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Delayed debriefing: after a disaster

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EDITORIAL COMMENTS

This chapter challenges the conventions of psychological debriefing as an intervention that is only applicable in the earliest period post disaster. After dissecting debriefing as a trauma prevention strategy, Chemtob highlights the need to examine the traditional elements that have been seen to potentially prevent morbid outcomes. These include prevention aims, supporting processing of the emotions, dealing with the cognitive distortion produced by the event, providing systematic information about the course of recovery over time so as to counter perceptions generated by cognitive disturbances, social support, public health screening and monitoring function. Three additional 'propositions' are added to this list as a result of the author's clinical observations and research: adaptation to the cultural environment, debriefing specific to the psychological tasks of the particular phase of recovery, taking into account individually specific ways of responding to life events. The last of these the author has described further in terms of 'survival-mode' psychological distortions that people use for necessary adaptation. He considers that understanding of these through education is likely to assist the recovery process.

Chemtob makes a strong case for the 'clear specification of procedural steps' involved in debriefing before it can be appropriately evaluated for intervention integrity and fidelity and for effectiveness as a preventive approach to post-trauma morbidity. Debriefing research is limited and findings difficult to appraise because procedures and aims have seldom been defined or measured.

Qualitative and quantitative assessment of the use of broadly based debriefing models of this kind some months after a disaster, and positive outcomes achieved are also presented, with descriptions of work with helpers, children and teachers and school environments. This is an innovative approach, and its conceptualizations are of interest. It is likely to contribute further findings if the research presented is extended. Nevertheless it rests on an acceptance of traditional wisdom about the need to work through the experience in this talking or narrative manner. These concepts need to be further challenged and researched. The author does not discuss the possibility that the extensive debriefing intervention provided in the early phase of the disaster that he describes appeared to have had little long-term benefit, or possibly negative effects, thus leaving this population in need of further intervention. Nevertheless, the model he puts forward is more normalizing in that it does not appear to educate to pathology, but rather to a recovery ethos, and survival models. This more positive, less pathology-oriented basis may contribute to the improved outcomes found in the studies presented. The conceptualization overlaps somewhat with others in this volume (e.g. Stallard, Chapter 15), but provides additional insights and a model for further evaluation.

Introduction

Psychological debriefing is a specific procedural intervention designed for use in a well-defined context with specific populations. However, recently psychological debriefing has also increasingly been viewed as a broad

approach to the application of trauma prevention principles. This definitional confusion can interfere with undertaking appropriate efficacy research on specific psychological debriefing procedures. It may also impede the clear formulation of trauma prevention principles applicable beyond the immediate aftermath of stressful events.

Well-defined prevention principles can guide the design of interventions to support trauma recovery processes across the entire recovery cycle, starting with the immediate after effects of a potentially traumatic event and extending in time until recovery is complete. Thus clear formulation of such prevention principles would facilitate the design of trauma prevention procedures, which are appropriate for the recovery needs of people at different points in the trauma recovery cycle. Moreover, disentangling conceptual and procedural aspects of psychological debriefing should support the clearer specification of specific procedural interventions. In turn, this would serve to increase the internal and external validity of debriefing research.

This chapter presents a brief description of the conceptual origins of psychological debriefing. Then, specific trauma prevention principles embedded in psychological debriefing are described. Some extensions of these principles used by the author are also given. Case examples of extended applications of psychological debriefing are then presented to illustrate broader application of these principles. Well-controlled additional research on trauma prevention that capitalizes on advances in field and naturalistic research is called for in the conclusion of the chapter.

Conceptual origins of psychological debriefing

Psychological debriefing originally was defined as an intervention to ameliorate the immediate after effects of potentially traumatic stressors among emergency services workers. Its early formulation and dissemination can be credited largely to Mitchell's (1983) work with emergency responders and to Raphael's (1986) work with disaster rescue workers. Dunning (1988) has pointed out that other contributors participated in the early formulation of acute post-trauma interventions. Currently, psychological debriefing is often used as a generic term to describe any procedure that purports to support the recovery of normal people exposed to potentially traumatic stressors. Thus psychological debriefing has been used to describe activities as diverse as meeting with hundreds of people in a psycho-educational context (Young, 1988) and holding a single-session individual intervention with severely burned patients (Bisson et al., 1997).

Some psychological debriefing procedures, such as Critical Incident Stress Debriefing, have well-delineated treatment manuals (Mitchell & Everly, 1996). However, most debriefing procedures do not have treatment manuals. This has made critical evaluation of research on debriefing interventions difficult, since it is not always clear what is being evaluated.

Psychological debriefing was named by reference to the after-action review process (debriefing) routinely used by military forces, emergency responders, and police forces (amongst others) to review operational matters and lessons learned from a specific mission. Using the familiar term 'debriefing' and adapting elements of a familiar after-action process helped to facilitate the acceptance of the principal innovation promoted by psychological debriefing, namely the systematic review and processing of the emotional impact of the work mission at issue.

