Maggie Schauer · Frank Neuner · Thomas Elbert

Narrative Exposure Therapy

A Short-Term Treatment for Traumatic Stress Disorders

2nd revised and expanded edition

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Library of Congress Cataloging information for the print version of this book is available via the Library of Congress Marc Database

Cataloging data available from Library and Archives Canada

http://www.hogrefe.com

PUBLISHING OFFICES
USA: Hogrefe Publishing, 875 Massachusetts Avenue, 7th Floor, Cambridge, MA 02139
Phone (866) 823-4726, Fax (617) 354-6875;
E-mail customerservice@hogrefe-publishing.com
EUROPE: Hogrefe Publishing, Rohnsweg 25, 37085 Göttingen, Germany
Phone +49 551 49609-0, Fax +49 551 49609-88,
E-mail publishing@hogrefe.com

SALES & DISTRIBUTION
USA: Hogrefe Publishing, Customer Services Department,
30 Amberwood Parkway, Ashland, OH 44805
Phone (800) 228-3749, Fax (419) 281-6883,
E-mail customerservice@hogrefe.com
UK : Hogrefe Publishing c/o Marston Book Services Ltd, PO Box 269,
Abingdon, OX14 4YN, UK
Phone +44 1235 465577, Fax +44 1235 465556,
E-mail direct.orders@marston.co.uk
EUROPE: Hogrefe Publishing, Rohnsweg 25, 37085 Göttingen, Germany
Phone +49 551 49609-0, Fax +49 551 49609-88,
E-mail publishing@hogrefe.com

Format: PDF

ISBN 978-1-61676-388-6

Acknowledgments

This manual was written in cooperation with Dr. Elisabeth Schauer (vivo). We thank Drs. Brigitte Rockstroh, Claudia Catani, and Martina Ruf for helpful comments and continuous support of our work.

Research was supported by the European Refugee Fund, the Deutsche Forschungsgemeinschaft, and the nongovernmental organization vivo.

Cover Picture

The cover picture was taken by the therapist Dr. Claudia Catani (vivo) during a therapy session with a traumatized Sri Lankan child. The lifeline is a creative medium used in narrative exposure therapy (NET and KIDNET) that displays the chronological order of good (flowers) and bad or traumatic events (stones) in a survivor's biography (see Figure 12, "Lifeline of a Sudanese refugee woman," in Section 3.2.3).

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1 Introduction: Voices of Victims

Traumatized people become "stuck" in the horror they endured. Traumatic memories dominate the life of many survivors, who continue to live in fear and feel tormented, even when the threat is long gone. Their body and mind feel and act as if an ongoing threat endangers their survival. At the core of psychological trauma is the confusion of past and present. The intrusive memories of the traumatic events can create a world that seems more real than the actual reality. Survivors with traumatic stress disorders have never arrived in the present – have never reached the here and now. The result is the alienation of a wounded soul from life in the present and the future.

When severe pain and harm are purposefully inflicted by one human being on another, a breach of humanity has occurred. Even natural disasters and life-threatening accidents are sometimes viewed not as occasional occurrences that may happen to anyone but as deliberate and intentional acts of violence, and are therefore taken by the survivor to be a very personal attack.

Trauma destroys the human kernel that resides in moments or acts that occur within a social context: communication, speech, autobiographical remembrance, dignity, peace, and freedom. Trauma isolates the survivor, alienates life, and indeed freezes the flow of one's personal biography. In this introduction, we will listen to the voices of survivors of violent acts, of childhood abuse and neglect, and of torture, terror, and suffering:

