
Psychological trauma in children and adolescents

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During the last decade, direct work with children who have experienced public disaster or private catastrophe, such as abuse, neglect and other intra-familial crime, has led to the recognition that classifications of post-traumatic stress disorder are relevant to childhood psychopathology. Comorbidity is common. Traumatized children who also are bereaved or dislocated are hindered in mourning and in the capacity to sustain or form attachments. Adult psychopathology often may be linked with unrecognised or underestimated effects of psychological trauma during childhood and adolescence. This paper discusses therapeutic interventions, outlines research hypotheses and provides an introductory bibliography.

Background

Until a decade ago the received view concerning the effects upon children of overwhelming stress was that, since responses tended towards the mild and transient, a categorisation of post-traumatic stress disorder (PTSD) comparable with that used for adults was unnecessary. The major hindrance to a more sophisticated understanding was that studies of conflict, disaster and crime, including intrafamilial violence, as they affected children, relied upon the evaluation of parents, teachers and other surviving adults; children were not asked what they thought and felt. In 1985, Eth & Pynoos published a seminal book on recently published and at that time little-known work concerning direct assessment of children and the effects upon them of war, terrorism, kidnapping, crimes of violence, community disasters, abuse and neglect. The range

of children's reactions to traumatic events has been reviewed by Udwin (1993).

The International Society for the Study of Traumatic Stress has brought together workers in all of the above fields. Those from the UK who work with children include Yule and his colleagues at the Maudsley Hospital, who continue to study the effects upon child survivors of shipping disasters, including the sinking of the Zeebrugge ferry in 1987 (Yule & Williams, 1990; Yule & Gold, 1993). Pynoos and his colleagues have studied the effects of witnessing homicide, of a sniper attack and of earthquakes; Terr of a mass kidnapping; and Parry-Jones and his colleagues at the University of Glasgow the effects upon the child population of the Lockerbie airplane crash in 1988. Parry-Jones, Yule and their colleagues now also work with refugees, as does Richman (1993). Harris Hendriks *et al* (1993) continue a study of domestic homicide as it affects children. Black *et al* (1995) provide an overview of this and other related research. Herman (1992) outlines the common core of physiological and psychological effects of personal or public disaster upon the human frame.

The criteria for PTSD as specified in DSM-IV (APA, 1994) and ICD-10 (WHO, 1992) were developed from adults, not from children, although studies suggest that children and adolescents surviving a life-threatening disaster show many of the symptoms reported in adults (Yule, 1994). Certain symptoms may be particularly prominent in children, such as sleep disturbances (including problems settling to sleep, frequent night-waking, nightmares, fear of the dark and of sleeping alone), loss of newly acquired developmental skills, repetitive play, separation anxiety and clinging behaviours (Udwin, 1993).

A multi-axial classification suitable for children

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and adolescents must consider the age and sex of the child, the presence or absence of learning disability or specific developmental delay, associated medical conditions, and specific psychosocial features. The final categorisation should reflect the scope and nature of the disaster (Parkes, 1995). Account should also be taken, as far as is possible in the immediate aftermath of a traumatic event, of the structure and stability of the child's previous life circumstances.

A diagnostic formulation must also consider comorbidity. Traumatized children are particularly vulnerable to anxiety states and depressive reactions. Additionally, children, like adults, are psychologically and physiologically ill-equipped to deal with the interlocking effects of trauma and grief. A traumatized child with intrusive memories of a fearful event will find it difficult to summon up images and memories of a parent or sibling lost through crime or catastrophe. Those bereaved or dislocated suffer separation anxiety and sadness; those traumatized startle readily and fear recurrence of the terrifying event. The bereaved are angry at their loss and perhaps guilty about faulty relationships with their loved one; the traumatized feel diffuse rage together with guilt that they have survived when others did not. The bereaved seek out associations with their loss; the traumatized avoid memories of the fearful event. Those who grieve see a long featureless dark road ahead of them; the traumatized see a rocky unpredictable path full of pitfalls (Terr, 1990).

These interlocking reactions, plus real life events such as dislocation and discontinuities in care, when combined with the foreshortened sense of the future which is a common reaction to trauma, create in childhood a propensity to insecure, avoidant or absent attachment. The compounded effects of these factors create multiple vulnerability to psychological illness in later adolescence and adult life: a field rich in potential for the development and testing of research hypotheses.

