A multi-level framework to guide mental health response following a natural disaster

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Abstract: Natural disasters can cause significant distress, grief, loss and hardship, and mental health is a key public health issue that needs to be addressed as part of a wider psychosocial response to assist affected communities. Most people who live through a natural disaster, including bereaved individuals, will not require the attention of specialist mental health professionals. In addition, because many people will cope or 'bounce back' on their own and with the support of others, we should be careful to not interfere with the natural coping processes of community members. In the aftermath of the Victorian bushfires in Australia in 2009, a three-level framework was developed that outlined three levels of response to enhance the capacity of lay community members as well as health and welfare personnel to provide evidence-informed care, support and interventions.

Key words: disaster, mental health, community programmes, treatment interventions, training

Natural disasters involving widespread loss of life and property are known to have a significant impact on mental health and wellbeing (Ursano *et al*, 2007; Norris *et al*, 2002; Shear *et al*, 2011). Following disaster, mental health is a key public health issue that needs to be addressed as part of a wider community development approach to assist affected communities (Mollica *et al*, 2004). For both humanitarian and economic reasons, government and non-government disaster response agencies have a responsibility to ensure that co-ordinated and effective mental health programmes and interventions are provided to promote psychological recovery and to alleviate the mental health burden among affected communities.

The available evidence shows that a significant number of affected persons will experience acute distress in the immediate aftermath of disaster, and that individuals will exhibit a range of mental health outcomes and trajectories (Norris *et al*, 2002). Although most will recover without developing diagnosable psychiatric disorders, of concern is the fact that a number of people will develop a more persistent mental health problem, such as depression, anxiety or complicated grief, either soon after a disaster

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or at some point in the following months. For example, in the year after Hurricane Katrina devastated New Orleans and surrounding areas in 2005 in the United States, elevated rates of anxiety and mood disorders were detected in approximately one-third of the residents (Galea *et al*, 2007). Acute disaster stressors that are associated with the development of mental health problems include the death of relatives, witnessing horror and death, threat to life, physical injury, and panic and fear. More chronic stressors in the months and sometimes years following disaster include housing and property loss, physical adversity, loss of livelihood, financial loss, and displacement. However, it is important to emphasise that a 'persistent' mental health trajectory is typically less common following disaster than 'resilient' or 'recovery' trajectories. A resilient trajectory is characterised by transient distress with relatively stable functioning. Studies suggest that often more than half of disaster-exposed individuals show a resilient trajectory (Bonanno *et al,* 2010). In contrast, a recovery trajectory typically involves moderate to severe levels of symptoms with impaired functioning which improve over the ensuing months until the person returns to their usual level of functioning. Following the deadly south-east Asian tsunami in 2004, the prevalence of post traumatic stress disorder (PTSD), anxiety, and depression symptoms among survivors in southern Thailand significantly decreased in the year following the disaster (van Griensven *et al*, 2006). This pattern of findings may well have been the result of people recovering under improved social and environmental conditions. Similarly for bereaved individuals, most will eventually accommodate the loss of a loved one and return to enjoyable and productive activities after an initial period of acute grief (Zisook & Shear, 2009), despite the fact that a gradual return to better functioning can be complicated by media exposure, prolonged coronial and legal processes, delayed funerals, and changed social circumstances following a natural disaster.

There is certainly a need to undertake more research into the development of effective community-based and individual-level programmes and interventions following disaster. However, based on the available evidence, we can expect that most people who live through a disaster will not require the attention of specialist mental health professionals. In addition, because many people already appear to cope or 'bounce back' on their own and with the support of others around them, we should be careful to not interfere with the natural coping processes of community members, or promote interventions that may in fact provide no relative advantage.

Community and workforce development framework

A key consideration in disaster mental health planning is to enhance the capacity of community members, health and welfare practitioners, and mental health professionals to understand disaster-related mental health issues and to deliver evidence-informed support and interventions. In the aftermath of the Victorian bushfires in Australia in 2009, the Australian Centre for Posttraumatic Mental Health in collaboration with other trauma and disaster experts, and representatives from health professional associations and the Australian and Victorian governments, developed an evidence-informed three-level framework that outlined recommended levels of care to be provided by lay personnel and different workforce sectors. This framework has now been applied to other natural disasters in Australia, including the Queensland mental health recovery plan following the floods and cyclone in 2011.

The framework identified three levels of response. Level 1 was consistent with current models of psychological first aid (PFA) (Brymer *et al*, 2006) that are designed to be used by lay people and professionals to promote simple and practical recovery strategies to community members in the immediate aftermath of a disaster. Level 2 was based on an approach called Skills for Psychological Recovery (SPR) (Berkowitz *et al*, 2010) designed for delivery by primary care and allied health providers treating individuals with more enduring sub-clinical mental health problems. Level 3 focused on treatment provided by mental health specialists for those people who developed (or exacerbated) a diagnosable mental health problem. This paper will outline the steps included in each of these levels, with a particular focus on assistance and interventions for those experiencing traumatic loss and grief.

