



## UNISDR Scientific, Technical and Advisory Group Case Studies - 2013

### Preventing Post-Traumatic Stress Disorder after the Indian Ocean Tsunami: Using reliable and timely evidence

#### The problem

The powerful earthquake-triggered tsunami that devastated the coasts of many countries in two continents bordering the Indian Ocean on 26 December 2004, killed more than 280,000 people, displaced more than 1 million, and affected the lives of around 5 million more [1,2].



**Figure 1:** Destruction caused by the tsunami in a village in Nagapattinam district, Tamil Nadu, India  
(Source: Prathap Tharyan)

Unprecedented media coverage triggered a worldwide outpouring of empathy, financial aid, and pledges of assistance; the mobilisation of resources; and concerted action from the international community. However, some of the well-meaning responses were not without drawbacks. There were concerns that the unregulated, uncoordinated, and poorly sustained activities of independent visiting health-care teams or individuals would undermine local health-care efforts [3].

Acute stress reactions were common in survivors two weeks after the tsunami, and most people interviewed reported insomnia, with images of towering waves, and hearing the high pitched sound of the tsunami that some felt were the cries of the dead. There were frequent rumours of earthquakes and more tsunamis. Those who had lost loved ones were also experiencing acute grief reactions [1].

Although stress and distress after such a disaster is a natural response, in some people it can become debilitating and can also lead to longer-term psychological disorders including depression and post-traumatic stress disorder (PTSD). Such mental health burdens affect lives and livelihoods and impair individuals', households' and communities' recovery from a disaster.

#### The science

To ensure that the available resources were used as effectively as possible, a psychological support team responding to the disaster in India checked the scientific evidence for the best known way to reduce acute stress and prevent longer-term psychological disorders. They identified a relevant 'Cochrane systematic review'. These are structured analyses of the available scientific evidence, undertaken by the Cochrane Collaboration ([www.cochrane.org](http://www.cochrane.org)), an international network of scientists, practitioners and patients. These 'systematic reviews' involve searching for all available scientific studies on a topic, identifying the best quality studies and then assessing what results they show – and what actions they support – when you consider at them together.

The identified Cochrane Review looked at scientific evidence for the technique of 'debriefing' following a traumatic event [4]. Debriefing was a commonly-used strategy in the wake of traumatic events, aiming to reduce immediate psychological distress and to prevent the development of psychological disorders, notably PTSD. It involves asking the person who has just experienced a traumatic event to think about what happened and their feelings during and after the event. It can be provided to individuals or groups (when it known as mass debriefing) and over multiple sessions or as a single session.

The Cochrane review did not find any scientific evidence that brief single-session debriefing reduced psychological disorders, moreover one scientific study actually found that, one year after a traumatic event, those who had received debriefing had a nearly three times greater risk of PTSD than those who had not received debriefing [4].

## The application to policy and practice

In the wake of the tsunami, many response teams rushed to Nagapattinam district, one of the worst hit areas of Tamil Nadu, the state in India with the largest number of casualties. Several of these teams would make short visits to affected villages, offer brief debriefing (predominantly single-session, mass debriefing) to survivors and then move on to the next village.

As a result of the evidence assessment and identification of the Cochrane Review, the psychological support team who conducted this work urged officials and nongovernmental organisations to desist from offering brief, single-session debriefing. This message about debriefing was incorporated into the content of counsellor training workshops along with evidence for interventions that **were** supported by the results of systematic reviews and randomised trials [5,6,7].



**Figure 2:** Resuming fishing some months after the tsunami near Velankanni in Nagapattinam district, Tamil Nadu, India (Source: Prathap Tharyan)

## Did it make a difference?

Follow-up studies were performed among adult survivors of the tsunami in parts of the Nagapattinam district by the team who had done the evidence assessment. They did not find the high rates of PTSD that were predicted by some immediately after the disaster [8,9]. The team assessed Post Traumatic Stress-Symptoms (PTSS) and grief symptoms in 643 adult survivors from five villages affected by the tsunami, using two well-established assessment questionnaires. They found that 85% of those questioned did not have any persistent psychological symptoms, 15% had some PTSS but none had all the symptoms and behaviours that show PTSD [8].

The team concluded from this work (and further in-depth research in some villages) that they were probably right in avoiding debriefing and offering more established and more personalised support instead. Furthermore, their research suggested how the psychological support response to future disasters might be done better. For example, to target the responses at two areas: (1) strengthening community coping for the majority; and (2) identifying and providing appropriate psychological services for those with persistent difficulties - most of whom can be readily identified.

This application of scientific evidence and other examples like it, after the tsunami, led members of The Cochrane Collaboration to develop an initiative, Evidence Aid, which provides access to scientific evidence that support health and public health professionals responding to disasters, “.. a co-ordinated, international initiative to improve effective and timely access to systematic reviews on the effects of interventions and actions of relevance before, during and after natural disasters and other humanitarian emergencies, to improve health-related outcomes; working with those who need and use this evidence and those who produce it” ([www.EvidenceAid.org](http://www.EvidenceAid.org)). The Evidence Aid website includes the Cochrane Review from this case study in its freely available collection.

## References

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