Childhood maltreatment and attention deficit hyperactivity disorder symptoms in adults: a large twin study.


Abstract

BACKGROUND:
Childhood maltreatment (CM) has been associated with increased risk of attention deficit hyperactivity disorder (ADHD) in children and adults. It is, however, unclear whether this association is causal or due to familial confounding.

METHOD:
Data from 18 168 adult twins, aged 20-46 years, were drawn from the population-based Swedish twin registry. Retrospective self-ratings of CM (emotional and physical neglect, physical and sexual abuse and witnessing family violence), and self-ratings for DSM-IV ADHD symptoms in adulthood were analysed. Possible familial confounding was investigated using a within twin-pair design based on monozygotic (MZ) and dizygotic (DZ) twins.

RESULTS:
CM was significantly associated with increased levels of ADHD symptom scores in adults [regression coefficient: 0.40 standard deviations, 95% confidence interval (CI) 0.37-0.43]. Within twin-pair analyses showed attenuated but significant estimates within DZ (0.29, 95% CI 0.21-0.36) and MZ (0.18, 95% CI 0.10-0.25) twin pairs. Similar results emerged for hyperactive/impulsive and inattentive ADHD symptom scores separately in association with CM. We conducted sensitivity analyses for early maltreatment, before age 7, and for abuse and neglect separately, and found similarly reduced estimates in DZ and MZ pairs. Re-traumatization after age 7 did not significantly influence results.

CONCLUSIONS:
CM was significantly associated with increased ADHD symptoms in adults. Associations were partly due to familial confounding, but also consistent with a causal interpretation. Our findings support cognitive neuroscience studies investigating neural pathways through which exposure to CM may influence ADHD. Clinicians treating adults with ADHD should be aware of the association with maltreatment.