



**UK TRAUMA
COUNCIL**

Research Round Up

SPECIAL
EDITION

**Developmental
Trauma Disorder:**
The state of evidence
since DSM-5

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There remains academic and clinical debate about the best way to conceptualise and address the mental health needs of young people who have experienced multiple, often ongoing, interpersonal traumas, sometimes called complex or developmental trauma, such as physical, sexual abuse, or witness to domestic violence.

When the diagnostic and statistical manual of mental disorders (DSM) was updated in 2013, there was a proposal to include a new diagnostic classification called Developmental Trauma Disorder (DTD). Proposed by a group of clinical academics from the US, DTD was posited to capture a fuller scope of difficulties that may be experienced by a young person who has been exposed to such maltreatment. DTD was ultimately rejected due to lack of scientific evidence¹. Despite this, in practice 'developmental trauma' continues to be used prolifically, often instead of existing diagnostic classification systems. In 2018, the World Health Organisation's ICD-11 included Complex post-traumatic stress disorder into its nosology, a category not currently in the DSM-5, the classification system most utilised by researchers and clinicians in the United States. Crucially, Complex PTSD still requires a person to meet criteria for 'standard' PTSD, but also includes additional symptoms that overlap with DTD - emotion dysregulation, negative self-

affect, and interpersonal difficulties (symptoms core to many mental health difficulties). The recommended treatment also remains the same as for PTSD. While it has been argued that PTSD does not adequately apply to multiply traumatised children and young people, several large scale screening studies have shown high rates of PTSD in children and teens who have experienced multiple traumas, such as those in child welfare systems.

It has been argued that introducing DTD as a diagnosis could both increase access to appropriate mental health support, and that it could decrease access to support – particularly evidence-based interventions. In favour, is the argument that it might provide a broader conceptualisation of the complex mental health needs of young people who have experienced maltreatment. It particularly highlights neglect and somatic manifestations of trauma. The alternative view, is that a focus on 'developmental trauma' as both the description of the experience and the mental



health outcome, might mean young people are not being accurately assessed for mental health difficulties (and other conditions – such as neurodevelopmental conditions) that are well established in the scientific literature to present at extremely high rates in these groups. This could result in young people and their support network receiving unclear assessments that fail to identify and formulate their mental health needs.

The proposal of DTD and the decision not to include it in the DSM, certainly sparked much debate, and helpfully, a renewed interest in how we understand the mental health of young people who have experienced complex trauma and adversity. In this special issue we summarise the state of evidence for DTD, since it was ultimately not included in the 2013 DSM-5. In doing so, our goal is to provide clinicians and other professionals with a summary of how the science has developed over the past (near) decade and reflect on how the term 'developmental trauma' is used in practice. We have been selective in scoping the literature for this Research Round Up, focusing on work published between 2013 and now (i.e., since the DSM-5 review concluded that the evidence was insufficient).

It is worth noting that how DTD is defined has evolved over the past few decades. As it currently stands, DTD captures four criteria: (A) exposure to interpersonal trauma and disrupted attachment bonding with primary caregiver; (B) emotional or somatic dysregulation; (C) attentional or behavioural dysregulation; and (D) relational or self-dysregulation.

Based on the existing evidence, this Research Round Up provides an update on two themes:

- **The association between maltreatment exposure and the proposed symptoms of developmental trauma disorder**
- **An update on the state of evidence of whether DTD adds to our existing understanding of the mental health needs of children exposed to maltreatment**

One aspect of research that is crucial for scientific advancement is ensuring that findings are being replicated by different research groups. Unfortunately, one immediate issue with the DTD literature remains that the vast majority of research, even post-DSM-5, comes from the same group who originally proposed the diagnosis. The large scale (well powered) studies are also often re-analyses of the same sample. Of course, this is not a criticism of the group – large studies of trauma-exposed young people are time intensive, and it is not uncommon to see multiple analyses of large samples. However, when arguing for a new diagnosis it does present a challenge to drawing confident conclusions. There are an increasing number of studies from other groups; this is an important development if the evidence is to become more convincing.

In terms of the first theme – associations between maltreatment exposure and proposed DTD symptoms – there have been various papers that have continued to demonstrate that maltreatment exposure is associated with DTD



symptoms. From the available literature, there is relative consensus that violent (e.g., abuse) and non-violent (e.g., neglect) trauma exposure increases a young person's risk of meeting criteria for DTD, including after controlling for PTSD symptoms. There has been some attempt to understand whether specific types of trauma-exposure might differentially predict DTD versus PTSD. However, a lack of replication tempers conclusions. Reflecting on the broader maltreatment field, exploring whether specific trauma or maltreatment might lead to one outcome over another, often fails to hold-up to replication. At the more extreme ends of trauma exposure, children rarely experience trauma in discreet categories. Overall, it seems appropriate to conclude that maltreatment and adversity exposure is associated with DTD, as well as other common trauma-related mental health outcomes. DTD symptoms capture outcomes that are well-established in their association with maltreatment and complex trauma (e.g., emotion dysregulation, relationship difficulties).

