

Analysis

Child and adolescent mental health amidst emergencies and disasters

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Summary

The mental health of children and young people can be disproportionately affected and easily overlooked in the context of emergencies and disasters. Child and adolescent mental health services can contribute greatly to emergency preparedness, resilience and response and, ultimately, mitigate harmful effects on the most vulnerable members of society.

Declaration of interest

A.D. reports grants from MRC and NIHR during the conduct of the study. P.S. reports grants from MRC during the conduct of the

study, has co-authored a published treatment manual, *Cognitive Therapy for PTSD in Children and Adolescents*, and receives a share of royalties from Routledge.

Keywords

Childhood experience; post-traumatic stress disorder; risk assessment; trauma; child and adolescent mental health.

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Emergencies and disasters are not uncommon, owing to, for example, severe weather events linked to climate change (e.g. hurricanes, floods), war-related or economic displacement, and terrorist attacks.¹ Traumatic events such as these can lead to severe and impairing psychopathology in some children and young people (hereafter referred to as children).² Of note, these events may disproportionately affect children: in addition to suffering traumatic experiences, children often suddenly lose essential resilience factors, namely the support of parents, friends, neighbours and the social infrastructure that is normally in place to ensure their safety and provide assistance. Under these circumstances, the material and physical needs of the community may overshadow the psychological needs of children. Therefore, it is vital to integrate child mental healthcare within public health interventions for emergencies and disasters. Here, we put forward an analysis of both the lessons learned during the work we have undertaken with child survivors of recent terrorist attacks and disasters in the UK in collaboration with National Health Service England and Public Health England,³ and messages from key publications,^{4–7} with the aim to inform best practices and highlight future research directions in this area. We structure these reflections according to the broader National Health Service England/Public Health England framework for emergency preparedness, resilience and response.⁸

teams, it is important to plan in advance how clinical capacity can be optimised under the circumstances, both locally and through the involvement of national specialist emergency response teams for outreach activities. To enable local child and adolescent mental health services (CAMHS) to efficiently contribute to emergency response, it is essential that they are well resourced, trained in the assessment of the psychological responses to trauma and trauma-related psychopathology, and able to deliver evidence-based treatment that is effective for ameliorating common psychopathology after traumatic experiences, such as trauma-focused cognitive-behavioural therapy.⁷ Fourth, because the emergency resilience and response activities described below necessarily involve interagency work, it is important to map and resolve issues of jurisdiction, data-sharing and quality assurance for collaborative work across health services, police and the third sector. In particular, data-sharing barriers are consistently identified as major impediments to implement interventions⁹ despite clear indication that the sharing of data in an emergency is likely to be found lawful when basic principles of best interest and proportionality are respected.¹⁰ Finally, because the evidence base in this area is limited, it is important to plan to carefully evaluate any intervention to identify helpful practices and modify others.

Preparedness

Emergency preparedness encompasses the actions that can be taken to ensure that ‘emergency planning enables the effective and efficient prevention, reduction, control, mitigation of, and response to emergencies’.⁸ To be prepared to mobilise resources in a timely manner in the aftermath of emergencies and disasters, it is crucial to develop plans in ‘peace time’ to address leadership, communication, resources, integration and evaluation. First, because clear leadership is needed to coordinate activities at times of emergency, it is important to identify in advance local and national experts in child trauma prepared to intervene when needed to provide an evidence base for the development of care pathways and strategy. Second, because clear communication is needed to relay advice to affected communities and the media, it is important to prepare in advance accessible written material based on sound clinical evidence. Third, because emergencies are likely to create a mental health burden that exceeds the routine resources of local mental health

Resilience

Emergency resilience is ‘the ability of the community, services, area or infrastructure to detect, prevent and, if necessary, to withstand, handle and recover from disruptive challenges’.⁸ When caring for child mental health in the aftermath of emergencies and disasters, it is important to appreciate the uniqueness of each event as the actions taken to identify and support affected children may vary based on the context. For example, although locality-type incidents (e.g. flooding, fires) typically involve communities and may be complicated by the high levels of material needs and secondary stressors,¹¹ non-locality-type incidents (e.g. large-scale transport incidents, terrorist attacks) often involve unrelated individuals and may pose challenges because of difficulties in reaching all children involved.

