


Regular Article

Childhood trauma, attachment orientation, and complex PTSD (CPTSD) symptoms in a clinical sample: Implications for treatment

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Abstract

Although there has been significant work on the association between posttraumatic stress disorder (PTSD) and attachment orientation, this is less the case for complex PTSD (CPTSD). The primary aim of this paper was to assess the strength of the association between the four adult attachment styles (i.e., secure, dismissing, preoccupied, and fearful) and severity of CPTSD symptoms (i.e., symptoms of PTSD and disturbances in self-organization [DSO]). We hypothesized that attachment orientation would be more strongly associated with DSO symptoms compared to PTSD symptoms. A trauma exposed clinical sample ($N = 331$) completed self-report measures of traumatic life events, CPTSD symptoms, and attachment orientation. It was found that secure attachment and fearful attachment were significantly associated with DSO symptoms but not with PTSD symptoms. Dismissing attachment style was significantly associated with PTSD and DSO symptoms. Preoccupied attachment was not significantly associated with CPTSD symptoms. Treatment implications for CPTSD using an attachment framework are discussed.

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Introduction

Attachment describes the quality of the interaction between an infant and their primary caregivers. These early interactions provide the basis for the formation of a secure bond, which when it is internalized can provide a sense of safety at times of distress (Bowlby, 1988). Bartholomew conceptualized adult attachment style in terms of viewing self and others in a positive or negative way based on dimensions of dependency and avoidance. Different combinations of these elements provide four attachment orientation styles including secure, dismissing, preoccupied, and fearful attachment styles (Bartholomew, 1990).

The experience of childhood traumatic life events can disrupt the formation of secure attachments (Karatzias et al., 2019), while the experience of traumatic life events in adulthood can be threatening for the individual and can activate early attachments (Barazzone, Santos, McGowan, & Donaghay-Spire, 2019). Exposure to childhood traumatic life events in particular is associated with increased likelihood of developing complex posttraumatic stress disorder (CPTSD) (Karatzias et al., 2017). ICD-11

(International Classification of Diseases) CPTSD is described as a condition of six clusters of symptoms (WHO, 2018) including those of PTSD (i.e., present moment reexperiencing of the event, avoidance, and persistent perceptions of heightened current threat) as well as disturbances of self-organization (DSO) (i.e., poor self-concept, difficulties with interpersonal relationships, and affect dysregulation) (Karatzias et al., 2017). Disrupted attachments can be potentially implicated in the formation of DSO symptom clusters. For example, inability to trust others and form close relationships, a common CPTSD symptom, can result from poor attachments (Mills & Turnball, 2004). The experience of psychological trauma might also intensify attachment anxiety which manifests as a fear of rejection in relationships or attachment avoidance and fear of closeness and intimacy (Mikulincer, Shaver, & Horesh, 2006).

Internalizing poor attachments can also impair the capacity to regulate emotions (Bowlby, 1980). Following exposure to trauma, failed proximity-seeking attempts displayed in anxiously attached individuals can impair the regulation of emotion required to manage traumatic distress (Mikulincer et al., 2006). In a sample of adult trauma survivors recruited from an Emergency Department following a traumatic injury, attachment security was associated inversely with emotion-focused coping and substance misuse at follow-up assessments, and those maladaptive emotion regulation strategies mediated an inverse relationship between attachment security and subsequent PTSD symptoms (Benoit, Bouthillier, Moss, Rousseau, & Brunet, 2010).

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In relation to the PTSD symptom clusters, hypervigilance associated with attachment anxiety may lead to intensifying fear-related responses, and rumination on threats, and subsequently more traumatic distress (Mikulincer & Shaver, 2007). For example, Mikulincer et al. (2006) examined the relationship between attachment security before the United States/Iraq war and the development of PTSD symptoms consecutively for 21 days. It was found that anxiously attached individuals showed higher levels of PTSD intrusive symptoms and individuals with an avoidant attachment style showed higher levels of PTSD avoidance.

