The Management of Emotionally Disturbing Interventions in Fire and Rescue Services: Psychological Triage as a Framework for Acute Support

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This chapter describes the impact(s) of emotionally disturbing and potentially traumatizing interventions and the way in which fire and rescue services personnel should be supported in the acute stage. First, the controversy on the effectiveness of psychological debriefing will be revisited before shedding light on the way in which the detailed reconstruction of exceptional interventions, social sharing, open expression and psycho-education, may help fire and rescue personnel recover from emotional disturbing interventions. For some rescuers, early re-exposure to what they have been exposed to, can be harmful. Therefore, this chapter will introduce the concept of psychological triage which may help peer-support officers and mental health professionals manage their activities aiming at prevention, care and after-care of the post-event sequelae. Using a psychosocial matrix, psychological triage will lead to a categorization in different groups based upon primary, secondary or tertiary exposure. The management of emotionally disturbing events will be expressed in terms of primary, secondary and tertiary prevention of post-event sequelae. Throughout this chapter, field experiences from the author's practice as a fire and rescue psychologist will be used to illustrate the experiences of personnel after exposure to shocking or disturbing interventions.
One of the secondary aims of this article is to introduce a new terminology with respect to stress and trauma, introducing the French concept of effroi (*psychological terror*) as a central feature of the potentially traumatic event.
In terms of trauma interventions, differences will be identified between sessions for psychological stabilization, emotional ventilation and immediate recuperation. These sessions will be the stepping stones to further emotional and psychological uncoupling from an emotional disturbing intervention.

Introduction

This chapter aims to generate some clarity surrounding the variety of effects of emotionally disturbing and potentially traumatic events. The traumatising character of an emotionally disturbing event is always the result of a subjective interpretation of this event by the individual and not merely dependent on objective cues in the given event. Both in the literature and the spoken language there is too widespread a use of the term *trauma* these days, everything seems to become a trauma and the result is then that the involved victims develop a subsequent trauma after surviving one. As such, the causality between events and effects is very often unclear.

This conceptual lack of clarity also influences the practice of psychological support in fire and rescue personnel. The best illustration is the controversy on the effectiveness of psychological debriefing and whether or not it is effective. While techniques of psychological defusing and debriefing (Raphael, 1986; Mitchell & Everly, 1993) were originally developed to support professional (or professionally trained) caregivers – such as fire, rescue, police or emergency services personnel – they have also been widely used (and researched upon) to support all kinds of victims of critical events. Although the definition of a critical incident is rather vague, the practice of psychological debriefing has rapidly grown in popularity. Researchers started to investigate whether or not single session psychological debriefing also prevented

post-traumatic stress disorder in primary victims. Both Critical Incident Stress Debriefing (CISD) – being an integral part of Critical Incident Stress Management (CISM) – and the latter concept of early intervention became container concepts of various kinds of interventions for various kinds of victims. Meanwhile, a whole disaster business (Deahl, 2000; Shepherd, 2001) developed and professional caregivers or high-risk organisations (e.g. banks, petrochemical industry, rescue services, army, police) were urged or legally forced to 'do something' to support their personnel exposed to various kinds of emotionally disturbing and potentially traumatising events. In De Clercq & Lebigot (2001), and De Soir & Vermeiren (2002), European trauma specialists offer an alternative view on stress theories and psychological trauma, introducing terminology other than the current concepts such as traumatic stress, acute stress disorder and posttraumatic stress disorder.

Psychological debriefing: positive or negative outcome?

In the literature (Rose & Teharni, 2002), a number of methods of *psychological debriefing*, which generally correspond to a single-session and semi-structured crisis intervention, applied shortly after a *traumatic event* and expected to prevent post-traumatic stress reactions (Bisson, McFarlane, & Rose, 2000), have been described. Dyregrov (1997) describes psychological debriefing as a structured group process where facts, thoughts, impressions and reactions to a potentially stressful event – referred to as a *critical incident* – are explored and education on how to cope with reactions is provided. Originally, Mitchell (1983) introduced his Critical Incident Stress Debriefing (CISD) as a group intervention for emergency personnel after exposure to secondary trauma (i.e., where emergency personnel witness or assist primary victims of a *traumatic event*). Most researchers ignored the fact that CISD is only part of an overall trauma support model commonly known as Critical Incident Stress Management (CISM) and used a definition of debriefing to suit the study rather than the needs of involved fire and rescue personnel. Subsequently, the literature is inconsistent with the original objectives of CISM and uses various debriefing models that compete with therapeutic interventions model or even *doing nothing* described in the NICE Guidelines as *watchful waiting*. For example, Kenardy et al. (1996) studied the effectiveness of psychological debriefing for helpers (emergency services personnel, counsellors and welfare officers) who responded to an earthquake but did not specify what type of debriefing was examined. The authors reported that there was no standardisation of debriefing procedures, no knowledge of the extent to which the debriefing matched the CISD model, no way of determining whether or not any of the participants actually attended a debrief and no assessment of whether the debriefing was appropriate to the level of stress and trauma experienced. Therefore, it may not be appropriate to use this evidence to suggest that psychological debriefing may be harmful (e.g., Kenardy, 2000; Raphael & Meldrum, 1995).