Level 1: Psychological first aid (PFA) and community development programmes

As has been described, most people affected by disasters will experience acute transient distress but the majority will recover using their own existing coping strategies and social supports. As a result, formal psychological interventions such as psychological debriefing (which encourages individuals to recount the traumatic event and their responses in some detail) are not generally recommended in the first few weeks following disaster (Forbes *et al*, 2010b). Instead, there is now an expert consensus that individual and community-level post-disaster interventions can be guided by a number of evidence-informed principles: (1) promoting sense of safety; (2) promoting calming; (3) promoting sense of self- and community-efficacy; (4) promoting connectedness; and (5) instilling hope (Hobfoll *et al*, 2007).

PFA, with its emphasis on 'first, do no harm', is the recommended approach to providing tailored assistance to individuals in the immediate aftermath of trauma or disaster, including those who have experienced a significant loss. Put simply, PFA is designed to reduce initial distress and promote adaptive coping and connectedness with

existing social supports. A detailed manual on PFA is available from the US National Centre for PTSD website (www.ncptsd.org). The manual details eight components of PFA: (1) contact and engagement; (2) safety and comfort; (3) stabilisation; (4) information gathering: current needs and concerns; (5) practical assistance; (6) connection with social supports; (7) information on coping; and (8) linkage with collaborative services. While this approach has been endorsed by many experts in post traumatic mental health, it should be noted that the effectiveness of PFA to promote recovery and prevent the development of more serious problems has not been tested empirically.

Following large-scale disasters, early interventions should also include community development activities to inform community members, and promote understanding and cohesion in the emotionally charged aftermath of the disaster. These activities may include social events (such as sports, fetes, and barbeques), newsletters, and community meetings, but may also include more targeted mental health initiatives. Following the Victorian bushfires, the community support training (CST) programme was developed and delivered in affected local communities as part of the government-funded psychosocial recovery plan. Similar to PFA, the CST programme emphasises information about common reactions and problems after disaster, mobilising social support, and identifying individuals who may require more intensive support. A focus for participants is on assisting others, including active

Community Support Training Program information sheet for managing difficult times when grieving the loss of a loved one

Privately and personally

You may sometimes prefer to keep your thoughts and feelings to yourself.

- Keep a diary or journal.
- Create a memorial – do or make something to honour your loved one.
- Develop your own rituals – light a candle, listen to special music, make a special place to think.
- Allow yourself to express your thoughts and feelings privately. Write a letter or a poem, draw, collect photos, cry…
- Exercise – do something to use pent-up energy – walk, swim, garden.
- Draw on religious or spiritual beliefs if this is helpful.
- Read about other people's experience – find books and articles.
- Do things that are relaxing and soothing, eg. massage, meditation.
- To help with sleeplessness: exercise, limit alcohol, eat well before sleeping, and try to have a routine.
- Try to defer major decisions that cannot be reversed for 6 –12 months, eg. disposing of belongings.

With other people

Sharing with other people can reduce the sense of isolation and aloneness that comes with grief.

- Try to allow people to help you, don't be embarrassed to accept their help. You will be able to help someone else at another time. It is your turn now.
- Talk to family and friends; sharing memories, thoughts and feelings can be comforting and strengthen your connection with your loved one.
- Consider joining a support group to share with others who have had similar experiences.
- Take opportunities to join in public ceremonies where you can be private, yet part of a larger group.
- Use rituals and customs that are meaningful to you.
- Talk with a counsellor to focus on your unique situation, to find support and comfort, and to find other ways to manage, especially when either your life or your grief seems to be complicated and particularly difficult.

When to seek further help

Although grief can be very painful, most people find that with the support of their family and friends and their own resources, they gradually find ways to learn to live with their loss, and do not need to seek professional help. However, sometimes the circumstances of the death may have been particularly distressing, such as a traumatic or sudden death, or there may be circumstances in your life which make your grief particularly difficult. You should consider seeking professional help if:

- you do not have people who can listen to you and care for you
- you find yourself unable to manage the tasks of your daily life, such as going to work or caring for your children
- your personal relationships are being seriously affected
- you have persistent thoughts of harm to yourself or anyone else
- you frequently over-use alcohol or other drugs
- you experience panic attacks or other serious anxiety or depression
- over time you remain preoccupied and acutely distressed by your grief
- you feel that for whatever reason, you need help to get through this experience.

listening and encouraging them to seek professional help if necessary. Information from a programme handout on helping yourself or someone else to best cope with the death of a loved one is provided in the box on p. 111. In 2009–2010, more than 900 people from disaster-affected communities across Victoria attended a CST programme session. Encouragingly, the programme was found to improve a range of competencies including community members' confidence in their abilities to assist someone having difficulties coping (Wade *et al,* 2013). However, the extent to which the programme actually results in behavioural changes among participants is not yet known.