> *A dream full of horror has not stopped visiting me, at sometimes frequent, sometimes longer, intervals: I am sitting in a peaceful relaxed environment, apparently without tension or affliction; yet I feel a deep and subtle anguish, the definite sensation of an impending threat. And, in fact, as the dream proceeds, slowly and brutally, each time in a different way, everything collapses and disintegrates around me, the scenery, the walls, the people, while the anguish becomes more intense and more precise. Now everything has changed into chaos; I am alone in the centre of a grey and turbid nothing, and now I know what this thing means, and I also know that I have always known it; I am in the Lager once more, and nothing is true outside the Lager. All the rest was a brief pause, a deception of the senses, a dream.... I have fallen into a rather serious depression. I ask you as a "proper doctor," what should I do? I feel the need for help but I do not know what sort.*
>
> Primo Levi, Auschwitz survivor, in a letter to his friend and doctor David Mendel, February 7, 1987 ("David Mendel", 2007; Gambetta, 1999; Levi, 1963)

Collective trauma remembrance must never be wiped out ('forgive, but don't forget'!), the horror can never be made undone and the autobiographic past can never be erased by psychotherapy, but the survivors' suffering can be reduced a great deal. Treatments that indeed lead to a reorganization of the fear network are of central importance: they can induce a long-term structural change in a patients memory and not only an inhibition of the fear network, with the constant threat of reactivation of the implicit fear network through trauma-associated triggers. The integration of traumatic events is especially important since trauma memories of a suffering individual can get reactivated throughout the lifespan. Stressors, similarities to the old event, that activate parts of the fear network that has been built by previous traumata lead to reactivation and as a consequence reactivation can lead to a relapse even after years without symptoms. As legend has it, Primo Levi told to Raabi Elio Toaff in a telephone conversation: "I can't go on with this life. My mother is ill with cancer and every time I look at her face I remember the faces of those men stretched on the benches at Auschwitz" (Gambetta, 1999).

Trauma subsists through the abnormal coding of memories. Conscious recollection of the past has become impossible, while barely noticeable traces sneak through attentional gates and evoke memories of the traumatic events so vivid and real that fear and horror have become routine. An "as-if" reenactment of the past becomes a piece of the present, a composite too terrible to utter aloud. Speechlessness from the terror results.

> *When I think of this time, fear is rising. In the past, we had to suppress it because of the permanent danger, but today I feel strange, because I only remember fragments. Why is that so? I feel as if a part of me is still hiding. I am staring into the darkness and only now and then something flashes up and lays open, a memory of my previous life.*
>
> Ervin Staub, child survivor of the Holocaust, in Stein (1993)

Continuous or complex trauma survivors have had to live through frequent interpersonal abuse often from early childhood on. It may take decades in these victims until the first distinct sensory intrusive memories surface, although they have had to endure a long life full of symptoms of "unknown" origin, of untold misery:

> *One day I looked in the mirror. On my arms and legs there was hardly any place where I had not cut or burned myself.… I was 30 years old. This time I was hospitalized for 14 weeks. It was my 57th stay as an inpatient in a psychiatric ward. I had suffered from eating disorders, bodily pains and drug abuse since 16 years by then. During the 2nd week, I suddenly experienced my first flashback of sexual abuse through my grandfather. I saw him raping me. After this stay, I had panic attacks and nightmares. More and more memories appeared. I realized that my father had done the same thing to me. I felt immense disgust. I slit my wrists; another attempt to die. After that, I stayed again for 5 months on a locked ward. Terrible fractions of memory of a time when I was sold to men in child-prostitution were haunting me. I wished I had succeeded to starve myself to death.…*
>
> D. I., patient with borderline personality disorder, excerpt from a diagnostic interview at University of Konstanz' outpatient clinic, Center for Psychiatry Reichenau, Germany, 2010

The horror of the past – alive in the moment – can also take over the body and the mind. Listen to the voice of one woman describing those moments when the memories engulfed her being:

> *When I remember this body, so close to me, so ugly, so intimate, it is still as if there is a dark, bad, black thing entering me at the height of my stomach. It is a thing with arms, like an animal, like a snake, a winding being that enters me and turns around in me and twists. Uh, it makes me shiver. I know it wants to spread, it aims for my whole body, it wants to completely take over me. It wants me to lose control. It has a bad, dark intention.... There is such despair in me, such utter loss of control, such helplessness. I must hide, I am going far, far away in my mind, I cannot bear this.... I feel like I want to explode, I feel like a bomb inside. Yet I have never told anybody. Who will understand the memory of a small girl now that I am nearly 50 years old? People will think I am crazy ...*
>
> Excerpt from a vivo-documented NET testimony, during therapy with a 49-year-old female survivor of childhood sexual abuse, 2003