Activities aiming to support affected children and families should be well coordinated, ideally with a single point of contact (e.g. schools), to identify those exposed, screen for risk and psychiatric disorders, and triage to relevant services. Because the material needs of the community may overshadow the psychological needs of children, it is necessary that mental health services make a shift

from reactive to proactive service provision (e.g. centralised outreach, community activities, school liaison). The nature of the activities will depend on the nature of the incident (e.g. locality versus non-locality type, geographical area involved), whereas their feasibility will depend on the existing clinical capacity and additional funding allocated. Furthermore, although often challenging owing to issues of consent and confidentiality, the direct engagement of children is key to minimise reporting bias by parents,^{3,7} who may struggle recognising symptoms in their children, for example because of their own trauma-related distress and psychopathology.

The aim of screening is to identify the most vulnerable children in the community, namely those at greatest risk of developing psychopathology. Most children exposed to traumatic events develop fleeting psychological responses: children may worry about the same traumatic event happening again; they may become fearful, clingy, jumpy or very irritable (or, in contrast, they may become detached or numb); and they may develop headache and stomach-ache related to the intense distress. These are normal responses to intense and distressing experiences and not psychiatric disorders. For this reason, an initial phase of watchful waiting is recommended rather than immediate clinical involvement. Some children may need closer monitoring in the aftermath of emergencies or disasters; for example, because they were already in the care of CAMHS owing to psychopathology or neurodevelopment disorders before trauma exposure, or because of the severity of their symptoms, impairment or risk. These vulnerabilities can be identified through systematic screening of trauma-exposed children, using brief history-taking and short, validated questionnaires (e.g. the Children's Revised Impact of Event Scale,¹² the Revised Children's Anxiety and Depression¹³ and the Strengths and Difficulties Questionnaire¹⁴). Finally, few children will develop psychopathology, ranging from depression to conduct disorders, substance abuse, anxiety disorders and post-traumatic stress disorder (PTSD).² Because the expression of these psychological responses will vary based on the child's age or developmental stage,⁴ assessment should be undertaken by professionals with experience in child and adolescent mental health.

Response

Emergency response includes 'decisions and actions taken in accordance with the strategic, tactical and operational objectives defined by emergency responders'.⁸ As for preparedness and resilience, coordination of response activities is crucial because of the necessary interagency work and the involvement of the third sector. Specialist care is not usually required at early stages. As noted above, most children exposed to traumatic events develop fleeting psychological responses, which are normative given the context. In contrast, few children exposed to traumatic events develop psychiatric disorders requiring specialist care. Therefore, mental health service response to emergencies and disasters includes different levels of interventions in a stepped framework, moving from universal/low-intensity interventions to specialist/high-intensity ones.

A first level of intervention involves 'psychological first aid' – a set of actions (contact and engagement with survivors, promoting safety and comfort, information-gathering on needs and concerns of survivors, practical assistance, information on normative psychological responses to traumatic experiences and on coping strategies, linking with available support) delivered by trained non-health professionals to provide assistance to affected populations within days/weeks after a traumatic event with the aim of reducing the initial distress and fostering adaptive functioning and coping. Although the efficacy of psychological first aid has not yet been formally tested,

it has been practised since the 1950s and is broadly endorsed.^{15,16} A crucial element of these interventions is psycho-education for families and children, including information about possible reactions to stress (to help children and families understand and normalise many of the observed behaviours; to enhance the child's sense of control) and coping strategies (e.g. anxiety-reduction techniques, such as breathing, muscle relaxation and guided imagery).¹⁷

A second level of intervention involves the prevention of psychopathology in all trauma-exposed children. Psychological 'debriefing' was originally developed for this aim as a group-based intervention for rescue workers to directly confront the event, structure the memories of the event and share feelings. However, trials have shown that debriefing, particularly when delivered in individual-focused one-off sessions, is ineffective in children and adults alike.¹⁸ In contrast, trauma-focused cognitive-behavioural therapy group interventions delivered by trained non-health professionals might be effective in reducing PTSD risk and other key outcomes in children exposed to ongoing large-scale shared trauma,¹⁹ although more research is needed in the area before any clinical implementation.

A third level of intervention involves the prevention of psychopathology in trauma-exposed children who have developed some psychiatric symptoms. If symptoms are mild and have been present for less than 4 weeks, watchful waiting could be used to actively monitor the clinical presentation with review within a month.⁷ In contrast, if symptoms are long-standing, severe and/or impairing, treatment should be provided immediately.⁷ For example, a cognitive-behavioural intervention that was delivered by clinicians in the first 4 weeks after trauma to children with significant PTSD symptoms to improve caregiver-child communication and provide trauma-related coping skills reduced the likelihood of developing PTSD relative to supportive counselling.²⁰ Replication and cost-effectiveness analysis are needed before clinical implementation of this intervention.