Psychological debriefing was originally conceptualized as a highly focussed intervention intended to support the resolution of discrete stressful events encountered as a routine part of work, e.g. by an emergency responder, a disaster worker, or a police officer. Perhaps in part because these stressful events tend to compel attention, a disproportionate amount of attention has been directed on uses of psychological debriefing immediately after a stressful event.

Implicit in the early development of psychological debriefing was the proposition that the work cultures of first-line responders (at least in the USA) put a premium on the suppression rather than the expression of emotion, and that this conspired to interfere with the resolution of horrific and stressful work experiences. The failure to achieve such resolution was seen as generating substantial human and economic costs to the individual and to the organization. Thus psychological debriefing has been promoted as an occupational health innovation intended to support psycho-

logical health and safety and to facilitate the retention of effective workers.

Consequently, most specific debriefing protocols put an emphasis on initiating psychological debriefing within narrow windows of opportunity defined by temporal proximity to the stressful work event. In this respect, psychological debriefing implicitly incorporates the military psychiatry doctrine of 'proximity, immediacy and expectancy' which has governed combat-related interventions and the associated military purpose of preserving the fighting force. In the context of debriefing, preserving the response capacity represented by first-line responders faced with the sometimes overwhelming physical and psychological demands of their work has been considered analogous to maintaining soldiers on the front line.

In recent years, the use of psychological debriefing has become extremely widespread. It is increasingly viewed by first-line response organizations, such as emergency medical services, fire departments, and police departments, as a standard of responsible personnel management. The US Occupational Safety Health Administration has recently promulgated a requirement for employers to provide post-event stress management support. A recent legal decision in the USA held an employer potentially liable for failing to provide such post-event psychological intervention. Where it used to be an uphill battle to convince employers to use post-event debriefing interventions, the weight of regulatory and legal opinion have increasingly solidified the place of psychological support in the workplace after traumatic events. This is so whether the events are experienced as part of the occupationa hazards associated with a given occupation, or are due to catastrophic events such as workplace violence.

Thus the rise of psychological debriefing has both supported and been abetted by a change in cultural mores about the managing of painful life experiences. If the prevailing cultural norm in the past might be described as 'maintaining a stiff upper-lip' in the face of adverse life experiences, the emerging cultural prescription seems to be to express one's feelings in a supportive social context in the face of adversity (e.g. note the extraordinary popularity of various self-help affinity groups).

As psychological debriefing has become more widely accepted, its original highly specific workplace focus has been broadened. For example, psychological debriefing has been applied to the resolution of the emotional after effects of aircraft disasters for both affected passengers and for the employees of the airlines involved (Butcher & Hatcher, 1988). It has also been used to assist both victims and responders in the aftermath of natural disasters, hostage-taking, armed hold-ups (Grainger, 1995), and following staff assaults in hospitals (Flannery et al., 1996). Unfortunately, despite its rapid dissemination, psychological debriefing lacks an empirical research base that establishes its efficacy or a well-developed theoretical framework to guide its use (Raphael et al., 1995).

Moreover, perhaps reflecting relatively short training periods that do not usually incorporate clear proficiency markers, or continued training to criterion to ensure treatment integrity, there has been some increasing confusion about what actual therapeutic operations are enacted when psychological debriefing is described. This has led to some substantial controversy regarding the efficacy of debriefing and the aptness of some research that purports to evaluate debriefing. Research on the efficacy of psychological debriefing has suffered from clarity as to what constitutes a debriefing intervention. Reflecting this, efficacy research has encompassed a range of definitions from a single-session intervention directed at inpatient burn victims (Bisson et al., 1997) to accident victims (Hobbs et al., 1996), and providing debriefing several months after a natural disaster (Chemtob et al., 1997).

In one instance, research on debriefing addressed the efficacy of a debriefing intervention delivered several months after the index event and thus well outside the 72-hour window that is traditionally prescribed for some debriefing interventions (Chemtob et al., 1997). While that study made use of classical debriefing procedures, simply applied later in time, some might ask whether late application of debriefing procedures is not better defined as psychotherapy. This example highlights the sometimes conceptually unclear demarcation between psychological debriefing procedures and other types of psychosocial treatments.

The context in which psychological debriefing generally occurs, that is to say shortly after a potentially traumatic event or after a disaster, itself militates

against easily undertaking psychological debriefing efficacy research. There are a number of barriers to intervention research in post-disaster environments. These include a sensitivity of people post disaster to being exploited and thus experiencing research as a kind of voyeurism directed to their misfortune. There are also ethical constraints that make the randomization of people to a treatment or no-treatment group difficult. In addition, there has been a notable lack of commitment in debriefing research to modern concepts of treatment integrity and to fidelity controls.