Loneliness and social isolation are recurring themes among survivors. Unable to talk about the horrors of the past, unable to even comprehend "this other side, this crazy side" in oneself, the feelings become a part of, and seem to control, the behavior of this new and altered person. As one woman describes her experiences:

> *Even now many years later the pictures of this day keep coming back to my mind. I look at normal people, like a teacher or a friend, and suddenly the face of the perpetrator appears. Then I get angry and aggressive and try to hurt the person. I throw things and get violent. Sometimes I find myself sitting in strange places, like on top of the roof crying and I have no idea how I got there. It is as if there are two personalities living inside me. One is smart and kind and normal, the other one is crazy and violent. I try so hard to control this other side of me. But I fail. Sometimes I feel tears running down my cheek and I wonder why ... I have never told anybody what had happened to me during that day and even my father does not know what goes on in my mind and body when I get out of control. This is why I always feel a distance to everybody around me. People don't understand why I act strange sometimes, and I cannot tell them.... When I saw children playing and being happy I had to cry because I thought I could never do something like that again.*
>
> Excerpt from a vivo-documented NET testimony, during therapy with a 13-year-old Somali child survivor, 2003

From an outsider's perspective, it might seem that *narration* and *trauma* are radically opposed and mutually exclusive, as the people suffering these crimes are in too much pain, incapacitated by their enigmatic memory code, to share their stories. However, these two concepts are intimately connected. The atrocities cannot remain buried forever, and eventually the victim will be compelled to speak. It is this dichotomy that creates the foothold for this approach and this work.

> *After the war, for ten years I didn't speak, I was not a witness, for ten years ... and I was waiting for ten years, really.... I was afraid of language. Oh, I knew for ten years I would do something: I had to tell the story. One day, I visited an old Jew.... He sat down in his chair, and I in mine, and he began weeping. I have rarely seen an old man weep like that. I didn't know what to do. We stayed there like that, he weeping and I closed in my own pain. And*

> *then, at the end, he simply said, "You know, maybe you should talk about it...." In that year, the tenth year, I began my narrative.*
>
> Excerpt from an interview in 1996 with the Nobel Peace Prize laureate and survivor of Auschwitz Concentration Camp Elie Wiesel (Wiesel, 1996).

Speechlessness versus the wish and fear to disclose the events forms the central dialectic of psychological trauma. A naturally occurring conflict exists between wanting to deny the horrible events and feeling the urge to scream out the extent of the atrocities. Regaining one's dignity as well as finding truth in implicating the perpetrator are both fundamental to one's internal process of healing.

Not feeling understood becomes another major hurdle for some victims. The belief lives within that others will never be able to share their experience. Here is one person's testimony to this:

> *It is not because I cannot explain that you won't understand, it is because you won't understand that I can't explain.*
>
> Wiesel (1996)

If this core dynamic of *not feeling understood in the incommunicability* is not recognized, treatment is in vain. Previous approaches to healing and overcoming traumatization have tried to address this problem with different strategies, which may not have recognized these issues. By putting words to the trauma, victims are empowered to overcome their sense of speechlessness and lack of explicit memory. However, clinical intervention techniques are not sufficient. Trauma has societal and political dimensions, as do talking about the experiences, the terror, the torture, and the abuse. Victims may feel silenced because of the far-reaching political implications that verbalizing the abuse might have. This extends to mental health professionals as well, who may feel discomfort or overwhelmed while listening to stories that demonstrate a gross violation of human rights.