A fourth level of intervention involves the early treatment of psychopathology. For example, treatment of children with PTSD with trauma-focused cognitive-behavioural therapy delivered by clinicians within 2–6 months after trauma reduced the likelihood of PTSD at follow-up compared with the waiting list,²¹ and was found to be cost-effective,²² although the findings need to be replicated. When many children have been exposed to a shared trauma, such as in the case of emergencies and disasters, it is recommended that group-based trauma-focused interventions are considered.⁷ Of note, because emergencies and disasters often affect families rather than individual children, and because parental mental health needs and response to trauma can affect their children's response to treatment,²³ it is crucial to plan integrated care for children and their parents.

A final level of intervention involves the treatment of psychopathology in the longer term. Although interventions in the context of emergencies and disasters necessarily focus on rapid responses and short time-frames (days to weeks for universal, non-specialist interventions; months for specialist, clinical interventions), the mental health needs of children and families involved in these events can be enduring. Therefore, emergency response also needs to support care provision for such long-term needs. Because emergencies and disasters typically put additional strain on underfunded services, additional funding is necessary to support the delivery of specialist interventions in the long term in these circumstances.

It is also crucial to also consider the heavy toll that emergency resilience and response interventions may have on first responders and professionals. On the one hand, professionals involved should be encouraged to engage in mental health screening throughout the process and should have access to specialist services when psychiatric disorders are identified. The psychological toll on first

responders and professionals may not be immediately apparent and only emerge years after the incident.²⁴ On the other hand, it is important to be aware of possible barriers for professionals to engage in screening, such as stigma and regulatory issues if mental problems are detected.

Future directions

Although there are several areas of uncertainty, two may be of greater urgency to support resilience and response to future emergencies and disasters.


We need better ways to identify trauma-exposed children at greater risk of psychopathology. Although we have some understanding of the differences between groups of trauma-exposed children who do or do not develop psychopathology,²⁵ we know little about how to build accurate individualised risk prediction. Focus on single risk factors is clearly inadequate. For example, we know that female gender is associated with higher risk of PTSD after trauma; that is, girls are more likely to develop PTSD after trauma. However, not all girls develop PTSD after trauma and not all cases of PTSD are in girls, highlighting the low sensitivity and specificity of predictions based on single risk factors. Furthermore, multivariate models developed in a given data-set are typically not validated either internally or in external data-sets, and thus likely provide overoptimistic estimates of prediction accuracy in new samples because of overfitting. Therefore, to improve individual risk prediction, it is important to adopt modern computational methods addressing such shortcomings, such as statistical/machine learning.² Of note, although the risk-screening studies undertaken in the aftermath of traumatic events focus on prediction of PTSD, PTSD is neither the only nor most common psychiatric disorder to onset after trauma.² Therefore, clinically useful prediction models should enable accurate identification of trauma-exposed children at risk of a broad set of psychiatric disorders beyond PTSD. Such instruments will enable a more rational allocation of resources to children with the greatest needs and a more cost-effective use of the scarce clinical workforce.

We also need to develop a stronger evidence base for interventions in the aftermath of emergencies and disasters. Progress in this area has been hampered by concerns that certain types of early interventions (debriefing) may have harmful effects,²⁶ presumably by promoting the consolidation of trauma memories. However, as reviewed above, there is emerging evidence that other early interventions focusing on trauma-focused cognitive-behavioural principles may be efficacious and cost-effective to prevent or provide early treatment for PTSD in trauma-exposed children.^{7,19–21} Trials for these interventions need to be replicated and extended, with exploration of longer-term therapeutic effects and the effects on the broader set of psychiatric disorders linked to trauma. Because of the significant logistical challenges that emerge in the context of emergencies and disasters, research should also test whether early interventions focusing on trauma-focused cognitive-behavioural principles can be effectively delivered online/remotely. Alternative models of delivery have the potential to reduce stigmatisation and improve access to services.

Conclusions

The mental health of children and young people can be disproportionately affected and easily overlooked in the context of emergencies and disasters. CAMHS can contribute greatly to emergency preparedness, resilience and response and, ultimately, mitigate harmful effects on the most vulnerable members of society. More

research is needed to understand how to use a scarce workforce effectively, reaching those who are more likely to benefit from interventions and avoiding harm from inappropriate clinical involvement.

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