



served and may be unwilling to display emotional distress, especially with regard to grief and guilt. The extended family is the basic institution and plays a far more important role than the “nuclear” family seen in the West. The village is a fundamental unit of many Asian societies, and, despite inexorable urban migration, ties to one’s original birthplace, family, and clan remain strong. In that part of the world, an individual’s identity is associated strongly with the home village and surrounding community.

Religious faith is another fundamental influence in this region and, in turn, has a significant impact on people’s response to such a traumatic experience. Hinduism, Buddhism, Islam, Christianity, and animist/folk religions are central to the life and culture of South Asian people and influence both the initial response to a traumatic event and later response to therapy and rehabilitation. In addition, the practice and underlying philosophy of traditional medicine in many South Asian countries is inextricably linked to religion and culture. Traditional practices may provide a significant barrier to the effective introduction of contemporary mental health interventions if the value of the new intervention is not clearly explained and understood, particularly if the intervention is viewed as a challenge to current beliefs.

Another important cultural factor is the mental health system existing in the specific region affected by the tsunami. Many of the affected regions possess mental health systems that are very different from the settings in which established Western treatments were developed. For example, CBT evolved in settings characterized by individual face-to-face therapy, well-resourced mental health systems, and a tradition of help-seeking for mental health problems. It needs to be recognized that adapting Western treatments to Asian contexts may involve obstacles arising from cultural differences in how mental health is conceptualized and how mental health services are regarded.

#### SCREENING AND ASSESSMENT TOOLS FOR PTSD

A number of groups are particularly vulnerable to PTSD and demand special attention with an appropriate cultural approach. In the case of the tsunami, as with other large-scale disasters, whole communities are affected and therefore screening and assessment need to adopt a community-based approach. When resources are limited, it is particularly important to identify those people most at risk and those who will benefit most from treatment.

Immediately after the tsunami, children in the relief camps in both Thailand and Sri Lanka were reportedly responding well and perhaps did not fully appreciate the catastrophic events that had taken place. However, a survey in a Sri Lankan camp 3 weeks after the disaster showed that 41% of the children (aged 7–15 years) had evidence of severe acute stress disorder (3 weeks after trauma) identified

by use of the Validated Short Screening Questionnaire.<sup>9</sup> The PTSD Checklist (PCL), a 17-item self-report checklist of PTSD symptoms<sup>10</sup> based closely on the DSM-IV criteria, has now been validated for the Tamil community, who make up a significant proportion of the Sri Lankan population and were a group severely affected by the tsunami in south India.<sup>9</sup>

Adolescents are a newly identified vulnerable group who experience grief and aggression and who may develop delayed antisocial behavior in response to traumatic events. Behavioral problems previously associated by parents and other adults with being “naughty” may be linked with mental health problems. Traumatized adolescent boys in Sri Lanka showed signs of hostility and other antisocial behaviors following the tsunami that could prove problematic to society. Although posttraumatic symptoms in this age group have been shown to be similar across some cultures,<sup>11</sup> it is possible that the nature and treatment needs of adolescents in Asian cultures may be different from those of adolescents from the West.

Single parents are another at-risk group with particular needs. Many men who lost their wives in the tsunami have been faced for the first time with looking after young children and other domestic tasks normally reserved for women in these cultures. These men may be prone to depression and alcohol abuse. Likewise, bereaved women are faced with a new role as head of the household for the first time and may find the balance of finding suitable work and caring for the family impossible to achieve, with a resulting harmful effect on income and well-being. The problems faced by single-parent families are particularly likely in families in which, even though no parent died in the tsunami, parents are required to leave the family home because of lack of employment. For example, in southern Thailand, many major hotels are not being rebuilt after the tsunami, which will result in long-term unemployment for many people. As a consequence, many parents might move to Bangkok to seek work to support their families who remain in the south of Thailand. Such economic realities may have long-lasting mental health consequences.