The debriefing literature has been criticised for a lack of randomised-controlled trials, evaluating psychological debriefing but these designs would involve; a) taking a group of people who have been exposed to a potentially traumatizing event; b) randomly assigning them to a 'debrief' group that attends a psychological debriefing session or to a 'no debrief' control group that does not attend a debriefing session, and then c) contrasting the two groups on appropriate outcome measures. This process gives rise to a number of ethical issues. For instance, if researchers believe that psychological debriefing is beneficial, it is unethical to withhold the debriefing experience from the research participants in the control group. On the other hand, if researchers believe that psychological debriefing is harmful, then it is unethical to expose participants to the debriefing process.

Further, random allocation to debriefing or non-debriefing groups, with homogenous teams of fire and rescue personnel who have been exposed to the same potentially traumatizing interventions and mandatory participation would not be ethical either. Research participation should be voluntary and, as a consequence, the individuals who choose not to participate in the research may influence the results.

The lack of baseline data, clarity regarding response and drop out rates, and confounding factors should be taken into account when claiming that psychological debriefing might be potentially harmful. For example, despite using random assignment, individuals in the Bisson et al. (1997) study who were debriefed had, on average, more severe burns than the individuals who were not debriefed. This may have occurred because a number of people originally assigned to the 'debrief' group left hospital before their debrief was conducted (and were thus excluded from this study). Severity of burns might be expected to be a stronger predictor of trauma resulting from burns than a 45 minute discussion, in hospital, within days of hospital admission (Robinson, 2003). Similarly, in the Mayou et al. (2000) study, the victims of road traffic accidents who were debriefed had more severe injuries and spent more time in hospital, on average, than the accident victims who were not debriefed, also despite random assignment (Hobbs, Mayou, Harrison, & Warlock, 1996).

The literature on the effectiveness of psychological debriefing shows a lack of conceptual clarity and consistency; it is unclear which models have been used, how the 'debriefers' have been trained and what have been the objectives of the 'debrief'. It seems that any post-incident psychological intervention, often conducted in a single-session approach and for various kinds of trauma, has been called debriefing. The regretful conclusion is that these issues have often had serious implications on the implementation of support programs in police, fire and rescue organizations.

The only conclusion that can seemingly be drawn from these studies is that it is not appropriate to offer one-off individual psychological debriefing sessions to victims of primary trauma while they are physically recovering from the trauma. It is not surprising that psychological debriefing – if it is still correct to call it that way - is not effective under these conditions. However, also positive outcome studies suffer from a number of limitations that need to be taken into account when evaluating scientific evidence in support for psychological debriefing: the effectiveness of psychological debriefing has to be proven in an ecological valid way, participants of psychological debriefing sessions are not assigned to these sessions in a random way, and, other confounding factors (such as the way of being assigned to debriefing sessions) and the value of self-reports on the value of debriefing) exist.

It is clear that both negative and positive outcome studies on the effectiveness of psychological debriefing suffer from a number of limitations that need to be taken into account when evaluating their findings. Future research needs to be oriented towards the true understanding of the very specific world of fire, police and rescue personnel.

Acute reactions after potentially traumatic events: direct victims and significant others

This section seeks to qualify an event to be *emotionally disturbing*, when this event is abrupt and shocking, and involves disturbing feelings of anxiety and/or depression, followed by guilt and/or shame and/or sadness and/or rage. By its sudden impact, the event temporarily disrupts the emotional and/or physical and/or cognitive equilibrium. Examples of these kind of events include the painful or sudden death of a friend or a relative, witnessing severly injured or dead

people and other important losses. It is argued that these events are *shocking*, instead of being directly traumatising, if they did not lead to a subjective and/or objective confrontation with death or if they did not involve a fight to survive during which the survivor(s) was (were) confronted with a state of psychological terror, frozen fright and unspeakable experiences which are impossible to symbolise nor verbalise, or in which there was a complete disruption between *signified* and *signifier* (cf. Infra).

