Washington DC: American Psychiatric Association.
- 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. doi: 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. doi: 10.1016/j.cpr.2017.09.001.
- Carlson, E. B., Waelde, L. C., Palmieri, P. A., Smith, S., McDade-Montez, E., & Macia, K. (2013a). *Development and Validation of the Dissociative Symptoms Scale*. Unpublished Manuscript.
- Carlson, E. B., McDade-Montez, E., Armstrong, J., Dalenberg, C., & Loewenstein, R. J. (2013b). Development and initial validation of the Structured Interview for Self-Destructive Behaviors. *Journal of Trauma & Dissociation*, 14, 312-327. doi: 10.1080/15299732.2012.762822
- Cloitre, M., Stovall-McClough, K. C., Noonan, K., Zorbas, P., Cherry, S., Jackson, C. L., Gan, W., & Petkova, E. (2010). Treatment for PTSD related to childhood abuse: a randomized controlled trial. *American Journal of Psychiatry*, 167, 915-924.
- 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. doi: <http://dx.doi.org/10.3402/ejpt.v4i0.20706>

## CORRELATES OF PTSD AND CPTSD

- 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. doi: <http://dx.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.
- 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. doi: 10.1037/a0027900.
- 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. DOI: 10.1348/014466506X171540
- 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. Doi: <http://dx.doi.org/10.3402/ejpt.v5.24221>
- 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. Doi: <http://dx.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. doi:10.1002/jts.21840



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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. doi:

<http://dx.doi.org/10.3402/ejpt.v6.28766>

Hyland, P., Murphy, J., Shevlin, M., Vallières, F., McElroy, E., Elklit, A., Christoffersen, M., & Cloitre, M. (2017a). 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. doi: 10.1007/s00127-017-1350-8.

Hyland, P., Shevlin, M., Brewin, C. R., Cloitre, M., Downes, A. J., Jumbe, S.,...Roberts, N. P. (2017b). Factorial and discriminant validity of ICD-11 PTSD and CPTSD using the new International Trauma Questionnaire. *Acta Psychiatrica Scandinavica*, 136, 313-322. doi: 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://dx.doi.org/10.1016/j.janxdis.2016.10.009>

Karatzias, T., Shevlin, M., Fyvie, C., Hyland, P., Efthimiadou, E., Wilson, D., Roberts, N., Bisson, J., Brewin, C. R., & 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://dx.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

## CORRELATES OF PTSD AND CPTSD

- (HiTOP): A dimensional alternative to traditional nosologies. *Journal of Abnormal Psychology*, 126, 454-477. Doi: <http://dx.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. DOI: 10.1002/wps.20057
- 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. doi: <http://dx.doi.org/10.3402/ejpt.v7.32678>
- O'Donnell, M. L., Alkemade, N., Nickerson, A., Creamer, M., McFarlane, A. C.,... & 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. doi: 10.1192/bjp.bp
- 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. Doi: <http://dx.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. Doi: <http://dx.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). Scale available from the National Center for PTSD at [www.ptsd.va.gov](http://www.ptsd.va.gov).

## CORRELATES OF PTSD AND CPTSD

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. doi:

<http://dx.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.

## CORRELATES OF PTSD AND CPTSD

Table 1. Descriptive statistics for all continuous variables.

	Mean	<i>SD</i>	95% CI of the Mean	Median	Range
Depression	10.93	5.13	9.95 – 11.92	11	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	4-14
Dissociation	12.06	6.51	10.74 – 13.38	11	4-35
Destructive behaviours	.97	.94	0.78 – 1.16	1	0-4

Note: 95% CI = 95% confidence intervals; SD = Standard Deviation.

## CORRELATES OF PTSD AND CPTSD

Table 2. Independent samples t-tests comparing those with ICD-11 PTSD and ICD-11 CPTSD on each continuously measured variable.

	ICD-11 PTSD		ICD-11 CPTSD		t	df	d
	Mean	SD	Mean	SD			
Depression	9.73	3.71	12.43	4.76	2.05	78	.63*
Anxiety	14.20	3.23	16.14	4.55	1.56	78	.49
Borderline Personality Disorder	9.69	3.01	11.09	1.94	2.10	68	.55*
Destructive behaviours	.80	.78	1.13	1.01	1.19	74	.37
Dissociation	9.00	3.36	14.37	6.76	2.98	73	1.01**

*Note:* PTSD = Posttraumatic stress disorder; CPTSD = Complex PTSD; df = degrees of freedom; d = Cohen's d effect size; SD = standard deviation; \*  $p < .05$ , \*\*  $p < .01$ .

## CORRELATES OF PTSD AND CPTSD

Table 3. Associations between ICD-11 CPTSD and DSM-5 PTSD and each clinical variable.

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

Note: OR (95% CI) = Odds ratio with 95% confidence intervals; statistical significance = \*  $p < .05$ , \*\*  $p < .01$ , \*\*\*  $p < .001$