Similar findings have been reported in two reviews on the association between the severity of posttraumatic stress and attachment orientation. In one review, Woodhouse, Ayers, and Field (2015) reported a medium sized association between secure attachment and reduced posttraumatic symptom severity, and a medium sized association between insecure attachment and higher posttraumatic symptom severity. A fearful attachment style was found to have the strongest association with posttraumatic symptoms. Dismissing attachment was not found to be significantly related to posttraumatic symptoms. In another review of the literature, Barazzone et al. (2019) reported that attachment orientation had moderating and mediating effects in the relationship between trauma exposure and posttraumatic symptoms. They found consistent evidence that insecure attachment was associated with posttraumatic stress symptoms, and that interpersonal trauma was more highly associated with attachment insecurity compared to noninterpersonal trauma. Finally, individuals reporting greater attachment anxiety compared to attachment avoidance tended to report higher levels of posttraumatic stress symptoms.

Although there has been significant work on the association between PTSD and attachment orientation, this is less the case for CPTSD. Ogle, Rubin, and Siegler (2016) found that attachment anxiety – but not avoidant attachment – was associated with the perceived centrality of traumatic events to older adults' identity. Moreover, identity centrality of trauma mediated a relationship between attachment anxiety and PTSD symptom severity. In a clinical sample of adults diagnosed with severe and chronic psychiatric and personality disorders, the relationship between severity of childhood interpersonal trauma and *Diagnostic and Statistical Manual of Mental Disorders*, fourth edition (DSM-IV) PTSD symptoms in adulthood was partially mediated by both fear of closeness (i.e., attachment avoidance) and of abandonment (i.e., attachment anxiety), as well as by emotion regulation problems and psychoform dissociation (Van Dijke, Hopman, & Ford, 2018a). Moreover, those relationships were independent of the effects of borderline personality disorder (BPD) symptoms, despite evidence that attachment avoidance and anxiety, emotion dysregulation, and psychoform dissociation also partially mediated the relationship between childhood interpersonal trauma severity and BPD symptom severity (Van Dijke, Hopman, & Ford, 2018b). Thus, adult attachment insecurity may not only be associated with childhood interpersonal trauma but also with features of CPTSD that are better described by DSO than by classic PTSD symptoms (e.g., sense of self/identity in which trauma is central), and attachment insecurity may be associated with the DSO feature of emotion dysregulation or may be linked to CPTSD independently of emotion dysregulation.

In the only study to date on the association between CPTSD and attachment, Karatzias et al. (2019) found that attachment anxiety and attachment avoidance were both associated with CPTSD but not with PTSD in a clinical sample of trauma-exposed individuals, indicating that attachment insecurity might be a more

significant factor in the severity of CPTSD symptoms compared to the severity of PTSD symptoms. Similarly, it might be well the case that specific types of attachment orientation are uniquely associated with CPTSD. Nevertheless, attachment orientation has never been studied in relation to CPTSD before. Exploring the relationship between psychological factors, such as attachment orientation, and CPTSD can inform the development of future interventions to enable recovery from this debilitating condition. Karatzias and Cloitre (2019) have suggested a modular approach to the treatment of CPTSD, whereby symptom clusters are being prioritized for therapy using appropriate interventions in terms of patient readiness to tackle a symptom cluster and preference for addressing specific symptoms. There is adequate evidence on effective treatments for PTSD symptoms in the form of exposure based interventions such as trauma focused cognitive behavior therapy (TfCBT) and eye movement desensitization and reprocessing (EMDR), but this is the less the case for DSO factors especially for symptoms resulting from childhood trauma (Karatzias et al., 2019). If certain attachment styles form unique associations with DSO, then attachment-based interventions can be particularly useful to aiding recovery from these debilitating symptoms.

The primary aim of this paper was to assess the strength of the association between the four adult attachment styles (i.e., secure, dismissing, preoccupied, and fearful) and the severity of PTSD and DSO symptoms. It was predicted that secure attachment would be negatively associated with PTSD and DSO symptoms, and the other attachment styles would be positively associated with PTSD and DSO symptoms, after controlling for age, gender, and childhood interpersonal trauma severity. The second aim was to test for differences in the strength of associations between attachment styles and PTSD and DSO symptoms. Considering the theoretical conceptualizations presented earlier in relation to the associations between attachment styles and emotional regulation and interpersonal difficulties, we hypothesized that each of the adult attachment orientations would be more strongly associated with DSO symptoms compared to PTSD symptoms.

