

Violent homes have the 'same effect on brains of children as combat does on soldiers'

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By Ted Thornhill Last updated at 6:43 PM on 5th December 2011

The brains of children are affected by family violence in the same way as combat affects soldiers, according to a study.

In both cases the brain becomes increasingly wary of potential threats.

For children, the changes may increase susceptibility to mental health problems, say experts from University College London (UCL) and the Anna Freud Centre.

[Pix} Long-term affect: Suffering abuse can make children vulnerable to anxiety later in life (picture posed by models)

Children who suffer abuse or witness domestic

violence are known to be at greater risk of anxiety and depression in later life.

Scientists carried out magnetic resonance imaging brain scans on 20 London children with an average age of 12 who had been exposed to documented violence at home. All had been referred to local social services.

While in the scanner, the children were shown pictures of male and female faces with sad, calm or angry expressions. Their patterns of brain activity were compared with those of 23 matched children with no history of family violence.

The children exposed to violence responded in a distinct way to angry faces, the study found. Their brains showed heightened activation in two regions associated with threat detection, the anterior insula and amygdala.

Previous research has shown a similar pattern in the brains of soldiers

exposed to violence combat situations.

The scans suggest both combat veteran soldiers and children who witness violence tune their brains to be hyper-aware of environmental danger.

Lead author Dr Eamon McCrory, from UCL's Division of Psychology and Language Sciences, said: 'We are only now beginning to understand how child abuse influences functioning of the brain's emotional systems. This research is important because it provides our first clues as to how regions in the child's brain may adapt to early experiences of abuse in the home.

{Pix} Impact: Witnessing violence can have a traumatic effect on the brains of soldiers (file picture)

Enhanced reactivity to a biologically salient threat cue such as anger may represent an adaptive response for these children in the short term, helping keep them out of danger. However, it may also constitute an

underlying neurobiological risk factor increasing their vulnerability to later mental health problems, and particularly anxiety.

‘The next step for us is to try and understand how stable these changes are. Not every child exposed to family violence will go on to develop a mental health problem; many bounce back and lead successful lives. We want to know much more about those mechanisms that help some children become resilient.’

The anterior insula and amygdala are both implicated in anxiety disorders, the researchers pointed out.

Professor Peter Fonagy, chief executive of the Anna Freud Centre and Professor of Psychology at UCL, said: ‘Dr McCrory's groundbreaking research has undoubtedly taken us an important step closer to understanding the devastation which exposing children to violence can leave in its wake. His exciting findings confirm the traumatic effects

these experiences have on
brain development.

‘The report should energise clinicians and social workers to double their efforts to safeguard children from violence. By helping us understand the consequences of maltreatment the findings also offer fresh inspiration for the development of effective treatment strategies to protect children from the consequences of maltreatment.’

The research was reported today in the journal Current Biology.

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Comments (64)

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... I was amaze when I read this article, because I finally know that I'm not alone, before this I thought I am a freak, because I always vigilant, afraid of crowd and don't have friend at all(not because I don't want to but because I'm afraid). ...

...

... those that know better do better,my parents

didn't,they were tortured
souls them selves.shame really.....

...

... War left me no scars. I had prepared myself mentally for what I was going to do. Daily life is my real struggle. How can I teach my son to be positive when I can trust no one but myself. ... As I cry while I type this all I can say is thank you to all who have shared their experiences. The pain will never go away but It helps to know someone can understand my emptiness.

...

This is very important research but will it make a difference when it comes to the mindset of the Family courts and social services? I very much doubt it. ... Post traumatic stress DOES HAVE an insidious, long-term, damaging effect as a result of violent environments. As well as a possible, problematic mental health outcome for these 'combatants', physical health can also be affected. If those in power really had the will to redress the

emotional balance, in favour of the children and their futures, our society would be the richer for it.

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