Finally, the use of psychological debriefing procedures has tended to be limited to close proximity to the event. This limitation seems more to reflect the specific conceptual origin of debriefing than limitations inherent in the presumed effective ingredients of it as an intervention. Indeed, it might be argued that trauma prevention procedures should be applied later, when a person has begun to recover from the immediate aftershock of a traumatic event. In any event, the legitimate question of when psychological debriefing interventions would be best undertaken has not been empirically studied.

The usual application of debriefing to the immediate post-disaster period may reflect its military and emergency services origins. There is no empirical evidence to direct such time-bound applications. This application may also reflect the financial and political context of psychological support following disasters. Such psychological support usually follows immediately after a disaster, reflecting genuine humanitarian concern as well as the availability of formal emergency political and financial infrastructures. In addition, its purposes at this stage are to ensure the maintenance, through return to action, of an optimal fighting or operational force.

However, typically within weeks or months, responder attention diminishes greatly. By the end of a year, most psychological support has tapered off. Despite this time-limited horizon of response, there is an emerging recognition that major disasters may have substantial long-term consequences that extend well beyond a year (Green, 1995). Thus the tendency to limit the use of psychological debriefing to the immediate aftermath of a potentially traumatogenic event may be driven more by practical than by theoretical concerns. Also, despite an avowed commitment to screening and monitoring as part of psychological debriefing, in practice this is rarely undertaken systematically. In summary, it is increasingly evident that psychological debriefing has come to denote both a specific though often unspecified procedure and a broad approach to preventing stress disorders. As a result, there appears to be some definitional confusion as to how to conceptualize debriefing. Is it a specific preventive intervention procedure, a general approach to trauma prevention, or, even as has been suggested, a kind of social movement (Gist et al., 1998)?

An expanded conception of psychological debriefing

In this chapter, it is proposed that it is useful to disentangle the underlying conceptual assumptions involved in psychological debriefing in order to inform an expanded use of the psychological principles that debriefing must be utilized to be effective. It is argued that psychological debriefing as a specific procedure and the conceptual advances that it implicitly incorporates have not been clearly distinguished.

It is possible to separate the conceptual advances incorporated into psychological debriefing, and popularized by it, from the specific procedures that purport to incorporate them. Doing so has at least three benefits: (1) conceptually derived accounts of purported effective ingredients permit more effective research, (2) distinguishing conceptual propositions from their specific procedural implementation in given special-purpose interventions gives designers of trauma services greater conceptual freedom to adapt trauma intervention design principles to particular needs, and (3) an improved conceptual structure facilitates engaging in research and training on specific trauma-related interventions by improving clarity about each intervention.

Psychological debriefing incorporates a number of generally accepted conceptual principles (although not necessarily directly research tested) about how to prevent stressful events from becoming traumatic. A number of these principles are reviewed briefly in this section. Then additional trauma prevention concepts are proposed as being necessary to provide for a fuller conceptual armamentarium needed for an expanded

definition of psychological debriefing. This expanded set of principles is necessary to enable the design of a wider set of debriefing procedures, suitable for a broader range of post-disaster needs. There are eight dynamic conceptual propositions that, it is proposed, are implicitly incorporated into psychological debriefing. These are described below.

1. Psychological debriefing is one of a growing number of treatments aimed at the primary prevention of behavioural disorders

It is based on the broad recognition that exposure to life-threatening or horrific events increases the probability of subsequent trauma-related symptoms and distress. Like other preventive treatments, psychological debriefing incorporates an optimistic world view. In this case, that the consequences of exposure to highly stressful events can be managed and reduced. They need not be accepted simply as part of the cost of being alive and therefore to be endured without choice. Rather, exposure to a life threat or horrifying event is recognized as a specific risk factor that serves to increase the probability of psychologically deleterious consequences. Psychological debriefing calls for undertaking a set of psychologically informed activities to reduce the negative consequences of such harmful life events. While it might be argued that psychological debriefing, given appropriate technical modification, may have a role to play in secondary prevention, clearly it does not have a role (as presently conceived) to play in tertiary prevention. Once a person has a disorder sufficiently established to merit diagnosis as a stable and chronic condition, debriefing is replaced by more conventional treatment approaches. Note, however, that the demarcation between debriefing and conventional treatment is not always completely clear because preventive psychological treatments share a number of common elements with palliative treatments.

2. Supporting the processing of emotions and cognitive distortions provoked by exposure to stressful events is salutogenic

Psychological debriefing emphasizes supporting natural processes of recovery and removing barriers to resolution of the emotional impact of life-threatening events. The natural process of psychological assimilation following exposure to traumatizing events has been described by Horowitz (1976), who was the first to emphasize that interruption of effective emotional processing is a key factor in the development of trauma-related symptoms. There are two subpropositions which have now been recruited in support of this: (a) expressing oneself through narrative disclosure is salutary and ameliorates the consequences of stress exposure (see e.g. Pennebaker, 1993), and (b) exposure to traumatic memories promotes effective resolution of such memories (Foa et al., 1995).