Method

Participants and procedures

Ethics approval for this project was sought from the appropriate ethics committee. Participants in this study were self-referred individuals for psychological therapy to a National Health Service (NHS) trauma center in Scotland. All 331 new patients over the 8-month recruitment period were invited to complete a set of standardized measures. The mean age of the sample was 39 years ($SD=12.46$) and there were more females (62.1%) than males. Most of the participants were born in the United Kingdom (92.5%). Of the sample, 41.4% were employed, 29.8% were unemployed, 7.7% were home keepers, 6.9% were students, and the others were either retired or economically inactive due to ill health. Approximately one third of the participants were living alone (32.9%), 26.7% lived with a partner and/or family, 2.4% lived with friends (and the 37.9% reported 'Other').

Measures

Childhood trauma

The Childhood Trauma Questionnaire (CTQ; Bernstein & Fink, 1998) is a 28-item, self-report questionnaire that assesses exposure to a range of different childhood traumas. The scale produces five subscales, each with five items: emotional abuse, physical abuse,

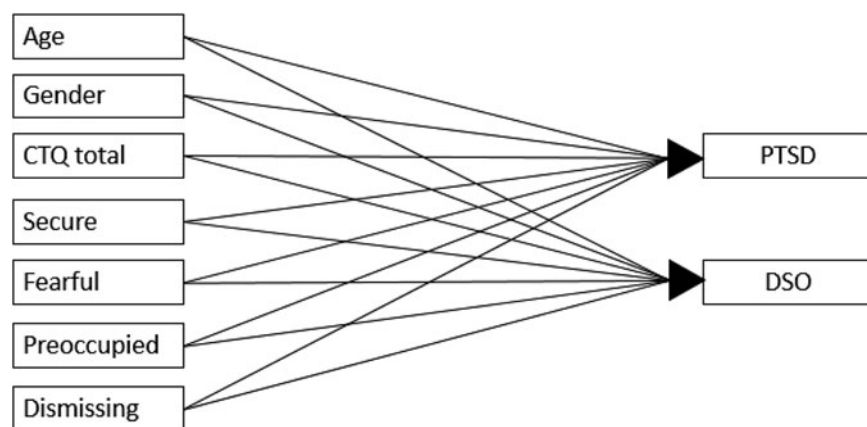


Figure 1. Model predicting posttraumatic stress disorder (PTSD) and disturbances in self organisation (DSO) scores.

sexual abuse, emotional neglect, and physical neglect. Items are responded to using a 5-point scale ranging from 1 = *never true* to 5 = *very often true*. The mean scores for each subscale were calculated. The continuous scores for subscales were used in the main analysis and the clinical cut-off scores indicating the presence of significant abuse and neglect were used to interpret the mean scores (Walker et al., 1999). The measure has previously demonstrated good internal consistency, test-retest reliability, and convergent validity (Bernstein & Fink, 1998). In the present study, high levels of internal consistency was found for the total scale ($\alpha = .94$).

Complex PTSD symptoms

The International Trauma-Questionnaire (ITQ; Cloitre et al., 2018) is a self-report measure of the diagnoses of PTSD and CPTSD, as described in the ICD-11. The ITQ comprised two sections measuring the six symptoms of PTSD distributed across the three clusters of re-experiencing, avoidance and sense of threat; and the six symptoms of DSO distributed across the three clusters of affective dysregulation, negative self-concept and disturbed relationships. Each cluster contains two items. All items are responded to using a Likert scale ranging from 0 = *not at all* to 4 = *extremely*. For PTSD, participants are asked to rate how much they have been bothered by their symptoms in the last month. For the DSO symptoms, participants are instructed to report how they typically feel, think about themselves, and relate to others. Summed scores for the PTSD and DSO scales have a potential range from 0 to 24.

The diagnostic criteria for PTSD require participants to endorse one symptom in each cluster (endorsement of an item is constituted by a score of ≥ 2), as well as evidence of functional impairment associated with these symptoms (constituted by a score of ≥ 2 in the domain(s) of social life, work-life, and/or other important obligations). For diagnosis of CPTSD, participants must endorse one symptom (score of ≥ 2) in each PTSD cluster and one symptom in each DSO cluster, and evidence functional impairment in relation to the PTSD and DSO symptoms alike. The internal reliability as measured by Cronbach's α was acceptable in the current study; PTSD, $\alpha = .76$; DSO, $\alpha = .84$; full scale, $\alpha = .86$.