Traumatisation can also emerge from identification with victims or the on-scene contact with friends or relatives (or victims looking like friends or relatives) and especially children, always considered to be the ultimate victims. In other cases, such an event can also trigger[1] earlier trauma and thus lead to post-traumatic sequelae, aggravating the already damaged psychological structure of the individual.

It is important to qualify an emotionally disturbing event as potentially traumatizing if this event also satisfies the following criteria: (1) the event is sudden, abrupt and unexpected; (2) involves feelings of extreme powerlessness, horror and/or terror, disruption, anguish, and/or shock; (3) implicates vehement emotions of anxiety and fear of death, due to; (4) the subjective (feelings) or objective (real, direct) confrontation with death (i.e. the real or felt severe threat to one's physical and/or psychological integrity or the integrity of a significant other). What is considered to be central in this definition is the confrontation with death: the potentially traumatizing event confronts with a world which is unknown, a world of cruelty and horror, the world of the death in which certainties, norms and values does not (seem to) exist anymore. The world of the death which is the world of the unspoken horror – *le néant* (*the nothing*) as French contemporary authors (Crocq, 2000; Lebigot, 2000) call it – in which everything becomes senseless, which is impossible to describe or to put into words, since the human kind has no words or concepts to describe the real characteristics of death. This is the reality of survivors of terrible (industrial) accidents, wars, fires, explosions, earthquakes and floods, macro- or microsocial interpersonal terrorism or severe threat. In this reality, overwhelming forces annihilate human values, norms and/or life, oppressive amounts of violence and power reducing the human being to 'dust', leaving the survivors in a short but significant silence of emptiness, complete abandonment and loneliness. This is typical for the immediate aftermath of trauma, in which victims *awake* again and try to get in contact again with *the spoken world of the living*.

In the above description, the illusionary state of predictability and security, respect for the human being (or life) and its norms and values, and/or its basic assumptions and certainties about the world we are living in, makes place for a situation characterized by deep physical and/or psychological injury, irreversible damage, humiliation and destruction beyond repair.

The overwhelming impact of this close encouter with death involves a typical situation of frozen fright and psychological terror which can be likened to the French concept *effroi de la*

[1] The principle of *triggering* is one of the central problems in the working-through process of trauma victims. A psychological trauma is always characterized by a combination of several symptoms clusters, normally; 1) the original potentially traumatising event being a more or less direct contact with a life-threatening situation; 2) a cluster of symptoms in which the original event is re-experienced; 3) a cluster of symptoms in which the original event is denied or avoided; 4) a cluster of symptoms characterized by hyperarousal; and, 5) a social dysfunctioning of the stricken individual. When trauma victims are confronted by various stimuli which make them remember or think about the original traumatising event, these stimuli can TRIGGER the same reactions (event dissociative responses) as the original event itself. The human brain does not seem to differentiate between the orignal event and the re-experienced events, leading to a potential *neuro-biological storm*.

mort as decribed by Lebigot (2000, 2001) and compared to the old Greek myth of Perseus by Crocq (2000; 2001).

Lebigot (2000) describes how a traumatizing event creates an embedment of one-self as dead into the psychic apparatus and how survivors lose their illusion of immortality. The traumatic moment is an exclusion moment too in which the language disappears, an unspeakable moment of dereliction creating feelings of shame and abandonment.

In *Le Retour des Enfers et son Message* (*Coming back from hell and its message*), Crocq (2000) illustrates how hell is spontaneously evocated in the speech of the traumatised. Coming back from hell can perpetuate the remembrance of horror and misfortune.

Traumatizing events shake the very foundations of the human being. Beside feelings of extreme powerlessness and helplessness, and the overwhelming impression of deep penetration into one's own physical and psychological integrity, trauma survivors will have to cope with the potentially ego-destructive emotions of permanent uncertainty, (survivor) guilt, anxiety, shame and loss of control. The more there has been severe physical injury, the longer the recovery and *working-through process* will last, and the more we can be pessimistic about the prognosis in the long term.

There is also the loss of *connectedness* with the surrounding significant others and the life environment in general. As Lebigot (2001) states, trauma survivors have seen the *reality of death (le réel de la mort)* and lost the connection with the world of the living.