3. Predictable cognitive distortions have been identified through clinical experience that constitute psychological risks for the development of symptoms

These include: (a) a fragmented representation of the trauma event, which is often incomplete and frequently distorted because of the subject having a limited grasp of all the aspects of the incident; (b) an inaccurate evaluation of one's influence in the outcome, which can perpetuate a sense of helplessness or provoke guilt; (c) a foreshortening of the future; (d) a lack of knowledge about normative emotional responses to catastrophic stressors that can lead to misattribution about one's functionality and even sanity; (e) a tendency to overestimate the likelihood of future threats; and (f) for some, increased psychological salience of pre-existing concerns (e.g. a pre-existing tendency to social isolation becoming intensified because of experiencing a disaster alone).

To counter these normative distortions, psychological debriefing calls for systematically providing information about the expected course of response and recovery associated with a particular traumatogenic event. This includes putting cognitive and emotional distortions in a context of normal response to unfamiliar and rare events. Such normalization serves the purpose of reassuring the exposed person that what he or she is experiencing is not 'crazy', although it may feel quite unusual. Normalization also serves to define the outer limits of what is normal. Affected participants are told to seek help if the reactions exceed the normative definition by virtue of exceeding normative intensity or persistence thresholds.

4. Social support is a major moderator of exposure to traumatic stress

Debriefing is generally conceived of as a group process. This reflects a conviction that social support moderates the impact of trauma exposure (Flannery, 1990). It is also based on observation of naturalistic processes of recovery. People tend to gather together to review and process stressful events. Some cultures institutionalize processes of group narrative construction following stressful experience. Examples include the Kava Ceremony in Fiji during the course of which a mildly intoxicating drink is shared and people describe their experiences with an eye to resolving any emotional disharmony. Similarly, in Hawaii, a process known as H'oponpono is used to resolve disharmony among members of a kin group. That process involves each person expressing their perception of the events, their feelings, and the spiritual consequences for them of the disharmony.

5. Psychological debriefing incorporates a public health-derived screening and monitoring function

Intervening to prevent symptoms also provides an opportunity to identify persons whose responses exceed normative levels. Once identified, these persons become candidates for more intensive support. The monitoring component of this aspect of debriefing refers to the need to follow up systematically with the participants to ascertain the trauma status of people some months after the exposure. In this view, debriefing influences a systematic and principled approach to designing an appropriate response to the extended support of people exposed to catastrophic stressors. There has been a tendency to neglect this component of psychological debriefing, which has been reflected in identifying psychological debriefing as a one-off intervention. However, recent trends in the psychological debriefing community (see Chapter 5, this volume) have been to reaffirm the need to see psychological debriefing in the framework of a more systematic time-extended approach.

Three additional propositions have been central to the debriefing work undertaken by our laboratory and are presented here as extensions of psychological debriefing principles.

6. Psychological debriefing must be adapted to the cultural circumstances of the environment in which it is deployed

Communities (whether they are defined in terms of a police department, a neighbourhood, or a county) have specific cultural histories. Any effort at providing trauma prevention must incorporate an understanding of community concerns that are culture bound. For example, following Hurricane Iniki, a catastrophic disaster affecting the Hawaiian island of Kauai, factors became very salient that had previously been in the background. This issue had to do with concerns about the large numbers of newcomers who had been moving to the island. For some time, long-term residents had been concerned that newcomers did not completely understand the nature of community membership on the island. A few months after the hurricane, this concern became widespread and tended to provoke pronounced community divisions that interfered with recovery. In this instance, issues of community membership overlapped with ethnocultural identity. These concerns were evident in psychological debriefing meetings held shortly after the hurricane. Part of the task of the psychological debriefing necessarily included addressing such issues. Failure to recognize and address these community cultural concerns would have meant that the debriefing groups were not culturally responsive. Psychological debriefing requires cultural specificity and adaptation to be effective.

A related issue is that the person in charge of the psychological debriefing process will probably be an outsider. Therefore it becomes essential to establish cultural credibility. This is best accomplished, in the experience of our group, through establishing a close working partnership with a representative of the affected group who is willing to use his or her personal credibility to vouch for the trauma expert, thus permitting acceptance within the community in the faster time frame required in a disaster environment. Recognizing this dynamic, we have developed the concept of pairing a local culture expert and a trauma expert as a

functioning team. We define a culture expert as a person who is a member of the local culture and therefore understands and participates in the culture's norms. This person serves both to vouch for the trauma expert and to provide a culture-specific translation of trauma principles that facilitates the absorption of the trauma-related information. The trauma expert is defined as a person with substantial expertise and experience with normal and pathological trauma response. It is our experience that culturally appropriate trauma responses require such pairings to be effective. Mitchell's use of peer interveners in partnership with mental health clinicians appears to have intuitively recognized the need to pair members of a specific responding entity with a mental health professional. Unfortunately, in our view, true trauma expertise is difficult to develop, and the Critical Incident Stress Debriefing training process paired with standard mental health preparation is probably not sufficient to develop sufficient trauma response expertise.