Attachment styles

The Relationships Questionnaire (RQ; Bartholomew & Horowitz, 1991) is a four-item questionnaire designed to measure adult attachment styles. Each attachment style (secure, fearful, preoccupied, dismissing) is measured based on a brief description

prototypical and participants are asked to "...rate each of the relationship styles to indicate how well or poorly each description corresponds to your general relationship style." Participants respond to each description on a 7-point Likert scale ranging from 1 (*strongly disagree*) to 7 (*strongly agree*). Evidence of convergent validity and cross-informant consistency has been reported (Bartholomew & Horowitz, 1991; Griffin & Bartholomew, 1994).

Statistical analysis

Figure 1 shows the general model that was tested. The model was specified and estimated using robust maximum likelihood estimation (MLR: Yuan & Bentler, 2000), which has been shown to produce correct parameter estimates, standard errors, and test statistics (Rhemtulla, Brosseau-Liard, & Savalei 2012) using Mplus 8.1 (Muthén & Muthén, 2018). As the model is saturated, the adequacy of the model was assessed by (a) comparing the fitted model to a baseline model with all regression coefficients constrained to zero using a chi-square test, and (b) comparing the baseline and fitted model using information criteria, with lower values indicating better model fit: the Akaike information criterion (AIC, Akaike, 1987), Bayesian information criterion (BIC, Schwarz, 1978) and the sample-size adjusted BIC (ssaBIC, Sclove, 1987).

To test for the differences in the regression coefficients between the attachment styles and PTSD and DSO variables a series of equality constraints were tested. For each attachment style the regression coefficients for PTSD and DSO were tested to be equal using a Wald test. If the Wald test was significant, the regression coefficients were considered to be significantly different. At the variable level there was a modest amount of missing data, ranging from 1.5% to 14.8%, and pairwise percentage of data present ranged from 79.4% to 98.5%. The missing values were considered to be missing completely at random (Little's test: $\chi^2(171) = 183.44, p = .244$), and the missingness was handled using maximum likelihood estimation using all available data (Schafer & Graham, 2002).

Results

The descriptive statistics and correlations for all study variables are presented in Table 1.

The score for fearful attachment was the only attachment variable with a mean above the scale's midpoint of 4. The correlation between PTSD and DSO scores was positive, and the mean scores were high. The chi-square test indicated that the fitted model was

Table 1. Descriptive statistics and correlations for all study variables

| | Age | Gender | CTQ total | Secure | Fearful | Preoccupied | Dismissing | PTSD total | DSO total |
|-------------|--------|--------|-----------|---------|---------|-------------|------------|------------|-----------|
| Gender | .153** | 1.000 | | | | | | | |
| CTQ total | .084 | .069 | 1.000 | | | | | | |
| Secure | .111 | .013 | -.165** | 1.000 | | | | | |
| Fearful | -.040 | -.115* | .209** | -.384** | 1.000 | | | | |
| Preoccupied | -.147* | .091 | .088 | .008 | .061 | 1.000 | | | |
| Dismissing | .118* | .034 | .044 | .023 | .122* | -.219** | 1.000 | | |
| PTSD total | .007 | -.022 | .122* | -.128* | .123* | .048 | .132* | 1.000 | |
| DSO total | -.029 | .073 | .249** | -.299** | .288** | .098 | .189** | .518** | 1.000 |
| Mean | 38.97 | - | 59.78 | 2.84 | 5.50 | 3.43 | 3.61 | 17.599 | 17.325 |
| SD | 12.463 | - | 24.080 | 1.823 | 1.836 | 1.970 | 1.974 | 4.89305 | 5.537 |
| Range | 18-78 | - | 25-125 | 1-7 | 1-7 | 1-7 | 1-7 | 0-24 | 0-24 |
| % Missing | 1.5 | 3.0 | 14.8 | 7.9 | 6.1 | 8.5 | 8.8 | 8.5 | 5.2 |

** Correlation is significant at the 0.01 level (2-tailed), *0.05 level (2-tailed).
CTQ = Childhood Trauma Questionnaire; DSO = disturbances in self organization; PTSD = posttraumatic stress disorder; Correlations for age are point-biserial.

significantly better than the baseline model ($\chi^2(15) = 161.977, p < .001$), and the AIC (baseline = 14323.461; fitted = 14191.482), BIC (baseline = 14471.626; fitted = 14225.345), and ssaBIC (baseline = 14347.917; fitted = 14225.345) were lower for the fitted model, indicating that the fitted model was superior. The regression coefficients, and Wald tests, are reported in Table 2.