From here on, this article explores the various aspects of a model used to understand *the life-threat and emotional-shock-processing* in a chronological way. This interpretation – which finds its inspiration in the animal world (cf. the way animals act in a *predator-prey* context) – offers a simple parallel. It is important to carefully think about the different possibilities for immediate trauma-support during these different stages of traumatisation.

During the potentially traumatizing event i.e. the *peritraumatic stage*, direct victims act in a way which is very meaningful for their survival and comparable to what is found with animals when they are threatened by a predator, as expressed in the work of Nijenhuis (1999), who uses the animal trauma-model to explain the succesive trauma stages in trauma survivors (mainly in a context of sexual abuse). In most trauma accounts we can readily identify the next successive stages: 1) *immobility* and *total inhibition*; in nature this kind of immobility often means 'survival' and 'escape from death'; *freezing* may happen in a state *apprehension of danger and attempt to find the right or most adequate survival response*; 2) *flight*, if there is enough time and space for escape, otherwise numbness and freezing might return, or even the opposite reaction pattern, panic and senseless activation; 3) *fight*, for as long as the fight to survive has a sense and offers a chance to survive in the stage of the traumatisation process; 4) *total submission* – the moment on which victims experience overwhelming power and violence, of the predator, the perpetrator, technology or simply nature; it seems as if they understand that fighting death has no more sense; it is at that moment that *dissociative behaviour – alienation, depersonalisation, anaesthesia, analgesia, narrowing of attention, tunnelvision, out-of-body experiences, derealisation, etc (cf. Infra)* - sets in, as if this would allow the victims to die without feeling pain or without even knowing consciously that they are soon to die; and finally, the last stage in this traumatisation sequence, if the danger or death threat disappears; 5) *recovery, recuperation* and *return of pain sensitivity, partial*

consciousness of what happened, widening of attention, e.a. behaviours that are typical for a return to reality.

Van der Hart et al. (2006) explain the core of psychological trauma as a failed integration of an event. For Crocq (2000) and Lebigot (2000), reality will never be the same again if one has seen 'death' right into the eyes and has been confronted with the unknown, wordless and unspeakable world of death. For a further analysis of this animal model of traumatisation and an in-depth discussion of trauma and dissociation, and the disintegrating effects trauma can have on the psyche and personality of victims, readers are directed to the theories of trauma-driven structural dissociation of the personality in Van der Hart (1999), Nijenhuis & Van der Hart, 1999) and Van der Hart, Nijenhuis & Steele (2006).

After the return from death, survivors of wars, motor vehicle accidents, rape, assault, fires, hostage taking, etc have to work through the fragmentary and wordless trauma sensations and will have to search for words in order to express trauma impact. For trauma survivors, the world will never appear to be the same again. They will have to go back into the *trauma labyrinth*, in search of a way to express what they lived through, in search of a story and a meaning which can reconnect them again to the world of the living – *the world of those who speak*, allowing them to reframe their world, reconstruct their basic assumptions and beliefs, and become one bio-psycho-social whole again.

Different stage in the aftermath of trauma: acute impact, working-through and trauma-fixation

In the first stage – which is referred to as the *acute (or immediate) trauma stage* - in the immediate aftermath of trauma, immediately after living through the potentially traumatic impact, trauma survivors are confronted with a confusing mix of feelings of *disbelief, denial, relief and despair.* These moments of disbelief and denial - during which survivors yearn for rest, recuperation and safety – will be quickly disturbed and/or alternated by sudden and intrusive recollections and re-experiences of the traumatogenic event, during which the victim acts as if the event itself was reoccuring and the death threat has returned. The brain does not seem to make a difference between the original event and these intrusive recollections. Trauma survivors keep asking the same questions: *What happened? How did this happen? Who else is injured (or dead)? Why did this happen (to me, or to us)? Why now? How will I (we) ever recover from this?* They are in a desperate need of information. Still shaking from the event which just struck them, feeling the sequelae of the hyperarousal they needed in order to survive, still a bit disoriented and heavily affected by the close encounter with death. During this stage, trauma survivors have overwhelmingly material and practical needs. They keep asking themselves: *How will I eat? Where will I sleep? Who will pay for this? How can I tell to my relatives what just happened to me? How do I get home? What about my old sick mother and how will she react? Will I ever find the energy and courage to go back to work after this, etc*.