It is also important to recognize that the role of the outside intervener is self-limiting. Communities will use the trauma expert up to a point but eventually the trauma expert will become an unwelcome reminder of unpleasant experiences. Therefore the trauma expert must plan an exit strategy from first entering the community. Part of the sensitivity to cultural issues in trauma response that we advocate calls for recognizing the difference between a culture of disaster recovery and ongoing community functioning, which can become in part defined by the exit of the trauma interveners.

7. Different phases of recovery are associated with distinct psychological tasks and require psychological debriefing procedures specific to those tasks

It is now known that disasters and other traumatic events have long-term consequences. In our view, it is no longer sufficient to provide psychological support to address the immediate aftermath of a disaster. There are psychological risks associated with different phases of trauma recovery. A systematic approach to supporting trauma recovery therefore requires the application of trauma prevention principles to the different phases of trauma recovery. Also, different phases of recovery are associated with different levels of readiness to engage explicitly defined disaster recovery activities. Early on in a major disaster nearly all people appreciate the need for psychological support. However, as time passes most people recover and as part of that recovery have strong desires to put the disaster event behind them. For those for whom recovery is not proceeding apace, it quickly becomes apparent that it is no longer socially normative to experience distress. Such people tend to mask their symptoms and become considerably more difficult to reach and help. Supporting psychological recovery in that kind of a post-recovery environment is substantially different from immediate post-disaster efforts. It requires the development of screening methods to identify those people who are still experiencing distress. Moreover, phase-specific debriefing procedures are required.

Also, in the instance of large-scale disasters there are often occasions where decisions made in the process of recovery have left substantial negative after effects that continue to affect the functioning of the work group or community. The extended effects of disaster require adaptation of the debriefing intervention to the phase of psychological response to trauma to which the intervention is directed. For example, the leader of a large work group on Kauai called for early return of workers to their tasks despite their homes being damaged. This was done because the workers' tasks were critical to support community recovery. Nevertheless substantial dissension arose because some of the workers and the state had not recognized their role as essential for disaster recovery in the past. Nearly two years later, factions that had formed regarding the decision continued to divide the work group and required intervention. Much of the intervention involved the use of education about the conflicts that people experience between personal and work roles. Also, making reference to similar conflicts experienced in other disasters normalized these conflicts. Finally, through recognition of the very real achievements of this work group, support was provided to all factions. This proved to be extremely helpful in initiating a process of reconciliation that had not

started on its own and required an outsider's assessment and intervention.

8. People respond in highly specific ways to life-threatening events

Our laboratory has been engaged in developing a theory of trauma that we now describe as the survival-mode theory of post-traumatic stress disorder (PTSD) (Chemtob et al., 1988). Briefly, we have proposed that people respond to life-threatening events by engaging cognitive, behavioural and arousal systems specialised for survival. Part of responding in survival mode includes a loss of self-monitoring, an increased propensity to detect threat, increased irritability, and for some a tendency to dissociate. We have found that people intuitively recognize this aspect of their response to life-threatening events. Describing survival mode has been an important part of the psychoeducational component that we use following the affective processing component of our debriefing groups.

There are a number of survival-mode-specific cognitive distortions. These include the following, colloquially named for the purposes of educating affected people. (a) The 'in your face effect', that is the tendency to be overly preoccupied by the disaster to the extent of relatively neglecting to extend proportionate attention to predisaster events. Many people report that disaster-related preoccupations seem to crowd out other parts of one's experience. (b) The 'neon effect', which refers to an exacerbation of pre-existing issues at the individual, group and community levels. For example, a leader with a prior reputation for micro managing a group is likely to be seen as even more likely to engage in such a management style. Indeed, the leader may in fact do so, independently of the increased tendency to perceive him or her as doing so. An example of such exacerbation at the community level was seen on Kauai where there had been predisaster ambivalence about the election of a female mayor. During and following the hurricane, the mayor's performance was roundly criticized by some who attributed all difficulties in the response to the disaster to her gender. In reality, the mayor's performance was so good that she was given a special award by the Federal Emergency Management Agency, which is the primary agency for responding to national-scale disasters in the USA. Anecdotally, we have found that education about survival mode appears to help debriefing group participants better to integrate their group experience and helps them to restore self-monitoring.

Some examples of delayed uses of debriefing

In this section, several examples of delayed uses of psychological debriefing principles are presented to illustrate that the application of the concepts incorporated into this approach are not limited to the immediate aftermath of a stressful event. Indeed, implicit in the present argument is that trauma prevention requires time-extended attention and the creative design of trauma-preventive interventions fitted to each phase of recovery.