> *The ordinary response to atrocities is to banish them from consciousness. Denial, repression, and dissociation operate on a social as well as an individual level.... Far too often secrecy prevails, and the story of the traumatic event surfaces not as a verbal narrative but as a symptom. Remembering and telling the truth about terrible events are prerequisites both for the restoration of the social order and for the healing of individual victims.*
>
> J. L. Herman (1992b)

It is precisely these sociopolitical aspects of healing that need to be explicitly addressed. Only through an externalization of the feelings, abuse, and distrust, will true healing occur. Postconflict peace and reconciliation hinge both on a willingness of members of society to open their eyes to the abuse, and on the mental health of the individual. Narrative exposure therapy (NET) serves to address both the health of the individual, as well as society, based on the philosophy that these systems are inherently interrelated.

Given this theoretical foundation, NET works at the level of the individual by encouraging the telling of the trauma story and by reliving the past traumatic sceneries within an imaginative exposure design (see Foa, & Rothbaum, 1998). The goal is to allow for the modification of the *fear network* co-constructed by traumatic and stressful events (Lang, 1984, 1993; Schauer & Elbert, 2010). Thus NET weaves *hot implicit memories* into the story unfolded by *cool declarative memories* (see Elbert & Schauer, 2002; Metcalfe, & Jacobs, 1999). In this way, intrusive recollections and fragments are integrated into their original context, and a consistent autobiographical narrative develops. Part of the process is similar to that of creating a legal testimony. The logic of this part follows the testimony therapy procedure, as developed by Lira and Weinstein in Chile under the Pinocet regime (Cienfuegos & Monelli, 1983).

As narratives are an integrative part of every culture, NET is a culturally universal intervention for the reduction of traumatic stress symptoms in survivors of serious and repeated life-threatening events, such as organized violence, torture (see Amnesty International, 2003, and United Nations, 1984, for a definition for 'torture'), war, rape, civil trauma, and childhood abuse. NET is a form of exposure that encourages traumatized survivors to tell their detailed life history chronologically to a skilled counselor or psychotherapist who will record it, read it back, and assist the survivor with the task of integrating fragmented traumatic memories into a coherent narrative. Describing personal experiences in detail facilitates an internal visual recollection of, and thus exposure to, traumatic memories. Originally developed for survivors of multiple and complex forms of trauma who come from diverse backgrounds and who live in unsafe situations, often under conditions of continuous trauma, narrative exposure serves not only therapeutic purposes but also a social and political agenda. While NET is treating survivors through the narrative process, it is also simultaneously documenting violations of child rights and human rights.

Overall, this manual was written with the goal of integrating psychological rehabilitation of trauma survivors with issues of human rights and dignity on social, academic, and political levels. This work bridges the gap between science and fieldwork. It is aimed at mental health practitioners who work in the field (crisis regions, postconflict settings) as well as those individuals working in clinics, human rights organizations, public health institutions, and academic settings. At the same time, this manual is also written such that it is available to engaged members of the general public. Since story-telling, oral tradition, and verbal expression are concepts shared among all of humankind, NET can be tailored to any culture.

Based on scientific evidence from various disciplines (clinical psychology, neuropsychiatry, neuroscience, public health, and refugee studies), NET has been compiled and successfully field tested (e.g., Hensel-Dittmann, in press; Bichescu, Neuner, Schauer, & Elbert, 2007; Neuner, Schauer, Elbert, & Roth, 2002; Neuner, Schauer, Klaschik, Karunakara, & Elbert, 2004b; Neuner et al., 2008; Ruf et al., 2010; Schaal, Elbert, & Neuner, 2009; Schauer et al., 2006). Among other things, its applicability and efficacy for survivors of violence have been demonstrated under a variety of conditions such as refugee camps/settlements, national or local emergencies or crises, and in European and American outpatient clinic settings (for review, see Robjant & Fazel, 2010).

In sum, the core intention of creating NET has been to form a method of psychological treatment that will simultaneously heal while directly contributing to the fight against violence, abuse, maltreatment, torture, and persecution. The primary elements are thus threefold: healing of the individual, healing from violence committed against children and women or against one's ethnic or cultural group, and reconciliation from violence.