Screening for PTSD in a post-disaster situation, such as that following the tsunami, is useful only if it is followed up with action. Wide-scale screening of people who report mental health problems is indicated if there are sufficient resources to meet the needs of those identified in the screening procedure. The identification of people who require treatment when one cannot treat them poses new problems and thus should be avoided. This is particularly likely to be the case in the acute phase after a disaster, such as the tsunami, because the social and organizational chaos that often occurs after a massive disaster precludes mental health interventions being available for the massive demand that is observed. In this sense, it is probably sensible to delay screening of people

**Table 1. Screening and Assessment Tools Validated in Different Cultures and Languages**


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The 12-item General Health Questionnaire (GHQ-12)—revised <sup>13</sup>
Davidson Trauma Scale (DTS) <sup>14</sup>
Posttraumatic Stress Disorder Diagnostic Scale (PTSDDS) and other measures of anxiety and related disorders <sup>15</sup>
Harvard Trauma Questionnaire (HTQ) <sup>16,17</sup>
Hopkins Symptom Checklist-25 (SCL-25) <sup>16</sup>
Startle, Physiological arousal, Anger, and Numbness (SPAN) <sup>18</sup>

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who require treatment until requisite resources are available to provide treatment (see Bryant, "Recovery," this supplement).

The DSM-IV marked a dramatically new level of acknowledgment of the role of culture in shaping the symptoms, expression, and course of major mental illness.<sup>12</sup> These criteria highlight that clinicians who understand the influence of culture will be sensitive to the needs of patients with PTSD and will ensure that any treatment they receive does not isolate them from family and community, which is vital in the tsunami-affected region. Because most people will recover from the immediate effects of the traumatic event, the measurement of resilience is very important. As described elsewhere in this supplement (see Connor, "Assessment," this supplement), screening for resilience may be an effective measure of treatment outcome. In addition, longer-term screening may be important for the management of PTSD, grief, and depression in affected populations because the development of disorders is nonlinear and may extend to many months after the event. There are screening/assessment tools that have now been tested and validated in different cultures and/or languages (Table 1).<sup>13-18</sup>

### TREATMENT APPROACHES FOR PTSD

A number of key stages are central to an effective treatment approach in every culture after a traumatic event. These include normalization, death/grief rituals, community support, and close monitoring. For example, in the early days after a major traumatic event, efforts should be directed not toward early psychological intervention but toward social support and the strengthening of individual and community resources. Any intervention must aim to restore stability and control and not interfere with the natural recovery processes. For example, bereaved or traumatized children should not be moved from their community, and people are best not displaced to refugee camps distant from their homes. In this way, normal recovery can take place in a community/family setting. In such situations, detailed assessment will be required as people go through the different stages of recovery (see the beginning of this paragraph). In apparent contravention of the commitment to culture sensitivity, many Western agencies sent counselors to tsunami-affected areas very soon after the

event to perform psychological debriefing for people feared to be at risk of developing PTSD. Apart from the lack of evidence to support this approach in Western settings, this intervention typically neglects the local cultural needs that underpin recovery in many Asian contexts.

Any psychological treatment approaches need to be complementary to religious/cultural/traditional rituals that are already in place within that community. Much work is needed to transfer a treatment plan between different geographic regions, bearing in mind that the economic, political, and historical context may be as important as the cultural context. It should be remembered that Western medical culture changes rapidly, whereas South Asian cultures have a long history of traditional medicine, a fact that might impede the acceptance of new ideas foreign to that culture. A sensitive combination of local and other approaches will optimize response to the crisis. Teamwork and dialogue between health-care professionals and local leaders are vital to the overall success of any mental health strategy. Community and religious leaders have a crucial role to play in explaining to the local community what has happened and the need for a positive response, while widely accepted psychological tools can relieve symptoms of the crisis, thereby aiding recovery and rehabilitation.

### Delivering PTSD Therapy in Western and Asian Countries

In Western culture, most PTSD therapy has been managed on a one-to-one basis. There are limited data for community therapy other than analyses of Vietnam veterans, who represent a discrete treatment group, and even fewer for frontline, nonselective clinical settings encompassing a whole community.<sup>19</sup> For large populations affected by a disaster, group therapy would seem to be the best practical approach.

In Asian countries, group therapy is the most natural approach, so any intervention based on an individual approach must always be put into the context of family and community structure, culture, religion, and socioeconomics.<sup>20,21</sup> After the U.S. Embassy bombing in Nairobi, group-based interventions were apparently used with good effect. Mental health programs need to be initiated at the community level, and local resources should be considered initially before imposing an external framework on any intervention. In the case of the tsunami in South Asia, the very scale of the disaster demanded a community approach—approximately 50% of the affected population was estimated to be suffering from PTSD, with 10% requiring intervention.<sup>22</sup>

The tsunami profoundly affected the structure of many families throughout the affected areas. Reuniting families in this culture and reestablishing normal patterns of life have been seen as paramount for long-term recovery. In the same way, any psychological intervention should be designed primarily to ensure the restoration of families

and then allow healing and rehabilitation to occur within the restored family unit. The tsunami, like any other large-scale disaster, produced a so-called loss of communality. The early restoration of normal community and village social structures is vital to healthy regeneration, particularly in the tight-knit fishing communities impacted by the tsunami. Frequent deterioration of moral values that has been observed in refugee/displaced persons camps has been linked with destructive sexual behavior and excess alcohol consumption, which cause further distress within the community.