The examples that are presented are all drawn from our work following Hurricane Iniki, which struck Kauai in the Hawaiian Islands, on 11 September 1992. Hurricane Iniki carried sustained winds of 230 kilometres per hour with gusts up to 320 kilometres per hour, for over eight hours. Seventy-one per cent of homes on the island were damaged or destroyed. Damage affecting this community of only 50 000 people was estimated to be close to (US)$2 bn. Ranked as one of the most destructive disasters in US history, the impact of Iniki is nevertheless often underestimated. Living on an island, people were constantly re-exposed to destroyed homes and businesses, as well as to the ravaged natural environment. On an island, unlike with major disasters in mainland communities, affected people could not easily drive away to get respite. Moreover, the damage to the extraordinary beauty of the island, and to its hotels, caused a secondary economic disaster compounding the natural disaster's impact. This secondary economic damage clearly qualified Hurricane Iniki as a catastrophic disaster. There is an increasing recognition that traumatic events, natural disasters in particular, have longer-term psychological consequences. We had occasion to use a number of modified psychological debriefing procedures in the aftermath of Hurricane Iniki.

Using psychological debriefing methods some months after the index event

Because the state of Hawaii has a relatively sophisticated trauma community, there had been quite systematic efforts to provide psychological debriefing for large numbers of people on Kauai. It is estimated that several thousand people participated in some form of debriefing activity. As is usual in the post-disaster context, within two to three months most of the psychological helpers who had come to assist in the island's recovery went home or stopped coming over from the other islands to help. In the USA, the Federal Emergency Management Agency (FEMA) funds subsequent psychological outreach and counselling through an agreement with the Center for Mental Health Services. Three to four months after the hurricane, the author was asked to provide trauma and counselling training for the FEMA outreach peer counsellors and for the professionals working with them. It was known that quite extensive debriefing efforts had already occurred. Therefore, at a preliminary meeting with some of the staff that would be trained, it was assumed that much of their psychological recovery had already occurred. However, as the staff began to describe what they perceived as their training needs, it quickly became evident that they were still suffering substantial disaster-related symptoms. Given the staff's continuing distress, it became evident that training could not effectively proceed until support to resolve the persistent effects of their experience had been provided. As I continued to work on the island, it quickly became clear to me that this state of affairs was not limited to the staff of the psychological recovery project but certainly extended to many other members of the community.

In that instance, psychological debriefing procedures associated with critical incident stress debriefing were directly applicable. The major modification of technique was holding the debriefing groups several months after the event rather than in closer proximity to the event. The only other modification in technique that was undertaken was the addition of a period of direct didactic education (including describing survival mode) following the psychological debriefing. This didactic period, usually lasting two to three hours, seemed (1) to permit the participants a period of psychological integration of the emotional material that they had expressed and listened to, and (2) to provide a cognitive framework for disaster-related reactions that permitted the person to develop a self-regulatory set of reference points.

Because capacity limitations restricted the number of people who could be debriefed at one time, we had an opportunity to construct a quasi-experimental study (for details, please see Chemtob et al., 1997). Consequently, we treated two groups of people using a lagged-groups design such that one group served as a partial control for the passage of time. Our design clearly had limitations. Nevertheless, the results indicated that we could achieve 40% reductions in trauma-related symptoms as indexed by the Impact of Event Scale (Horowitz et al., 1979). This result was repeated when the comparison group was treated. While this was not a randomized controlled trial, and therefore required some caution in interpretation, the study suggested that substantial symptom reduction could be achieved and documented using a quasi-experimental design.

In other instances, where the debriefing was also presented in a delayed framework, but trauma-related feelings and thoughts were not as readily accessible, we have found it useful to use variations in technique which serve to restore the immediacy of the events that are being addressed. We have used two such variations successfully. One variation involved reviewing a videotape of Hurricane Iniki. Viewing the videotape seemed to serve to revive memories for participants and thus renewed the sense of immediacy of the event. The content of the group was then very similar to that experienced in more temporally proximate debriefing groups. Once activated, each person's story was told with vivid imagery and feeling. Another approach to revivifying memories involved asking the participants to imagine themselves back in the initial context. The process of imaginal re-exposure seems to refresh the sense of immediacy of the memory of the event(s) involved. As a result of this reactivation process, we found that groups have been able easily to access and work through experiences that they had felt compelled to avoid.

In conducting delayed debriefing groups, resistance to reactivating painful feelings must be dealt with. It is important to address these feelings thoughtfully and respectfully. They are reflective of the need that people feel to put aside feelings so that they do not interfere with their ongoing functioning. This should be explained and respected. However, it should also be addressed with information that the purpose of reactivating feelings that have been set aside is to assist with their resolution; to alleviate the continued distress that can result if they are not worked through.