This initial stage will be followed by a *trauma working-through stage* – which is referred to as the *post-immediate* or *post-acute stage* - during which the trauma survivors will have to: 1) accept what happened to them; 2) confront the negative emotions which are associated with these kind of events; 3) reach a daily life-equilibrium again, or try to return to normal life activities; 4) work through their experiences; 5) search for a way to express and put into words their trauma experience; and, 6) find a meaning and a story, in order to integrate what

happened in their personal life story. Numerous models are offered in the current trauma literature but most of them take more or less these different stages into account.

Most trauma survivors will have an urgent need to really understand what happened to them, how it happened. This should be achieved through a detailed collective reconstruction of the event, taking all possible sources of information into account (television reports, newspaper articles, individual accounts and stories, etc) and they will search for explication, understanding, compassion, recognition and meaning. The longer they stay alone with these needs, the longer they will be haunted by vivid, intrusive and/or weird re-experiences of the event, as if their minds look for understanding and closure of the event.

The intrusive recollections and re-experiences, while the survivors return to the hyperaroused states coupled with the repetitious reminders of the original event - and which are so typical for the *fight to survive* - alternated by moments (or periods) of denial and avoidance.

Finally, there is the third stage on the time-axis of *trauma processing, assimilation* and *accomodation* – or the *trauma fixation* or *chronification stage;* trauma survivors can get stuck in this stage, after several months during which they tried to cope with their experiences but which led them to a stage in which their initial fears and complaints worsened, omnipresent and intense, forcing them to invest nearly their complete quantum of daily energy to avoid the trauma-related symptoms or cope with the vivid, threatening reexperience attacks shutting down their ability to readapt to normal life again.

For one reason or another (e.g. previous trauma, concurrent life experiences, personality characteristics, extremety of the event), the *salutogenic* (i.e. *recovering, health promoting and rehabilitating*) physical, emotional and cognitive working-through of the trauma stopped and urges for professional trauma care and therapy reduce.

Early trauma intervention and support may lessen the suffering for trauma survivors but will probably never prevent them from developing long term sequelae or chronic post-traumatic stress disorder. Once an impact has been traumatizing and there has been this overwhelming objective or subjective contact with death, the damage is done and nothing can revert this. As is described in what follows it is considered that, at least in some cases, there is a possibility for on-scene (peri-traumatic) primary prevention of post-traumatic sequelae, but these chances are rare and often unexploited.

Acute reactions after potentially traumatic events: indirect victims and significant others

An explorative field research[2] into the experience of emotional distress by police, fire and emergency medical services personnel, brought an enormous amount of anecdotical data on how professional emergency responders manage stressful events in practice. These course-and-discussion sessions demonstrated in the first place that firefighters and crisis responders are *doers rather than thinkers and talkers*.

[2] This anecdotical evidence was generated by visiting Belgium, Holland, France, Australia, New Zealand, and former Eastern European countries, as co-ordinator and trainer of the *Firefighter & Emergency Medical Stress Teams*. General exercises (a minimum of three hours) on the management of emotionally disturbing (potentially traumatizing) interventions in the fire fighting and rescuing practice were held in more than two hundred fire brigades, ambulance services and emergency medical departments. They consisted of three parts: an experience-oriented analysis of traumatic interventions, a practice-oriented discussion of real-life situations and a theoretic (psycho-educative) placement of the mechanisms and phenomena under discussion.

During exercises with fire and emergency medical services personnel it became increasingly clear that it is essential to know their world, or, ideally, to be part of it to understand the way in which they react to traumatogenic events.

The firefighter/paramedic does not tolerate ‘busybodies’ and does not want to feel a victim. He realizes that the borderline between success and failure, between saving and not being able to save, and therefore between being a hero or a ‘victim’ is very thin indeed.

In the group, the following emotions usually surface; often overpowering impotence, a hated feeling of helplessness, a paralyzing grief about the human (and very recognizable) suffering of the victims, the intense guilt of not having been able to do more and the anger generated by all this. This is not what they joined the fire brigade or the ambulance service for. The emotionally disturbing intervention may be considered as a difficult puzzle, from which the pieces have to be put back together again, to allow the involved rescuers to fully understand the context in which the intervention took place.

The acute psychological experience of a potentially traumatizing event is one of extreme powerlessness and loss of control. The victim loses his mouth as if it were that his willpower is eliminated. At the same time this event causes a sudden and unexpected dislocation of the work and/or living conditions. Nothing will ever be the same again. There is always the threat of death or serious damage to psychological and physical integrity of the self or the other.

The caregiver can, in many instances, no longer maintain his image of the world. The basic assumptions and expectations about life are no longer valid. Everything, even in the practice of fire fighting, becomes dishonest, unjust, unpredictable and dangerous. There is danger behind every corner. Training no longer stands for controllability. Every intervention means ‘danger’. Partners become afraid with every call up and so on.