### **Culturally Sensitive Treatment Strategies for PTSD**

Cognitive-behavioral therapy is the best psychosocial approach in treating PTSD, anxiety, depression, and grief, as numerous controlled studies and practice guidelines around the world have shown. Cognitive-behavioral therapy is discussed elsewhere in this supplement (see Bryant, "Recovery," and Foa, "Psychosocial Therapy," in this supplement). However, any intervention needs to match cultural norms, and there are some culturally sensitive approaches that will optimize the effectiveness of this approach. Cognitive-behavioral therapy has not been tested rigorously in the countries affected by the tsunami, and close dialogue is needed to ensure that the proven effective components of CBT are introduced to these situations in a culturally acceptable way. In these conditions, the timing of treatment initiation should not be based on a specified number of weeks after the event but more on the resources available and strength of the surrounding infrastructure. Fulfillment of basic needs (food, water, shelter, and sanitation), rehabilitation of injured individuals, rebuilding of homes, and location of loved ones should take priority over initiating CBT.

It is important that CBT is viewed not as an imported Western approach that can be applied successfully in an Eastern context. Rather, it should be viewed as a proven approach in Western and some non-Western situations that requires cultural adaptation to work best in a local situation. A creative, flexible approach is needed to ensure its optimal use, while at the same time rigorous research should be carried out on its impact.

Grief is experienced in many different ways in different cultures, perhaps with far greater variation than PTSD. In the case of the tsunami, it is likely that grief reactions will develop slowly and will compound PTSD. This grieving process needs time to develop before CBT can be used. In addition, grief is a highly culturally specific response, and rituals must not be interfered with since they are important strategies for coping with grief. Interventions for complex grief must be based on intensive dialogue to ensure the applicability for each cultural situation.

Cognitive-behavioral therapy will work well in different cultures if it is related contextually. In the South Asian context, prayer, meditation, tai chi chuan, ayurvedic

massage, and other traditional relaxation methods could be useful vehicles to deliver CBT. Cognitive-behavioral therapy has already been successfully adapted to a South Vietnamese population<sup>23</sup> and, in combination with pharmacotherapy, has been shown to achieve substantial gains in Khmer-speaking Cambodian refugees.<sup>24</sup> Cognitive-behavioral therapy has been recently adapted, with impressive results, in a randomized trial of Sudanese refugees living in a Ugandan refugee settlement who suffered from PTSD secondary to considerable trauma. This trial compared narrative exposure therapy (a variant of CBT), supportive counseling, and education; all therapy was administered through interpreters. This trial indicated that only 29% of participants receiving the exposure therapy still had PTSD 1 year after treatment, compared with 80% of those receiving education or counseling.<sup>25</sup>

Four key issues need to be addressed in order to optimize the delivery of CBT and other therapies: training of local primary care physicians, adaptation of CBT (or other therapy) to group therapy, assimilation with local religious and community customs, and rigorous evaluation of the adapted therapy. Local primary health-care physicians operating within their specific cultural environment need to be trained in the diagnosis and treatment of mental health conditions, including how to deliver CBT and pharmacotherapy effectively (see Davidson, "Pharmacologic Treatment," this supplement). Although certain psychological techniques have been proved to be effective, they will be less effective if they are portrayed in ways that are unacceptable and not understandable for practitioners on the ground to use them as part of their regular treatment options.

The DSM-IV guidelines acknowledge the important role of ethnicity in response to pharmacologic treatment, and physicians should be aware of their local situation. These local doctors, and other health-care workers, will be the first in line in confronting mental health issues in a devastated community after a disaster as enormous and widespread as the tsunami. It is worth remembering that the trajectory of recovery following the tsunami may be different from other traumas because of community devastation, widespread grief, and ongoing problems associated with the event. Many health workers were themselves either killed or traumatized and in need of care.

Education and understanding play a vital role in the effective delivery of CBT. If patients and therapists do not understand why they are involved in CBT or pharmacotherapy, there will be limited motivation to persevere with therapy, particularly when there are challenging times in the normal course of the treatment. Cognitive-behavioral therapy is a complex and challenging therapy for practitioners to apply well; therefore, its rationale and application need to be culturally acceptable and relevant.