Perhaps more relevant to clinical practice is whether there is an additive benefit of DTD above existing diagnoses. Here, the literature has primarily focused on PTSD. The take home messages from this small set of studies is that PTSD and DTD are highly comorbid and both are associated with multiple other comorbidities (including suicidality). This work confirms the well-established evidence that complex comorbidities are the norm for PTSD (and seem likely to be the norm for DTD). One study found that DTD (with or without PTSD) was associated with more comorbidities (an average of 1 more), than those with PTSD-only. A few studies have found a small subset of young people who meet

DTD criteria but not PTSD criteria. However, it is unclear whether they might meet criteria for other mental health disorders. PTSD is not the only, or even the most common, post-trauma mental health outcome. It also remains unclear whether DTD adds to the new Complex PTSD diagnostic criteria – although this was only released in 2018, so studies may be currently underway.

Overall, our search of the literature suggests there remains very limited evidence to support DTD as a new mental health diagnosis. Concerns fall into three categories: (1) there remains a general lack of evidence for the additive benefit of DTD as a new defined diagnosis, particularly given the advent of 2018's Complex PTSD category; (2) there remains limited replicability of research; (3) there remains no consistent evidence of validated assessment tools or evidence-informed treatments. This is not to say that these areas should not continue to be thoroughly investigated. It is crucial for science and practice that we continue to strive to improve how we can best understand and support the needs of children who have experienced complex or developmental traumas. It is absolutely the case that young people who have experienced maltreatment often have more complex presentations (including multiple comorbidities and other risks). There is also some evidence that conventional mental health treatments can be less likely to be effective with more complex presentations (although this research is predominantly with adults) but less effective is different from ineffective and does not always indicate that completely new approaches are required. For example, they might need more sessions or adjunct treatments. It is also not to say that the



general term 'developmental trauma' might not be helpful in practice, particularly when working with children exposed to sequential childhood trauma who have experienced neglect or have disrupted attachment. Formulations, therefore, might highlight the need to address somatic dysregulation, for instance, in a treatment plan. In terms of understanding and recognising the complex experiences of the young person and what it might mean for their general mental health, however, strong caution is warranted if using this term to define their mental health outcome – particularly as i) the term 'developmental trauma' is not always used in the way that it has been defined in DTD and ii) the evidence does not yet show whether or not it actually helps the child or young person concerned to access the most appropriate support or intervention.

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Evidence

- 1 Schmid, M., Petermann, F., & Fegert, J. M. (2013). Developmental trauma disorder: pros and cons of including formal criteria in the psychiatric diagnostic systems. *BMC psychiatry*, 13, 3. <https://doi.org/10.1186/1471-244X-13-3>



A systematic review of research on Developmental Trauma Disorder (DTD)

Morelli and Villodas (2021) reviewed the existing literature to examine the potential clinical usefulness of DTD as a novel diagnostic category. The authors identified 21 studies (17 with non-overlapping samples), which included 19,998 participants. The samples of most studies had a similar number of males and females and were ethnically diverse (e.g., 10 of 17 samples included at least 40% of non-White children and adolescents), and participants were typically between 7 and 18 years of age (range 0–21 years).

Across the studies, the assessment of DTD was varied. Some used measures designed to specifically assess DTD, such as the DTD Structured Interview (DTD-SI) and the DTD Questionnaire (DTDQ). In contrast, others used a range of measures that were not specific to DTD and used items from these measures which were related to DTD symptom criteria to make an assessment. According to the authors, the evidence suggests that DTD and PTSD are overlapping but sufficiently different and independent from one another as diagnostic categories.