In this regard, it is important to help people to make the link between the traumatogenic event and the current distress. The work of addressing these resistances should be seen as an adaptation to the task of providing education as part of psychological debriefing. The educational focus is on a later phase of trauma response. However, this aspect of stress response is increasingly well understood. I would argue that these specialized techniques to access distressing symptoms that have not yet constellated into a clinical disorder could be thought as supporting a later phase of the trauma recovery cycle.

Longer-term psychological recovery of children

The next case example also illustrates a delayed use of trauma prevention. It involves a public health inspired community-wide post-disaster psychosocial intervention that was undertaken by the author's group to reduce disaster-related psychological distress in elementary school children. Intervention with children in post-disaster environments is difficult because of the tendency of disaster-affected people, with the passage of time, to deny the existence or importance of the disaster-related symptoms that they and others are experiencing. Even when symptoms are acknowledged, people generally no longer attribute their distress symptoms to the disaster.

As a result, children's disaster-related symptomatology often fails to be identified by relevant adults even a few weeks after a disaster. Further contributing to this problem is the fact that children's disaster-related distress often manifests as internalizing symptoms (such as anxiety) rather than as externalizing problem behaviours (usually conduct problems) that more readily attract adult attention. For example, a child who was experiencing high levels of distress two years after the hurricane (including hiding under her bed when there were high winds) and difficulty concentrating at school was asked whether she had told her mother about her symptoms. She replied: 'No, my mother has too much to worry about with the hurricane already.'

It is clear that children experience substantial levels of persistent post-traumatic distress following exposure to a hurricane. Although for most children this distress diminishes with time, effective psychological intervention is needed to help children recover from hurricane-related distress and to prevent the development of chronic psychopathology. Two years after Hurricane Iniki, we used a school-based screening protocol community-wide ($n = 4259$) to identify children with continuing hurricane-related distress (Chemtob et al., 1996). Children with the highest levels of distress were provided with a manual-guided short-term psychosocial intervention by specially trained school counsellors. This method incorporated principles of psychological debriefing into a brief resource-friendly intervention with children during the mid-disaster phase of recovery (i.e. in the period of one to two years following the event). Children were randomly assigned to either group or individual counselling. The children were guided through a four-session process that involved working through feelings of helplessness, loss, anger and finally a memorialization process that put the focus on positive coping with the aftermath of the disaster. The intervention goal was defined as restoring and supporting the normal processes of recovery, rather than treating morbidity and pathology. The intervention was conceptualized as supporting normal processes of psychological recovery that were either slower for these children or had been interrupted by some cognitive distortion. Thus the intervention was aimed at facilitating the normative resolution of an abnormal event rather than focussed on treating specific symptoms. Intervention effectiveness was assessed using the children's self-report inventory and teacher ratings of the children's classroom behaviours. Children were followed up one year later to ensure that

they had recovered. As a result of the intervention, children reported significant reductions in trauma-related distress. Teachers reported significant improvements in the children's ability to concentrate and significant reductions in their disruptiveness. Gains were maintained at one-year follow-up. Importantly, this intervention was designed as part of a process that included treatment follow-up one year later. At that time, children who were nonresponders to the secondary prevention intervention were identified and triaged to a more resource-intensive tertiary prevention level of care that clearly qualifies as traditional psychotherapy (Chemtob et al., 2000).

Renewing post-disaster school culture as a longer-term psychological debriefing intervention

This case example describes an approach to supporting the recovery of school faculty and staff in the middle phase of disaster recovery. Two years after Hurricane Iniki, it became clear that the schools with which we were working were suffering a great deal of internal friction among staff. Staff stress appeared to be manifested in reduced tolerance for student misbehaviours, as reflected in greatly increased suspension rates. The faculty and staff seemed to be experiencing a sense of exhaustion, depression and continued feelings of being overwhelmed. While the disaster appeared to have a great deal of continued after effects, resistance to further direct psychological work about its impact had emerged among some adults within the community. Yet restoring the vitality of these educators' commitment to educating the children in their care and assisting them in learning to identify children who were continuing to experience disaster-related distress was a crucial goal. The original requests for assistance from schools were quite diverse in form. For example, one high school asked for assistance with discipline problems, which had dramatically increased; another school asked for help with developing the relationship component of the teacher–student interaction. We therefore defined our intervention focus more broadly than disaster. We collaboratively evolved the notion of addressing reinforcing the 'teaching alliance', which we defined as the joining of teacher, staff and parents in a common purpose of caring for and teaching children. As we began to implement our workshops, word of mouth led to invitations to give them in yet other schools.