> *Look, you must speak.*
> *As poorly as we can express our feelings, our memories, but we must try.*
> *We have to tell the story as best as we can.*
> *We cannot guarantee success, but we must guarantee effort.*
>
> *In truth, I have learned something:*
> *Silence never helps the victim. It only helps the victimizer....*
> *If I remain silent, I poison my soul.*
>
> Wiesel (1996)

Throughout this process, witnesses and survivors of civil child rights abuse and severe human rights violations are invited to work through their traumatic memories while narrating and testifying to the details. This practice enables the processing of painful emotions and the reconstruction of clear contingencies of dangerous and safe conditions, generally leading to significant emotional recovery. If the survivor agrees, the documents (testimonies) that result from this therapy can also be used directly for prosecution of human rights violations or for awareness-raising purposes to counteract societal forgetfulness and denial.

Traditional means of assessing and narrating human experience have failed to encompass and account for trauma, and yet it is necessary to speak about these events if we are to heal their rupture of personal lives and history. But how can we tell these stories? What is the consequence of testifying to that horror? What is the effect of bearing witness to such testimony?

> *Now we recognize our duty to tell the full story, however painful,.. the survivors need to come forward after all these years of silence...The silence that had been both a trap and a sanctuary for many survivors.*
>
> Dori Laub, child survivor of the Holocaust and clinical professor of psychiatry at Yale University and the Fortunoff Video Archive for Holocaust Testimonies at Yale (personal communication)

As a result, victims of violence are offered the chance to claim justice through documentation. From this, an important step may result. The violence is no longer completely senseless; an element of meaning is given to their terrifying experiences and the healing process. NET's explicit societal and political orientation and goal, enforcing the UN Declaration of Child Rights and Human Rights, has proven to be a significant asset in many ways. Human rights groups, courts of law or international criminal tribunals, or courts of law that rely on the validity of the data given by survivors can profit from the completeness of a victim's report. Advocacy activities, carried out on behalf of one's own people, also may be based on testimonial evidence provided by NET. But most of all, it is a documentation of a person's life, a memory that will be preserved and that can be passed on to children and grandchildren.

Based on our own experiences and observations of NET in practice, we have concluded that it is indeed possible that NET has empowering consequences on both individual and societal levels. Striving for appropriate mental health services for trauma victims turns out to be anything but a "luxury," especially in

resource-poor, conflict-ridden countries (Schauer & Schauer, 2010). Many survivors suffering from disorders of extreme stress are unable to perform activities crucial to survival, such as creating viable economic and social living conditions for themselves and their families. Victims may be suffering from intrusions and nightmares, their physical health may be deteriorating, and feelings of worthlessness and suicidal ideations are likely to be increasing. Lives of trauma survivors are often characterized by hopelessness, poverty, and the inability to fulfill their societal roles. After treatment, it has been shown that survivors have been able to return to work, tend to their fields, and reengage in social and intimate relationships. With this, the process of individual and communal recovery is able to begin. Therefore, trauma treatment is a key link between an individual's mental health and those societal factors such as community and economic development.

> *Healing deep-seated antagonism or changing ideologies of antagonism through various types of interactive conflict resolution procedures can contribute to [reconciliation].... Members of each group can describe the pain and suffering of their group at the hands of the other.... They can grieve for themselves.... They can begin to grieve for the other as well. Members of each group can acknowledge the role of their own group in harming the other. Mutual acknowledgement of responsibility can lead to mutual forgiving. Healing from trauma, which reduces pain, enables people to live constructive lives, and reduces the likelihood of violence by victims and thus a continuing cycle of violence.*
>
> Staub (1998)

If it is indeed true that remembering and narrating the truth about terrible events are prerequisites for both healing of the individual victim as well as restoration of the social order and perhaps even reconciliation, postconflict peace, and economic development (Herman, 1992b), then why would we share the "conspiracy of silence?" At times it seems that we sometimes use the survivors feelings of incommunicability as an excuse not to hear their horrible stories. Here is one victim's voice that wants to encourage us:

> *The enemy wanted to be the one who speaks, and I felt, I still feel, we must see to it that the victim should be the one who speaks and is heard. Therefore, all my adult life, I always try to listen to the victim....*
> *Be sensitive in every way possible. There is nothing more exciting than to be a sensitive person. Because then you listen....*
> *Of course it hurts. Sensitivity is painful. Think of those that you have to be sensitive to. Their pain is greater than yours.*
>
> Wiesel (1996)

There are fundamental issues that continue to arise as we conduct this work. For instance, am I convinced that it is good for the survivor to be exposed again to the traumatic memories? Will it contribute to healing, or cause more pain and disturbance? Do I want to hear these stories? What do I do about the fear I have listening to these stories? Searching for answers, we honor the victims' voices:

> *If you had seen such things that I went through, you'll never forget. Before I had told my story, the horrible experiences felt like wounds in my body that didn't want to heal. I was always sad. I didn't know what could help. The pictures were always there and I was shaking with fear, so I wasn't able to dig in the fields. Because of the pain I couldn't find the words. Only pieces of speech. Then you came and were not afraid to listen to me. To hear all of it. I never thought anybody could bear hearing this. Now I hold the story in my heart and on the paper in my hands. I cannot read, but my children will finally know what has happened, what enables them to fight for peace. Because I went through the pain, I got my past back. Now my heart is free....*
>
> Excerpt from a vivo-documented NET testimony with a 35-year-old female survivor of the Sudan Genocide, 2000

There are unique advantages to working through and documenting the biography of a person's entire life as is done in NETherapy. First of all, the treatment allows reflection on the person's entire life in retrospect. This will enable a person to realize how interwoven the elements of the largely implicit emotional network of the relevant experiences and events are – its attached positive and negative feelings. A new sense of perceived identity may emerge: "who am I" at present and "who was I" when trauma struck me. An inner process of understanding and realization of the origin and perception of one's feelings, thoughts, and behavioral patterns is initiated. Moreover, personal resources and strengths assembled throughout the lifespan ("flowers") can be uncovered and validated. Safe engagement and detailed unfolding of emotional networks will allow for integration: The meaning of interrelated configurations of life will be appreciated, and associated incidents rise to consciousness, a process creating a sense of one's

"fateful" course of life. Insights about the past fall into place, so the implications and wishes for the future begin to show. The therapist, mental health expert, or trauma counselor is tasked to offer secure and personal bonding, while being fully present as a counterpart and listener, bearing witness, honoring, and respecting the survivor and every piece of her or his life as it has happened and as it keeps unfolding moment by moment.

2 Theoretical Background

2.1 Traumatic Stress

2.1.1 Traumatic Events

What we call trauma in colloquial language does not correspond well to the definition provided within the fields of clinical psychology and psychiatry. Trauma does not just refer to any breakdown in coping strategies in the face of difficult life events. Trauma means a cut into the soul as a result of a horrifying experience (see also Elbert & Schauer, 2002, for a brief outline of the concept). The wound may persist as a crippling disease with its core conceptualized as posttraumatic stress disorder (PTSD). The term *trauma* originally comes from Greek and means "injury or wound." It was first used in the field of medicine to describe bodily injury, such as with emergency medicine (physical trauma after an accident) or neurology (traumatic brain injury). Later, psychiatrists suggested that extremely stressful, typically life-threatening events could be considered traumatic, as those events could contribute to the onset of mental and subsequently also physical disorders, even without any physical injury. Trauma thus becomes the "wound of the soul." Consequently, the behavior, perception, and self-report of a specific symptom pattern as well as methods for examining survivors' brain functioning and structure became tools for "viewing" the mental injury. We will see in the next chapter how those survivors of trauma who still suffer from the impacts of the events also experience severe emotional pain when reminded of the event. Quite naturally, they try hard to avoid such reminders and to suppress related feelings. This is analogous to someone who has had a physical injury and avoids further pain by not moving or touching the injured part of the body.