The authors also reported that the experience of complex trauma (i.e., "traumatic experiences that are chronic, repeated, prolonged and interpersonal" during childhood or adolescence) was strongly linked with DTD symptoms, above and beyond the influence of PTSD, exposure to complex trauma later in life, or exposure to non-interpersonal or single-incident trauma (e.g., motor vehicle accident). However, they found that in some studies, DTD was not sufficiently distinguishable from other diagnostic categories, such as depression, anxiety, and conduct problems. The authors also highlighted some of the limitations within the field, such as the need for a gold standard assessment of DTD, more studies from independent groups of researchers, and studies with larger samples that are followed up over time. **In sum, the authors of this systematic review conclude that DTD may represent a promising novel diagnostic category but that more research is required.**

Morelli, N. M., & Villodas, M. T. (2022). A Systematic Review of the Validity, Reliability, and Clinical Utility of Developmental Trauma Disorder (DTD) Symptom Criteria. *Clinical child and family psychology review*, 25(2), 376–394. <https://doi.org/10.1007/s10567-021-00374-0>



Severe exposure to childhood trauma is associated with an increased likelihood of experiencing DTD symptoms

In this study, **Kisiel and colleagues (2014)** reviewed the records of 16,212 children and adolescents in state child welfare custody (49.1% female; age range = 0-16; 47.3% African American; 46.6 non-Hispanic White; 5.6% Hispanic; 0.5% Other). Upon entering state custody, young people were assessed using a comprehensive, non-DTD specific, clinical interview that evaluated a range of symptoms including, traumatic experiences, mental health and living needs, general functioning and well-being.

The authors found that young people with combined experiences of violent trauma (e.g., physical abuse or sexual abuse perpetrated by a carer) and non-violent attachment based trauma (e.g., emotional abuse or neglect) were more likely to meet DTD diagnostic criteria than youth exposed to either type or other/no trauma.

Moreover, consistent with DTD, young people with both violent and non-violent experiences of childhood maltreatment were more likely to experience difficulties in managing their emotions and behaviours, experienced more placement disruptions and hospitalisations, and showed poorer functioning in a range of settings (e.g., meeting social and academic demands in school and family settings). **In sum, this study suggests that exposure to more severe forms of trauma during childhood is associated with a greater likelihood of developing symptoms consistent with the proposed DTD diagnosis.**

Kisiel, C. L., Fehrenbach, T., Torgersen, E., Stolbach, B., McClelland, G., Griffin, G., & Burkman, K. (2014). Constellations of interpersonal trauma and symptoms in child welfare: Implications for a developmental trauma framework. *Journal of family violence*, 29(1), 1-14. <https://doi.org/10.1007/s10896-013-9559-0>



The association between childhood abuse and DTD

Ma and Li (2014) investigated the association between childhood abuse (repeated exposure to familial physical or sexual abuse) and important dimensions of DTD, using a combination of items from measures not specifically designed to assess DTD. Three-hundred-and-sixty-six children and young people (ages 9-15; 57% female; children were recruited from schools and clinical settings in Hong Kong, no other ethnic information was provided) were divided into three groups, a group with repeated exposure to childhood abuse ($n = 82$), a non-abused group with single-event trauma exposure ($n = 83$), and a no-trauma control group with no history of trauma exposure ($n = 201$).

The authors found that several symptoms

consistent with DTD (e.g., difficulties in managing emotions and behaviours, negative self-attributions, lower interpersonal trust and PTSD symptoms) were more prevalent among children and young people with a history of childhood abuse. **In sum, symptoms consistent with the proposed diagnosis of DTD were found to be more prevalent among children and young people exposed to childhood abuse as compared to children exposed to single-incident trauma or no trauma.**

Ma, E. Y., & Li, F. W. (2014). Developmental trauma and its correlates: a study of Chinese children with repeated familial physical and sexual abuse in Hong Kong. *Journal of traumatic stress*, 27(4), 454–460. <https://doi.org/10.1002/jts.21944>



A history of multiple or enduring childhood traumatic experiences is associated with DTD symptoms

McDonald and Molly (2014) examined the association between symptoms in the proposed DTD criteria and retrospectively reported exposure to complex childhood trauma (i.e., traumatic experiences involving multiple events during childhood or adolescence). DTD symptoms were measured using a DTD-specific (but unvalidated) questionnaire in a sample of 186 young people (ages 18-19; 73.3% female; 91% white).

Participants reported a range of multiple childhood events as being potentially traumatic (such as bullying, frequent separation from a caregiver, and repeated verbal abuse) which are not included in the current definition of PTSD.

Moreover, exposure to complex trauma during childhood was associated with an increased risk of experiencing symptoms consistent with a DTD diagnosis. **In sum, broadening the definition of childhood trauma, consistent with the proposed DTD diagnosis, may help identify individuals experiencing mental health difficulties.**

McDonald, M. K., Borntrager, C. F., & Rostad, W. (2014). Measuring trauma: considerations for assessing complex and non-PTSD Criterion A childhood trauma. *Journal of trauma & dissociation: the official journal of the International Society for the Study of Dissociation (ISSD)*, 15(2), 184–203. <https://doi.org/10.1080/15299732.2014.867577>



Association between parental absence due to migration and DTD symptoms

In this study, **Zhang et al. (2019)** investigated the association between parental separation due to migration and DTD symptoms. DTD symptoms were measured using a DTD-specific (but unvalidated) questionnaire in a sample of 322 children from rural areas in Shanxi, China (all participants were assessed at ages 13 and 18; 50% female; no other ethnic information was provided). Half were living with their parents, while the other half were not.