Research

Systematic epidemiological study of PTSD in childhood has yet to be attempted. As indicated earlier, the studies that do exist are problem-related (e.g. compensation claims and other medico-legal issues) or are initiated in response to identified disasters. Sponsors depend on the availability of researchers and are commonly hindered by massive related problems such as continuing conflict, dislocation, impoverishment and bereavement. To

tease out, for whole populations, the incidence and prevalence of PTSD in childhood, and to identify age-related factors, requires ethically approved studies which are prospectively planned, funded and staffed. Evaluation of outcome requires similar resources, as indicated even by consideration of individual case studies such as those below.

Case 1

Jane was three years old when her father killed her mother. The three were together in the family house at the time of the death. Afterwards her father took his wife's body to wasteland, and reported to the police that she was missing. He claimed that she had left the home after a quarrel but must have been attacked by an unknown stranger. Within 24 hours he had been arrested and charged with his wife's murder, and subsequently pleaded guilty to manslaughter. He claimed that Jane had slept throughout the night of these events. Jane stayed with her father until his arrest and then was moved to live with her mother's sister 200 miles away. Initially she had none of her personal possessions, her house having been sealed up for forensic reasons. Jane resisted bedtime, clinging, crying and protesting until she fell into an exhausted sleep at about 11.00 pm, then startled into wakefulness about two hours later, her sleep disturbed and restless, and she would scream in an irritable, high-pitched voice. By day her play included repetitive stabbing and striking movements (her mother died of blows to the head). Jane finger-painted exclusively in red and black. She sought comfort from her carers but then would struggle and turn her eyes from them when they were about to embrace and soothe her.

Jane demonstrated PTSD. A traumatic event was followed by evidence that she re-experienced the trauma. She showed both physiological reactivity and psychological stress in relation to her bedtime routine. (Her mother had been killed soon after Jane was put to bed, and her father's insistence that the child knew nothing was not borne out by this behaviour.) Jane's participation in childhood activities was much diminished, being replaced by repetitive play around the theme of the trauma. She also demonstrated her detachment, estrangement and restricted affect age-appropriately in the form of avoidant attachment behaviour.

Case 2

Michael was 16 years old when he went out with some friends to play. They were climbing over a fork-lift truck when it fell over. Everyone jumped off as it started to fall. Unfortunately, Michael

jumped the wrong way, and the truck fell onto his body. He was trapped under the truck for over an hour, and spent some months in hospital recovering from his physical injuries. Subsequently, he lost interest in schoolwork and in athletics, subjects that he had previously excelled in. He experienced nightmares. He experimented with alcohol and drugs as a way of getting rid of his nightmares. He avoided going to the place where the accident had occurred. He avoided going near water, which reminded him of a puddle that his face had lain in when he had been trapped under the truck. His relationships with his family and girlfriend deteriorated. He was unable to communicate his distress.

Michael also demonstrated age-appropriate PTSD. He had recurrent distressing dreams and avoided both the place of the accident and events or circumstances which might arouse memories of it. On interview he described specific new fears of being thrown off balance, aroused by every day events such as being on a swaying bus, and fears of being trapped in a confined space.

His interest in school activities was much diminished and this was demonstrated in the course of assessment by an educational psychologist. He was able to ascribe his difficulties with friends to feeling that he was estranged from them and that they could not understand him. He said "You never know what is going to happen next", and was reluctant to plan his future. His use of drugs and alcohol was maintained both to reduce sleep disturbance and to eliminate physiological symptoms of increased arousal, such as a fast-beating heart, nausea and abdominal pain, which occurred both when he was in streets among traffic and when he was in confined spaces. He had fears of heart disease of which he did not speak until an assessment interview one year after the accident.

The treatment of trauma

All children and adolescents require post-disaster services appropriate to their age, the scope and nature of the disaster, and their immediate circumstances. The Disasters Working Party (Allen, 1991) was funded by the Department of Health, following requests from a voluntary organisation, Cruse/Bereavement Care, and by the Association of Local Authorities. It provides an outline of good practice for coordinated inter-agency responses to community disasters. With particular reference to the social and psychological needs of people affected by disaster, the recommendation was that directors of

social services should be key workers in organising and coordinating this in conjunction with other emergency services. A multi-agency response should include, besides social workers and voluntary organisations, mental health services and community groups.