During interventions, many emergency responders show a narrowing of attention, known in literature as the Easterbrook-claim (Easterbrook, 1959). This narrowing of attention leads to a diminished capacity to take cues or information-elements from the environment in which an event takes place (Bruner, Matter & Papaner, 1955; Easterbrook, 1959; Eysenck, 1982; Mandler, 1975). It is therefore often very difficult for caregivers to come to a meaningful reconstruction of their intervention which resembles a giant puzzle from which they only hold a limited number of pieces. This makes it very difficult to come to a global image of the intervention. Yet it is indispensable to work through the event in a healthy way.

Caregivers often work on ‘automatic pilot’. In this way most of the actions during the first instances of a traumatic intervention happen automatically, almost instinctively and may seem unreal. Children are often ‘dolls’ under such conditions. Acquaintances ‘anonymous’, injured or dead victims partly ‘dehumanized’ through black humor to keep a psychological and emotional distance etc.

But the moment comes when the automatic pilot is promptly switched off. After the intervention, we know this phenomenon as the *emotional post-fact collapse*. During long interventions one precise stimulus may surface to stop the automatic pilot. The image or impression the victim attaches to a relative, a teddy bear or child’s doll, or other stimuli that pierces the hardness or armor of the caregiver. And from that moment onwards he starts to function mainly as a vulnerable individual. And he cannot keep this up for long. Once the

intense experience is over and the danger averted, the caregiver in question gets an insight – albeit partly – into what has really happened and how is acted. From that moment on, the *trauma-video-merry-go-round* begins. Because of the fragmented experience during the intervention every caregiver starts to reconsider – read 'ruminate on' – the events wondering if he and his colleagues should or could not have done more. The more holes there are in the experience of the event, the longer the questioning process takes and the longer the mind ruminates on the experience.

The next part of this text sheds light on the psychosocial matrix as a framework for emotional triage of trauma victims. This emotional triage could be the starting point for the development of a series of support activities, from *psychological first aid* to *emotional and psychological uncoupling (*closely related to *psychological debriefing)* and *working through*, for the different victims' categories of a certain potentially traumatic event. It will become clear that the type of support has to vary as a function of the type of (potentially traumatic) impact or victims.

The psychosocial matrix for crisis psychological support

The psychosocial matrix is a 3 x 3 matrix in which we find respectively in the rows and the columns: 1) the *primary, secondary* and *tertiary victims*, belonging to one of these three categories depending on the type of potentially traumatising impact suffered; and, 2) the *primary*, *secondary* and *tertiary prevention*, depending on when the trauma support takes place. The concrete realisation of the complete framework for psychological (crisis) support consists, on the one hand, of a kind of psychological triage to sort out the different kinds of victims, dividing them in three different categories, and on the other hand, the selection of the appropriate support technique, at the right moment and carried out by the right people, thus trying to realise an optimal fit between victims and the type of support they get. A third dimension might be added to the matrix, namely the type of event: potentially traumatic (traumatogenic), potentially depressing (depressogenic) and potentially exhausting (exhaustogenic).

The *primary victims* in this model are the direct victims, those who have to be rescued and/or medically saved, who may have been directly confronted with the life-threatening potentially traumatic stimuli.

The *secondary victims* are the significant others, closely related to the primary victims or playing a significant role as bystanders, in the first rescue attempts (before the emergency services arrive) or providing the first assistance to the primary victims and their families. The *social tissue* of significant others – relatives, family members, friends, colleagues, etc. – creates a victims dendrite of people who can be considered to be secondary victims. It would appear that for each primary victim there are approximately 10 to 15 secondary victims.

The *tertiary victims* are the professionally involved people, caregivers or law and order personnel – fire & rescue personnel, police, emergency medical services, etc. – who have been in direct contact with the primary and/or secondary victims.

With respect to the prevention, this trifurcated subdivision can be used, differentiating between primary, secondary and tertiary prevention.

While strictly speaking, *primary prevention* would include everything which is done to prevent the emotionally disturbing impact itself, we like to use a broader and perhaps less conventional definition of primary prevention, taking the whole series of activities of trauma education and preparation, training, and the creation of intervention models and structures, even considering the on-scene support along with the peritraumatic first psychological support (cf. example of the tactics for victims aid by firefighters during the extrication and rescue of motor vehicle accident) to be a kind of primary trauma prevention.