The tsunami has left tens of thousands of people with mental health issues, and individual therapy is not

a practical option in this situation. Group therapy has a higher patient:counselor ratio, which improves cost-effectiveness. It is essential that the health-care workers create a "safe" environment in which the group therapy may take place. Any therapy should be prepared with local help and should resonate with the traditional village or community structure.

Normal community approaches to disaster, such as burial rituals, anniversaries, and other religious ceremonies, are very important for helping people to rehabilitate and should be encouraged. In introducing CBT, it may be important to stress that its objective is not to change people's beliefs but to help people think in a different way about their experiences, themselves, and their future so they will have a chance of earlier recovery. The impact of local beliefs is important to consider when developing an effective treatment approach.<sup>26</sup> Greater religious faith before a trauma has been shown to reduce subsequent development of PTSD. After trauma, the support gained through personal and community belief structures also reduces the incidence of PTSD.<sup>27</sup>

Local religious and community support structures are also invaluable. For instance, monks have been central to the recovery and rehabilitation process in predominantly Buddhist countries. There is considerable scope to integrate Buddhist teachings into CBT. Take, for example, the considerable overlap between Buddhist teaching and cognitive restructuring. Many Buddhists coped with the effects of the tsunami by recognizing that, according to Buddhist philosophy, nothing remains the same, and the devastation caused by the tsunami is part of the ever-changing nature of our world. Further, CBT has recently embraced Buddhist techniques in the form of mindfulness therapy, which adapts cognitive restructuring by teaching patients strategies to observe and distance themselves from cognitions that are maladaptive.<sup>28</sup> It should also be noted, however, that trauma-exposed individuals can make maladaptive appraisals based on Buddhist beliefs. For example, after the tsunami some people blamed themselves for the loss of family members because they concluded the deaths were a result of karma caused by their flaws in a previous life. These responses highlight the need to create a dialogue between CBT and Buddhist approaches (as well as those of other religious ideologies) to ensure that people can optimally benefit from their personal belief systems.

In vivo exposure is one of the most potent and easily used tools in treating PTSD and is particularly important in treating phobic or avoidant behaviors. The approach typically involves graded exposure to feared situations so that the patient can gradually learn to face feared situations in a safe way. Following the tsunami, there may be many fishermen who will be fearful of their only source of income provision. They need to be encouraged through exposure to resolve avoidant behaviors. This approach

must be performed in a culturally sensitive way so as not to bring a sense of shame or weakness on the patient. Exposure also needs to be structured in a way that does not expose people to excessive anxiety. For example, during certain months when the seas are choppy, it may be unwise to ask fishermen to approach the sea because the high seas may impede gradual exposure to feared stimuli.

## SUMMARY AND CONCLUSIONS

The cultural specificity of assessment and treatment tools needs careful validation in the tsunami-affected countries. The challenge in each local situation is to find the optimal means of adapting CBT into appropriate strategies for local communities. As time goes on, there will be a need to share resources between countries in the same region to optimize screening and treatment approaches. There also needs to be a mechanism by which regular progress updates can be communicated to refine and adapt mental health strategies in these affected communities.

Each disaster is a unique event. Although helpful experience can be gained from analyzing an earlier disaster, superimposing one disaster situation on another as far as recovery experiences are concerned can lead to inevitable difficulties. Accordingly, physicians must be prepared for different responses and develop a flexible and creative approach to any new disaster.

Physicians cannot be prescriptive about the therapies for PTSD in the tsunami-affected countries. A significant challenge is to improve dialogue to allow those successful ingredients of CBT to be adapted to make them work in different cultures. Despite the magnitude of the tsunami disaster, it has provided perhaps the first opportunity to evaluate how to customize mental health strategies developed under controlled conditions to the treatment of large numbers of people in diverse cultures. It is essential that treatments that have been proven in the West are initially adapted with local cultural considerations. The next step is to subject these adapted interventions to controlled studies that evaluate the effectiveness of the interventions. These trials should focus on both the capacity of the intervention to reduce symptoms and the willingness of practitioners to embrace the intervention. It is imperative that these trials be conducted, because one cannot assume that even culturally adapted interventions are effective if they are not subjected to rigorous evaluation.

*Disclosure of off-label usage:* The authors have determined that, to the best of their knowledge, no investigational information about pharmaceutical agents that is outside U.S. Food and Drug Administration-approved labeling has been presented in this article.

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