However, impeccable principles are increasingly difficult to implement. Legislation concerning health, education and social services, uncoordinated at central level, has created a situation in which devolution of services, changing boundaries and financial constraints are not conducive to the development of disaster-response initiatives.

There are few reports of appropriate treatment strategies specifically for use with children (Udwin, 1993). Principles for practice must be derived from those established or in process of evaluation for use with adults, and developed, critically evaluated and modified according to the needs of younger clients; see Saylor (1993) for a review of current knowledge.

Psychological first aid

Food, shelter, protection and medical attention must necessarily take priority, but prompt identification of children by available personnel concerning their proximity to disaster, what they have seen, felt, smelt and heard, where they are now and who is available to be with them, will enable focused intervention directed towards both the children and the adults who care for them in the immediate aftermath. Crisis intervention workers may be recruited from a range of professionals or volunteers. Early intervention should help to enable survivors to understand events and their own reactions, to share their experiences with others, and to provide education about the 'normalisation' of typical post-traumatic reactions. The aim should be that sufferers do not become further isolated from those around them by the fear of fear.

Psychological debriefing

A technique developed with emergency personnel as well as trauma survivors (Robinson & Mitchell, 1993) may be relevant to at least some child survivors of disaster, but early clinical work requires validation and replication (Bisson & Deahl, 1994; Busuttill & Busuttill, 1995) in order to ascertain its usefulness for both adults and children. Factors relevant to the consideration of therapeutic approaches may be summarised as:

- (1) *Group factors*: a credible group leader should be appointed to develop an environment in which reassurance can be offered with clear rules, boundaries and explanations.
- (2) *Cognitive factors*: the group leader facilitates discussion of factual events, expectations, thoughts, and the communication of emotional reactions and sensory impressions.
- (3) *Coping style factors*: education about the process of traumatic stress responses, normalisation of these experiences and the formulation of anticipatory guidance. Participants are encouraged to show their response to events and, since the process is time-limited, a disengagement phase is included. Follow-up psychological debriefing takes place several weeks after the incident. This is not mandatory, but when used its main function is to resolve issues arising from the initial incident.
- (4) *Evaluation*: the need for more direct, specific therapeutic intervention may be evaluated as part of a psychological debriefing process. Adults who have been helped by debriefing may in turn be more accessible to the consideration of children's needs.

However, psychological debriefing is an educative rather than a therapeutic process, relief if it occurs becoming available via learning, sharing and normalising the post-traumatic experience (Busuttill & Busuttill, 1995).

Long-term interventions

There is a balance to be struck between working at a child's pace and colluding with two common circumstances which hinder psychotherapeutic help.

- (1) *The conspiracy of silence*: adults are reluctant to disturb a traumatised child, fearing that speaking of or otherwise reawakening memories about a traumatic event will cause further damage. Meanwhile, the children in need of care are reluctant to disturb or distress their carers.
- (2) *Numb, compliant children* are unwittingly helpful to those around them who reinforce this aspect of PTSD. Children often do not speak of sleep disturbances. Jane (above) is unusual in demonstrating both her knowledge

of the traumatic event, through play and drawings, and her psychological symptoms in a way which was unavoidably recognisable. Michael's psychological distress remained substantially unrecognised.

The interventions outlined below are those which are or ought to be available as components of comprehensive child mental health services.

Family and group therapy

Here the terms 'family' and 'group' must of necessity apply to whichever caring group is available to the child after the disaster. It may include foster parents, social workers, or carers in a refugee camp. Interventions range from education about the effects of psychological trauma, using the sharing of common experiences, to the facilitation of family or group interaction. Survivor groups may be of particular value (Yule & Gold, 1993).

Individual psychotherapy

Here the therapist, available for a defined period to the child, may pick up tentative communications and expressions of grief which would otherwise remain unnoticed. The structure and reliability of the experience itself may be helpful to the child and, with the child's permission where appropriate, the experiences of individual psychotherapy may be helpful to carers who are reluctant, out of their desire to protect the child and deny his experience, to face the reality of post-traumatic suffering. Individual cognitive-behavioural treatments aim to help the child or adolescent make sense of what happened and to master feelings of anxiety and helplessness. Therapeutic sessions may need to be longer than usual to avoid sensitising rather than desensitising the child. Intrusive thoughts and behavioural avoidance appear to be helped by exposure under supportive circumstances. Nightmares may also be helped by cognitive-behavioural techniques. For further discussion, see Yule (1994).