Our assessment indicated that we should target our adaptation of psychological debriefing to address (1) education about longer-term effects of disaster; (2) revitalizing a sense of shared commitment and collaboration for a common purpose, in effect renewing a commitment to shared cultural values, in this case related to caring about children; (3) addressing through education, normalization and support the continued after effects of having served as de facto emergency workers during the hurricane and the impact of the hurricane on them as affected people. An important aim for us was to provide support to participants through acknowledging their caring and the extraordinary sacrifices they undertook to care for both their own families and the children they had had to teach during a catastrophic time.

The general level of resistance in the community required a relatively indirect approach. Consequently, we initiated one-day workshops with approximately 20 staff and faculty meeting with us at a time. Our project funding permitted us to free the teachers to participate by providing for substitute teachers. When we convened the groups, we began each group by giving flower leis (garlands) to each participant. In Hawaii, such flower leis are given to people to celebrate a variety of life transitions ranging from birthdays to graduations. They mark a change in status and celebrate it. We acknowledged each participant as we gave him or her a lei for their contribution to the children and for their efforts in the recovery of their community.

The next phase of the session involved participants recounting their experiences of the secondary impact of the hurricane on the school children, the staff and their community. This was focussed on more recent events but many chose to recount their actual experiences in surviving the hurricane. This phase was somewhat briefer than a more standard debriefing process. It led into an educational presentation linking what the participants had said about themselves and about the children they worked with to what is known about recovery from disaster, the emphasis being on

long-term recovery issues. The presentation emphasized the 'normal people in abnormal circumstances' theme, which is a key part of applying the principle of normalization in psychological debriefing.

A key goal of the intervention was to revitalize the commitment of the faculty and staff to the educational enterprise. A second goal was to revitalize a sense of community within schools that had become characterized by factionalism. We accomplished these aims by inviting the participants to reassert the values that they believed characterized their school. We termed this process the creation of intentional culture. As the participants described what they believed their school stood for, they became re-energized by the assertion of a common purpose, specifically of a community of values. This process was particularly important because, as a result of the hurricane, factionalism around ethnic lines had emerged. Asserting common values permitted the participants to commit to an intentional culture defined by shared commitments. Moreover, the hurricane's impact had interfered with the normal process by which new staff became acculturated. It brought them on board and made them known more intimately to other participants. This process was followed by an opportunity for each participant to let go anonymously of a hurt they had experienced from another participant during the post-hurricane recovery process. Participants were asked to describe anonymously very briefly such a hurt on a piece of paper. The papers were placed in a sand bucket and circulated. Each participant then drew a piece of paper and read the description of the slight. This was followed by a brief meditation focussed on letting go of the pain involved.

Finally, we asked the group to define shared goals they might have for their school. This was done by having people write ideas on poster paper. Participants then 'voted with their feet' by lining up with the ideas or projects that interested them. Participants were free to change groups at any time. This process led to the formation of common interest work groups that then presented their plans to the whole group. Groups agreed to present progress reports at faculty meetings. The follow-through on these projects was reported to be excellent by the school principals and by other participants. Regrettably, despite our general commitment to putting in place evaluation measures as a standard practice when deploying debriefing-type procedures this was not done in this aspect of out intervention. Therefore, we are limited to anecdotal reports of significant positive impact.

Prescription for future research

The thesis of this chapter is that psychological debriefing has come to represent for many a description of a broad approach to trauma prevention. This is highly problematic for research on the efficacy of psychological debriefing, since efficacy research must depend on clear specification of the procedural steps involved in a given intervention. Without such procedural clarity it is not possible to implement treatment integrity and fidelity controls. Failure to implement such controls means only that 'someone did something to someone somewhere'. This is hardly an appropriate standard on which to base scientific judgements about the value of specific approaches to trauma prevention. In this chapter, it has been proposed that one must distinguish between psychological debriefing as a general approach to trauma prevention and specific procedural implementations of this approach. One can conceive of many procedures that are specific implementations of broad emerging principles of trauma prevention. It is these clearly specified procedures that must be studied for their efficacy.

Research on psychological debriefing procedures is often difficult to implement because of the intense and compelling level of need when one is responding to catastrophic situations. It is proposed that a potential strategy to surmount this problem is to convene groups of clinical researchers to consider many varieties of possible research design scenarios, together with required assessment instruments. These designs and the associated measurement instruments could then be 'pre-positioned' so that they are ready for use. In order to succeed, this strategy will require practitioners of trauma prevention to make a commitment to changing the standard of practice so that evaluation of debriefing interventions always includes, as an essential part of their procedures assessment, post-debriefing assess-

ment and follow-up. Including such routine assessment is necessary to fulfil the screening and monitoring requirement of responsibly designed psychological debriefing procedures. Such follow-up must be defined as a necessary part of responsible clinical practice in trauma prevention. It is therefore essential for the field to commit to undertaking clear descriptions of specific procedures, to evaluate the efficacy of these procedures, and to begin to enhance effective interventions. Failing to do so will ultimately prove profoundly divisive and undermine the credibility of psychological practices aimed at preventing the deleterious effects of traumatic events.

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