In the aftermath of trauma, an important challenge involves identifying individuals who will later develop post-traumatic stress disorder (PTSD). The diagnosis of acute stress disorder, which differs from PTSD in its requirement of three or more dissociative symptoms (e.g. derealisation), was introduced to meet this challenge. The rationale is that dissociation in the acute phase can identify those at risk of later PTSD. However, research suggests that dissociation actually accounts for little unique variance in predicting PTSD in adults, thus questioning the dissociation mandate in adults, it is important to fully assess whether dissociation has predictive utility in trauma-exposed youth. Our primary aim was therefore to examine the predictive utility of the acute stress disorder dissociation criterion in children and adolescents in a large sample, homogeneous for type of trauma. To this end, we combined data from the three published studies in children and adolescents. Our second aim was to examine whether individual symptom counts across the different acute stress disorder/PTSD symptom criteria assessed in the month post-trauma can perform as well as full acute stress disorder in predicting later PTSD in children and adolescents.

**Method**

Data from hospital-attending, trauma-exposed child and adolescent road traffic accident survivors (n=367, 117 female) aged 6–17 years (mean=11.88, s.d.=2.60) were pooled from three centres: Oxford (n=86, aged 6–17 years); London (n=41, aged 10–16); and Philadelphia (n=240, aged 8–17). Written, informed consent was obtained from caregivers and assent from children. Of the 367 individuals, 285 were followed up at 6 months (n=82, n=29 and n=174 respectively). Participant recruitment and flow details are presented elsewhere.

Diagnoses were based on widely used instruments with robust psychometrics, as follows. Acute stress disorder was assessed at 2–4 weeks (baseline) using either structured clinical interview (London), the Child Acute Stress Questionnaire (Philadelphia), or a combination of questionnaire and interview (Oxford). At 6 months PTSD was assessed using the Anxiety Disorder Interview Schedule, the Clinician-Administered PTSD Scale for Children and Adolescents, or the Childhood PTS Reaction Index respectively.

**Results**

At baseline 9% (n=33; 16 females) of the pooled sample met criteria for acute stress disorder and 23% (n=83; 38 females) for sub-acute stress disorder (acute stress disorder minus dissociation), with 7% (n=25; 12 females) meeting criteria for PTSD at 6 months. Point-biserial correlations revealed no significant associations between age and presence of these diagnoses (P>0.4). As initial analyses revealed no significant effects involving research centre (coded by dummy variables) (P>0.2) reported analyses utilised the pooled sample.

As expected, baseline presence of acute stress disorder correlated significantly with 6-month PTSD (p(283)=0.18, P<0.01). Stepwise logistic regression predicting 6-month PTSD, with sub-acute stress disorder on step 1 and the acute stress disorder dissociation criterion on step 2, revealed sub-acute stress disorder as a significant predictor of PTSD (Wald=22.39, P<0.001), whereas dissociation provided no significant increment in PTSD prediction (Wald=0.48, P>0.48).

Table 1 shows the ability of different baseline acute stress disorder/PTSD symptom counts to predict PTSD at follow-up. In adult violent crime victims, six or more baseline symptoms of hyperarousal and/or re-experiencing predicted later PTSD as effectively as did full acute stress disorder, in terms of the trade-off between specificity and sensitivity. It is clear from Table 1 that this threshold, and even a threshold of three or more re-experiencing symptoms, was if anything, somewhat better than the full acute stress disorder diagnosis in its balance of sensitivity and specificity for the present sample. Furthermore, adding full acute stress disorder (on step 2) to either of these symptom counts on step 1 in logistic regressions, to predict later PTSD, provided no significant independent predictive benefits for acute stress disorder (Wald<0.71, P>0.4) over and above the predictive effects of either symptom threshold alone (Wald>14.34, P<0.001).

**Conclusion**

The acute stress disorder dissociation criterion appears to have no unique role in the prediction of later PTSD in a large sample of young trauma survivors, homogeneous for trauma type. The significant association between acute stress disorder and later PTSD may therefore simply reflect persistence or chronicity in the symptom clusters that acute stress disorder and PTSD have in common. Indeed, sub-acute stress disorder (acute stress disorder minus dissociation) was almost three times more sensitive than full acute stress disorder in predicting PTSD (Table 1). Thus, these data cast doubt on the predictive validity of the acute stress disorder diagnosis in younger people.
Presence of three or more re-experiencing symptoms at baseline was as effective at predicting later PTSD as the full acute stress disorder diagnosis, and possibly better. Indeed, the full diagnosis provided no significant increment in PTSD prediction over and above this simple threshold. Similar results were found for a count of six or more hyperarousal/re-experiencing symptoms. However, sensitivities for both of these thresholds were less than 50%, suggesting that they are not an effective screen.

Study limitations are that diagnoses were derived differently across the three centres on samples with different age ranges and the focus on a single-incidence civilian trauma.

References

Predictive validity of acute stress disorder in children and adolescents

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