Results showed that, at 13 years of age, the two groups of children showed no difference in DTD

symptoms. However, when assessed again at age 18, children separated from their parents showed higher DTD symptoms than their non-separated peers. **In sum, the findings suggest that disrupted relationships with a primary caregiver may be associated with increased DTD symptoms over time.**

Zhang, Y., Zhang, J., & Ding, C. (2019). Investigating the Association Between Parental Absence and Developmental Trauma Disorder Symptoms. *Journal of traumatic stress*, 32(5), 733–741. <https://doi.org/10.1002/jts.22446>



Co-occurring mental health difficulties among children and young people with PTSD and DTD

Research by **Ford and colleagues (2021)**

sought to characterise coexisting mental health diagnoses associated with DTD and PTSD by replicating findings from an earlier field study. Children aged 8–18 years (N = 271; mean age = 12 years; 47% female; 51% White non-Hispanic, 31% Black or biracial, 10% Latino/Hispanic, 5% Asian American or Other) were assessed using a structured interview designed by the authors' research group to evaluate DTD symptoms.

Many children meet the criteria for both PTSD and DTD. Those who met the criteria for DTD (with or without PTSD) had more coexisting

diagnoses than children with PTSD (but not DTD). **In sum, the authors conclude that assessing for DTD may identify a subgroup of traumatised children with a complex mix of coexisting difficulties that are not captured by the PTSD diagnosis.**

Ford, J. D., Spinazzola, J., & der Kolk, B. V. (2020). Psychiatric comorbidity of developmental trauma disorder and posttraumatic Stress disorder: findings from the DTD field trial replication (DTDFT-R). *European Journal of Psychotraumatology*, 12(1). <https://doi.org/10.1080/20008198.2021.1929028>



The contribution of different forms of early adversity to the development of PTSD and DTD

Spinazzola and colleagues (2018) explored how two forms of early adversity - violent trauma (e.g., physical abuse, sexual abuse, exposure to community violence) and non-violent trauma (e.g., emotional abuse, neglect, prolonged separation from a carer) can contribute to the development of DTD and PTSD. Two-hundred-and-thirty-six children aged 7-18 (50% female; 50.4% White non-Hispanic, 29.3% Black, 16.9% Latino/Hispanic and 3.4% Asian American) were assessed using a structured interview designed by the authors' research group to evaluate DTD symptoms.

The authors found that, after controlling for symptoms of PTSD, children who met the symptom criteria for DTD were twice as likely to have a history of violent and non-violent trauma

than children without DTD. On the other hand, after controlling for symptoms of DTD, PTSD was only associated with violent trauma. Also, children and young people presented with more severe DTD symptoms if violent and non-violent trauma occurred together than if either occurred separately. **In sum, the findings indicate that DTD is associated with exposure to both violent and non-violent childhood traumatic experiences, while PTSD may be linked only to exposure to violent trauma.**

Spinazzola, J., der Kolk, B., & Ford, J. D. (2018). When nowhere is safe: Interpersonal trauma and attachment adversity as antecedents of posttraumatic stress disorder and developmental trauma disorder. *Journal of Traumatic Stress*, 31(5), 631–642. <https://doi.org/10.1002/jts.22320>



Prevalence of childhood trauma, PTSD and DTD in adults with intellectual disabilities in secure forensic settings

Morris and colleagues (2020) examined the occurrence of early adverse experiences, DTD and PTSD among adults with intellectual disabilities who were admitted to a secure specialist forensic service. The clinical records of 123 working-age adults were reviewed against the proposed criteria for DTD and PTSD (51% male; no information on age or ethnicity was reported).

In line with previous studies, the researchers found that exposure to developmental trauma in this sample was frequent, with 65% having experienced enduring adverse experiences during childhood. 47% of the total sample met

diagnostic criteria for both PTSD and DTD, and an additional 18% met the criteria for DTD but not PTSD (that is, 65% of the total sample met the criteria for DTD). **In sum, these preliminary findings suggest that symptoms related to the proposed DTD diagnostic criteria are common among adults with intellectual disabilities in forensic settings.**

Morris, D. J., Shergill, S., & Beber, E. (2020). Developmental trauma in a forensic intellectual disability population. *Journal of Intellectual Disabilities and Offending Behaviour*, 11(1), 35–48. <https://doi.org/10.1108/JIDOB-06-2019-0011>



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