Age and gender were not associated with either PTSD or DSO symptoms. CTQ scores were associated only with DSO symptoms and not PTSD, with higher CTQ scores correlated with higher DSO symptom severity. Secure attachment was uniquely but inversely associated with DSO symptoms (and not PTSD). The Wald test indicated that the two regression coefficients (for secure attachment with DSO vs. PTSD symptoms) were significantly different. Similarly, fearful attachment had a significant, and positive, association with DSO symptoms and not with PTSD symptoms, and this difference was confirmed by a statistically significant Wald test. Preoccupied attachment was not significantly associated with either PTSD or DSO symptoms, and the Wald test indicated that both coefficients did not differ. Dismissing attachment was positively, and significantly, associated with both PTSD and DSO symptoms, and the magnitude of the coefficients did not differ significantly.

Discussion

There has been limited work on the associations between adult attachment orientations and ICD-11 CPTSD severity. In line with previous findings in the area of PTSD (Barazzone et al., 2019; Woodhouse et al., 2015), results indicate that secure and fearful attachment styles – but not the avoidant/dismissive attachment style – were associated with posttraumatic stress symptoms. However, in contrast to prior research on attachment style and PTSD, neither secure nor fearful attachment were associated with PTSD symptoms. Instead, both secure and fearful attachment styles were associated only with DSO symptoms. Although both secure and fearful attachment styles were associated (inversely and positively, respectively) with severity of childhood interpersonal trauma, they were associated with DSO symptom severity independent of the significant positive relationship between childhood interpersonal trauma severity and DSO symptoms.

Our findings suggest that adult attachment security and the fearful subtype of insecure attachment are of primary clinical concern for treatment-seeking adult survivors of childhood trauma who present with CPTSD; that is, not only the PTSD symptoms of re-experiencing, avoidance, and hyperarousal but also the DSO symptoms of emotion dysregulation and negative alterations in relationships and identity (Cloitre et al., 2018; Karatzias et al., 2019). Although attachment security and fearful attachment were significantly related to PTSD symptom severity on a bivariate basis, the correlations were relatively weak ($\sim .10$) and became nonsignificant when the effects of demographics and childhood trauma severity were included with all attachment styles in the multivariate model. Thus, the apparent relationship between attachment security and fearful attachment and PTSD found in prior research (Barazzone et al., 2019; Woodhouse et al., 2015) may primarily be due to a relationship between those attachment styles and the symptoms that characterize CPTSD. In relation to type of trauma and attachment, there has been evidence to suggest that interpersonal trauma forms stronger associations with attachment orientations (Barazzone et al., 2019). We have not addressed the role of the type of trauma in the present study and we suggest that these should be addressed in future research. Our findings

Table 2. Standardized estimates from model predicting posttraumatic stress disorder (PTSD) and disturbances in self organization (DSO)

| | PTSD | | | DSO | | | Wald test W (df) p |
|-------------|-------|--------|------|-------|--------|------|-----------------------|
| | B | SE | p | B | SE | p | |
| Age | .024 | (.062) | .699 | -.022 | (.058) | .701 | |
| Gender | -.037 | (.057) | .519 | .074 | (.053) | .159 | |
| CTQ total | .089 | (.056) | .112 | .163 | (.052) | .002 | |
| Secure | -.117 | (.071) | .100 | -.223 | (.058) | .000 | 4.766 (1) .029 |
| Fearful | .031 | (.071) | .657 | .146 | (.063) | .020 | 3.963 (1) .046 |
| Preoccupied | .070 | (.060) | .242 | .106 | (.058) | .069 | 0.574 (1) .449 |
| Dismissing | .143 | (.065) | .026 | .198 | (.057) | .001 | 1.562 (1) .211 |
| R-squared | .055 | (.030) | .070 | .204 | (.050) | .000 | |

CTQ = Childhood Trauma Questionnaire

also give support to the notion that secure attachment might act as an important protective factor against the development of CPTSD after exposure to traumatic events and that can enhance resilience in the face of trauma.