If potentially traumatic or life-threatening events lead to hyperarousal states in which the victims have to fight for their lives and mobilise all possible animal-like survival mechanisms, sometimes going into dissociative behaviour, and these acute reactions, may be predictive of later chronic trauma. Every action which can prevent these states of hyperarousal (i.e. every support lowering arousal in trauma victims, calming down, nurturing, etc.) and possibly avoid peritraumatic dissociation, keeping the victims on-scene grounded, could be considered as primary prevention of long term psychological trauma.

The immediate support, both on the scene of the accident or in temporary support centres on the field, carried out by the caregivers of fire & rescue, or ambulance services, or even provided by volunteers from civil defence, Red Cross or others services, is also considered to be primary prevention. The *on-scene buddy aid* or *peer support – the help for colleagues and from colleagues* on the scene of the accident – then the *initial emotional and physical recuperative talk sessions* (sometimes described as *defusing*) are also considered to be *primary prevention of posttraumatic sequelae in tertiary victims.* These primary preventive support activities could be carried out by non-professional caregivers or peers.

The *secondary prevention,* in the post-immediate stage, essentially consists of: 1) a quick and adequate detection of post-event psychological sequelae; 2) a rapid and adequate intervention, carried out by the appropriate people and all this at the right time. Secondary prevention targets the early detection of problematic responses or coping styles in victims, and a sufficient intervention tailored to the needs of the victims, in order to prevent these problems exacerbating and becoming chronic in the long term. It is considered that most *early intervention protocols* to be a kind of *secondary prevention (for tertiary victims).*

These secondary preventive support activities could, in some cases, also be carried out by non-professional caregivers, as long as they work under permanent supervision of well-trained and professional mental health specialists.

Without wanting to go into too much detail, it would appear that the currently known models of *critical incident stress debriefing* or *psychological debriefing* have been designed as a secondary prevention for tertiary victims, *which should not be used to support or debrief primary or secondary victims.* The negative publicity surrounding these intervention techniques is not due to these protocols but to the incorrect use of support techniques with people who should not be re-exposed to their trauma again so short after the impact or after an insufficient physical, emotional and psychological recovery period (see later).

The *tertiary prevention,* finally, aims at the full professional curative trauma care, which can become necessary for the different categories of victims after several months during which these victims tried to cope with their experiences without any professional help. In this case, trauma victims can suffer from what is called in the DSM-IV (APA, 1994) Post-Traumatic Stress Disorder (PTSD).

Tertiary prevention could mean psychotherapeutical action from different perspectives, as there are (non-exhaustively): 1) (Brief) Cognitive-Behavioral Therapy; 2) Psychoanalytically Inspired Trauma Therapy; 3) (Brief) Eclectic Therapy; 4) Sensori-Motor Trauma Therapy; 5) Creative and/or Arts Therapy; 6) Experiential (and/or Existential) Trauma Therapy; 7) Eye-Movement Desensitization and Reprocessing Therapy; and, 7) Integrative Trauma Therapy.

In nearly all trauma models, the first stage of the therapy will aim to reduce and stabilise the current trauma symptoms and complaints, followed by a stage in which there will be a regurgitation of the trauma-related material, mostly using narrative exploration and cognitive reframing techniques, and finally, in the last stage working towards integration of the (loss and) trauma in the personal life story of the survivor.

Primary prevention of psychological trauma in primary and secondary victims of traumatogenic events

As mentioned above, in most cases the acute (peritraumatic) stage for the victims of a traumatogenic event could range from a few seconds to several hours. In many cases victims will even need between 24 to 48 hours to 'wake up' again from their *trauma trance* (*dissociative state*) or *tunnel* (cf. the forementioned dissociative responses and survival stages). When leaving these, sometimes functional, dissociative states the primary victims start to slowly realise what they have experienced or how lucky they were to survive. They are still fearful that the threat will return and/or that in a repetitious way they will be aspirated back into their 'traumatic tunnel' when the surrounding reality is still too cruel, extreme and/or overwhelming. The need to escape the reality remains. Primary trauma victims will only return back to reality very gradually and only when they perceive again a sense of safety, security and stability in the surrounding environment.

For rescue workers and caregivers, it is very important to know how to guide and support the primary victims on their way back to reality, to calm them down, help them ground themselves during and immediately after the rescue operations, and assist them in their first reorientation attempts. In particular, survivors who show dissociative responses need to be 'grounded' in order to prevent them from staying overwhelmed by intrusive recollections of the event.