Carers and other professionals

Direct work with adults may range from training and education via post-traumatic psychological debriefing, to ongoing assistance and supervision in facilitating the recovery of traumatised children, plus psychological and pharmacological therapies as appropriate.

Psychopharmacological treatments

Most studies of physiological change subsequent to trauma have been made on male combat veterans. There appears to be overactivity of the autonomic nervous system, which may also involve the locus coeruleus, and it is hypothesised that biological and behavioural changes may be produced by repeated traumatisation, such as child abuse, terrorism, or when one trauma creates vulnerability to intrusive re-experiences (Van der Kolk & Fisler, 1993). These findings have led to a study of drugs which affect the autonomic nervous system to reduce physiological arousal or anxiety, which may have effects on disturbances in sleep patterns. Evaluation of medication is complex, since some studies have identified a significant level of coexisting psychiatric illness in some sufferers from post-traumatic stress: depression, substance abuse and personality disorder may coexist. To date, studies are small, conducted on adults and on patients not randomly selected. However, diagnosis and treatment of adult psychopathology may be helpful to these children. There are very few studies specifically concerning the psychopharmacological treatment of PTSD in childhood, and drug treatments do not play a major role at present.

Stress inoculation

Such training aims to give children cognitive and behavioural skills for coping with future stresses. Its effectiveness requires further research; for example, whether these skills should be taught to all children irrespective of their life circumstances, since all human beings are vulnerable to unexpected and threatening life events, or are more specifically relevant and best taught to those already identified as vulnerable or as survivors. Social skills training involving the use of role play and similar techniques derived from social learning theory may be helpful to children and adolescents who face specific tasks such as re-entering a peer group, returning to school, relocating, or communicating with their wider family group subsequent to a trauma.

Case 3

Frank, aged 15, was reluctant to visit his maternal grandparents after his father's imprisonment for assaulting his mother: "They won't want to see me; I look like my father". Frank was similarly reluctant

to go to school, saying he did not know what to say to his classmates about his father's imprisonment, which had been reported in the local press. Help for Frank included a prescription of propranolol for symptoms of high arousal, and joint sessions with his mother concerning Frank's rage at his father, his guilt that he had not prevented the assault, and fear that he too might behave as his father had done. Role play was offered concerning Frank's proposed visit to his mother's parents; and intervention was planned for his return to school, involving his head of year.

Further research

Work is needed to refine concepts of psychological trauma in childhood with particular reference to variability with age and linguistic capacity and to the existence of comorbidity. Longitudinal studies are required to clarify the natural history of PTSD commencing in childhood and the risk of psychiatric disorder in adult life. Outcome studies of treatment interventions (emergency, intermediate and longer term) require validation. In the short term, however, it is important that due recognition be given to the extent of suffering, hitherto unrecognised or minimised, undergone by children who experience private or public catastrophes.

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Multiple choice questions

- 1 The following may be features of PTSD in children:
 - a nightmares
 - b poor concentration
 - c bed-wetting
 - d bad behaviour
 - e separation anxiety
- 2 The following are recognised as useful techniques in the treatment of PTSD in children:
 - a antidepressant medication
 - b cognitive-behavioural techniques
 - c survivor groups
 - d individual psychotherapy
 - e antipsychotic medication
- 3 Subsequent to psychological trauma, children:
 - a readily volunteer information
 - b show comorbidity
 - c indicate their distress through play
 - d startle easily
 - e demonstrate strengthened attachments
- 4 Post-disaster services:
 - a readily cater for children and adolescents
 - b routinely train personnel to note the presence of children
 - c offer well-planned crisis intervention to children and adolescents
 - d recognise psychological numbing in childhood survivors
 - e give priority to the physical wellbeing of children and adolescents
- 5 Psychopharmacological treatments:
 - a should never be used in childhood and adolescence
 - b available knowledge relates to adult victims
 - c comorbidity may require pharmacological treatment
 - d deserves further study
 - e treatment of parents may benefit children

MCQ answers

1		2		3		4		5	
a	T	a	F	a	F	a	F	a	F
b	T	b	T	b	T	b	F	b	T
c	T	c	T	c	T	c	F	c	T
d	T	d	T	d	T	d	F	d	T
e	T	e	F	e	F	e	T	e	T