Overall, our findings suggest that interventions designed to enhance adult attachment security and reduce adults' fearfulness in their attachment working models may be potentially beneficial for the treatment of adults with CPTSD (Courtois & Ford, 2013). This could reduce the severity of DSO symptoms by incorporating developmentally informed strategies to reset attachment representations (Liotti, 2004). These may include interventions that foster the development of stable and positive attachment representations, increase organization of coherence of mind, transform maladaptive interpersonal schemas through limited reparenting, enable the development of capacity to mentalize, and reflect on mental states that promote increased control over internal experiences (e.g. Giesen-Bloo et al., 2006).

Nevertheless, the use of relational models of therapy can be demanding for many therapists as well as patients with CPTSD. Many clinicians find challenging forming therapeutic relationships with adult survivors of complex trauma due to their mistrust, emotional lability, and relational instability. Incorporating attachment theory into the conceptualization of the difficulties of adults with complex trauma adds to our understanding of these difficulties. Pearlman and Courtois (2005) suggested that an attachment framework can help the therapist to understand and empathize with the patients' problems and deal with routine relational challenges as well as those associated with emotion regulation.

The finding that a dismissive attachment style was associated with both PTSD and DSO symptom severity, independent of the effects of the other attachment styles and the severity of childhood trauma exposure, also warrants comment. Avoidant attachment was inconsistently associated with PTSD symptoms in prior research (Barazzone et al., 2019), but was associated with both trauma-related alterations in identity (Ogle et al., 2016) and (in the form of fear of closeness) with CPTSD symptoms (Van Dijke et al., 2018a). The bivariate correlation of dismissive attachment and PTSD was relatively weak (.14), and that with DSO was only slightly stronger (.19), yet this subtype of attachment insecurity nevertheless had a unique association with both PTSD and DSO symptoms in the multivariate model. This is consistent with the avoidance symptoms of PTSD and the relational dysregulation in DSO, suggesting that treatment

for adult PTSD or DSO should include therapeutic work on not just trauma-related avoidance but also avoidance based on a fear of closeness (Van Dijke et al., 2018b).

The absence of a relationship between preoccupied attachment and PTSD and DSO symptoms indicates that individuals exposed to severe childhood trauma are more likely to evolve into adults that avoid and feel disconnected from relationships and struggle to tolerate and express intimacy than into individuals who desperately cling to problematic relationships and frantically worry that they will be abandoned or deemed unlovable. This also is consistent with the evidence that the personality disorder in which preoccupation with relational injuries and emotional wounds is particularly prominent – borderline personality disorder – is distinct from both PTSD and DSO both in terms of symptoms and attachment insecurity (Van Dijke et al., 2018a, 2018b).

A number of limitations can be observed in the present study. Although the sample was typical of secondary and tertiary care clinical groups in the United Kingdom, the clinical nature of the sample limits generalizability to the wider population of adults with childhood trauma histories in the community. The cross-sectional and retrospective nature of the data and the lack of information about the temporal sequencing of the onset and course of the development of attachment styles and PTSD and DSO symptoms, as well as exposure to childhood trauma limits the conclusions that can be drawn to correlations among the variables rather than prospective or predictive relationships. Finally, and although brief measures of attachment orientation are scarce, RQ as a measure of attachment orientation is limited with a single item per attachment orientation style.

Despite its limitations, this the first study that explored the association between attachment orientation and ICD-11 CPTSD in a large clinical sample. Overall, while preliminary, results are suggestive of a meaningful association between CPTSD symptoms and both secure and fearful adult attachment styles. There is clearly a need for further work to increase our understanding of how childhood trauma may disrupt the development of internal representations of secure attachments and lead to the adoption of fearful attachment working models. The independent associations of attachment styles and childhood trauma severity identified in this study also suggest the need for further research on how factors that may co-occur with, but be distinct from, childhood trauma can contribute to fearful attachment and undermine attachment security (e.g., separations from caregivers; a poor fit between the child and caregiver's temperament and personality;

emotional abuse; Ford, Spinazzola, van der Kolk, & Grasso, 2018; Spinazzola, van der Kolk, & Ford, 2018). With a clearer understanding of the separate and interrelated roles of exposure to childhood trauma, attachment working models, and adult PTSD and CPTSD, it will be increasingly possible to develop and test the effectiveness of attachment-informed interventions for CPTSD that leverage increased attachment security and reduced attachment fearfulness in order to enable survivors of psychological trauma to recover from this debilitating condition.

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Conflicts of Interest. None

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