Level 2: Skills for psychological recovery (SPR)

Empirical research findings and clinical experience suggest that a significant number of people will continue to experience distress following disaster despite their best attempts to cope. For many, these difficulties are limited to mild or sub-clinical conditions and include worry, sadness, insomnia and anger as well as reduced functioning at work, school or home. These difficulties can often be fuelled by issues such as bereavement, destruction of property and other possessions, relocation, and rebuilding. Individuals experiencing these intermediate level difficulties can be taught simple evidence-based skills by primary and allied health care practitioners. SPR was developed by the US National Center for PTSD & National Child Traumatic Stress Network in the aftermath of Hurricane Katrina (Berkowitz *et al*, 2010). SPR comprises six core modules, the first of which involves gathering information and prioritising the individual's needs. Having done so, the practitioner then chooses one or more of five skills-based modules that provide structured and detailed information to assist them to teach tailored self-management skills to the individual. The five skills-based modules are: (1) building problem-solving skills; (2) promoting positive activities; (3) managing reactions; (4) promoting helpful thinking; and (5) rebuilding healthy social connections. The skills from the modules can be taught in a relatively brief period of time, with contact of up to five sessions expected. A number of these modules may be helpful to assist individuals experiencing a grief reaction, including the 'Managing Reactions' module with information sheets on grief reactions to promote understanding and use of simple coping strategies.

Assisting the grief-stricken person to practise more helpful ways of thinking about their loved one's death may also be useful to reduce guilt and distress. Based on a cognitive therapy strategy of challenging habitual and negative thinking, 'promoting helpful thinking' helps individuals to recognise that some of their thoughts (or views) may actually be contributing to their distress. After individuals identify their unhelpful thoughts, they are encouraged to practice more helpful ways of thinking. For example, an individual who thinks 'I should have been able to save her. It's my fault' and 'no-one can help me with this' could be encouraged to generate and practise more helpful and realistic thinking to ease their distress. This could include more helpful thoughts such as 'If I had done things differently, it might not have made a difference' and 'if I talk to someone about my grief, then it may make me feel better'.

An evaluation of the implementation of SPR following the 2009 Victorian bushfires indicated that health practitioners from various disciplines perceived the SPR approach to be an acceptable and useful intervention for disaster survivors with moderate severity mental health problems (Forbes *et al*, 2010b). Similar to the word of caution about the unknown effectiveness of PFA, controlled studies have yet to assess the efficacy of the manualised SPR approach.

Level 3: Psychological interventions for diagnosable mental health conditions

Despite the fact that the majority of those affected by disaster will either show a resilient trajectory or else recover from relatively short term mental health problems, a significant minority will continue to experience clinically significant distress and functional impairment in the months following a disaster. In such cases, more formal assessment and intervention by a mental health specialist is warranted. Common mental health disorders following disaster and trauma include depression, anxiety disorders (including post traumatic stress disorder), complicated grief, and substance abuse. In addition, relationship problems are not uncommon. These problems may be newly developed in the aftermath of the disaster but can also be exacerbations of pre-existing conditions.

Evidence-based psychological treatments for psychiatric disorders are drawn primarily from a cognitive behavioural paradigm, with interventions such as psycho-education, symptom management, in vivo and imaginal exposure, cognitive restructuring, and relapse prevention likely to be included. Effective cognitive behavioural treatments for complicated grief utilise similar therapeutic interventions (Boelen *et al*, 2007, Shear *et al,* 2005), although the available evidence for effective treatments of complicated grief is not derived from studies of disaster survivors.

Following the 2009 Victorian bushfires, an intensive training programme was developed and rolled out for mental health practitioners across Victoria to equip them to provide evidence-based cognitive behavioural treatments for common mental health problems. Recommended components of treatment for complicated grief included in the therapist and other training resources were: psycho-education about persistent grief and providing a rationale for treatment; graded imaginal and in vivo exposure to confront avoided memories and situations; cognitive

interventions for negative, distorted or ruminative thinking; processing emotional blocks by 'communicating' with the loved one via a letter or imaginal conversation; facilitating positive memories of the deceased person; setting personal goals to 'reclaim your life'; and relapse prevention strategies (Forbes *et al*, 2009). Specific training for medical practitioners, with an emphasis on pharmacological treatments, was also provided following the bushfires. Anti-depressant medications are frequently used in the treatment of complicated grief and other post-disaster mental health conditions. When an anti-depressant is prescribed, a selective serotonin reuptake inhibitor (SSRI) is usually the preferred option, and should be reserved for at least moderate severity conditions and provided in combination with intensive psychological treatment (National Institute for Health and Clinical Excellence, 2009; Forbes *et al*, 2010a).

Further work is required to develop and evaluate effective dissemination and training methods in post-disaster mental health training programmes that lead to changes in practitioner behaviour. Ideally, training programmes will need to incorporate supervision, consultation, monitoring, and evaluation to ensure that practitioners can provide treatment in a competent manner following training.

Conclusion

Community members, support workers, primary and allied health practitioners, and mental health specialists have a great deal to offer in assisting affected communities to recover from the mental health consequences of disaster. The goal of any immediate post-disaster efforts should be to support and enhance the normal resilient and recovery processes and naturally occurring social networks. However, for those who do develop a more persistent mental health problem such as complicated grief, it is incumbent upon us to provide effective treatment and support options.

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