The first signs of post-impact recovery appear when victims start to search for information, about what happened, in the surrounding environment. This yearning for information in the immediate post-impact stage makes the primary victims very fragile and suggestible with respect to the first rumours about what happened.

The mental reconstruction of what really happened is very difficult for survivors since they all suffered more or less from a narrowing of their field of consciousness, focusing on peritraumatic details which were relevant for their own survival or rescue. Lots of trauma-related, essentially preverbal sensations about speechless terror, have been registered but need much more elaboration before they can be transformed into senseful traumatic memories. Therefore, psychological stabilization after traumatogenic events has to aim at physical recovery and cooling down but not at immediate verbal expression.

The on-scene support for primary, secondary and tertiary victims could be executed along the same principles. The first psychological help in the peritraumatic and immediate post-impact

stage should aim to reduce the level of arousal and re-create basic security and safety around the traumatised victim. One could assume that the natural support a mother provides to a child in a state of anxiety, in trying to secure and to calm down, is a similar kind of support a traumatised victim needs.

Primary prevention of psychological trauma in tertiary victims of traumatogenic events: first assistance, immediate physical recuperation and emotional uncoupling

In what follows, the discussion of emotionally disturbing, shocking or traumatising interventions, in group and according to procedure, will be called Psychological Uncoupling (PU). PU is, in fact, an individual or group oriented intervention – based on the commonly known Psychological Debriefing (PD) process – in which the most important elements of a past emotionally disturbing experience are treated shortly after the events. Lately psychological debriefing – mostly based on the elementary protocol of *Critical Incident Stress Debriefing* (Mitchell, 1983) - had been generally advised as the most appropriate stress-management technique for high-risk professions such as those providing aid in disasters, fire-fighters, military personnel, police personnel, etc. (Dunning & Silva, 1980; Wagner, 1979; Raphael, 1986; Mitchell, 1981; Bergmann & Queen, 1986; Griffin, 1987; Jones, 1985). However, now there are a number of variants of the original Mitchell-protocol of psychological debriefing widely used in psychological crisis intervention services. The problem is that in many cases outcome-expectances of psychological debriefing have been too high and more recently specialists have questioned the effects of psychological debriefing (Van Emmerik et. al., 2002).

Firstly, the term 'debriefing' can be misleading because many of its users do not even fully understand the meaning of it (can you debrief people who were not briefed in advance?) or believe that debriefings are simple because the term 'debriefing' is very familiar to them from the point of view of 'operational debriefing'. Secondly, it is suggested that the outcome criterion – i.e. the prevention of post-traumatic stress disorder (in itself a debatable 'condition') – may be the wrong one. The author's research (De Soir & Zech, in press) indicated that participants from police services reported very positive effects after taking part in psychological uncoupling sessions – role clarification, reconstruction, enhanced understanding of the event, recognition, emotional support, etc. – but did not show less post-traumatic symptoms afterwards.

In some cases, the testimonies of witnesses or direct victims can be essential in this reconstruction process. Very briefly, the various goals of Psychological Uncoupling would include *ventilating tensions and frustrations* (in many cases based upon the behavior of the press and "disaster tourists"), *normalisation, comprehension* and *legitimisation of occurring reactions and feelings, creating a cognitive restructuration* (we hope to replace negative cognitions by positive ones in the course of the discussion), *creating a* – almost mythical - *bond among fellow caregivers* and the *identification of those participants who may be supposed to run a high risk of problematic assimilation.*

Conclusions to the implementation of psychological support for fire and rescue services personnel

From the perspective of the management of fire and rescue services, there are many reasons why it is important to provide quality support to rescuers who are constantly exposed to stressful and emotionally disturbing events. For example, providing adequate support may

help to reduce absenteeism, lower the cost of compensation and litigation, and improve performance (Devilly & Cotton, 2003; Plant, 2000; Robinson, 2003). Accordingly, it is generally accepted that a healthy workforce is a more productive workforce (Devilly & Cotton, 2003).

In addition, most countries now have legal and moral responsibility to offer stress and trauma support to exposed personnel in risk organisations. Every organisation has a legal duty of care to provide a safe working environment for employees, as dictated by occupational health and safety policy and legislation. This responsibility extends to protecting employees from possible psychological harm and suffering. However, the nature of fire and rescue interventions implies that it may be impossible for personnel to avoid exposure to stressful events.

These legal and moral obligations make it clear that it is unacceptable not to offer support after emotional disturbing and potentially traumatising interventions.

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