Traumatic events are characterized by extraordinary circumstances and by the presence of distinct physiological alarm and defense responses in the victims when they do occur. Traumatic events are not just bad experiences that cause people to suffer. They are noted for the quality of the impact they have on human beings. These oftentimes life-threatening events can have a horrifying impact, regardless of whether the person was directly affected or whether the person simply witnessed the event happening to someone else. Both situations can be equally traumatizing; especially when the event happens to someone close, such as a family member or a loved one. We can classify traumatic experiences into two types: man-made disasters and natural disasters. Examples of traumatic events caused by other humans are exposure to combat, rape, torture, witnessing a massacre or mass killing, being held prisoner of war, or experiencing catastrophes such as airplane crashes or severe car accidents. Natural disasters classified as trauma may include floods, earthquakes, hurricanes, or volcanic eruptions. In contrast, experiences of loss, such as losing a business, or of bereavement, such as caring for an elderly parent, are not considered traumatic. Neither would viewing a horrifying movie or reading a violent book qualify as a *traumatic* experience in adults. Adult observers are constantly aware that movies are not real and therefore do not panic, in a state of alarm.

Even extremely stressful events are considered traumatic only when the victim or the eyewitness enters a physiological *alarm state* during the event, and the individual feels terrified or helpless or both. In this case, a cascade of responses in the body and mind is triggered which, when frequently reexperienced, will damage both the mind and the body. The stressful event is then called a traumatic one. This cascade involves a series of very rapid changes in body and brain mediated by neural activity, hormones, and changes in immune function, which affect all organs and include increased heart rate, muscle tone, blood flow, and metabolism; digestion is put on hold and resources are withdrawn from the immune system.

Summary What is trauma?

Psychological trauma is the experience and psychological impact of events that are life-threatening or include a danger of injury so severe that the person is horrified, feels helpless, and experiences a psychophysiological alarm response during and shortly following the experience.

2.1.2 Stress and the Defense Cascade

The body, including the brain, has the ability to deal with danger in a flexible and adaptive way. In contrast to homeostasis, i.e., the organism's ability to maintain a steady internal state, there is considerable flexibility in the adjustment to stressors that range from physical deprivation (cold, noise, deprivation of food and of sleep, etc.) to the real or imagined fear-provoking situations that trigger an alarm response or a "shutdown" process, and thus may result in corresponding disorders of the trauma spectrum. Mammals including humans choose from an arsenal of attack and de-

fense armaments to counter negative impact (McEwen, 2002; Schauer & Elbert, 2010). Even with minor cues, the brain can activate any appropriate alternative from the flight-fight-freeze-faint defense cascade. A coherent sequence of six defense responses that escalate as a function of proximity to danger and threat has been established by evolutionary biology and psychophysiology alike: freeze, flight, fight, fright, flag, and faint (Schauer & Elbert, 2010). First, the freezing (orienting response) facilitates a "stop-look-listen" perception and evaluation of the threat. Pavlov (1927) referred to it as "Shto Eta" (what is it?) – a reflex that turns the sensory systems to the source of stimulation and that can be viewed as a collection of bodily responses that assist in processing the stimulus further, such as papillary dilation, a drop in skin resistance, and a transient drop in heart rate. If the stimulus is perceived as a threat, an alarm response is initiated, with sympathetic arousal and adrenal release that enables the organism to counter danger (heart rate acceleration, blood pressure elevation, and vasoconstriction) – i.e., to flee or fight. It should be noted that highly aversive stimuli that appear close to the organism do not elicit an orienting response but rather a defensive reflex. For example, a very intense (say, 100 dB) noise with a short rise time, by its physical nature is likely to be from a nearby threat and elicits a startle response – pupils constrict and heart rate increases. This defensive reflex includes responses that assist in "blocking out" the event. The peritraumatic panic reaches its maximum in the fright response (tonic immobility), which may enhance survival when there is no more perceived possibility of escaping or winning a fight (direct physical contact with the perpetrator), finally leading to parasympathetic dominance (bradycardia, drop in blood pressure, and vasodilation) which may, in extreme cases, result in a

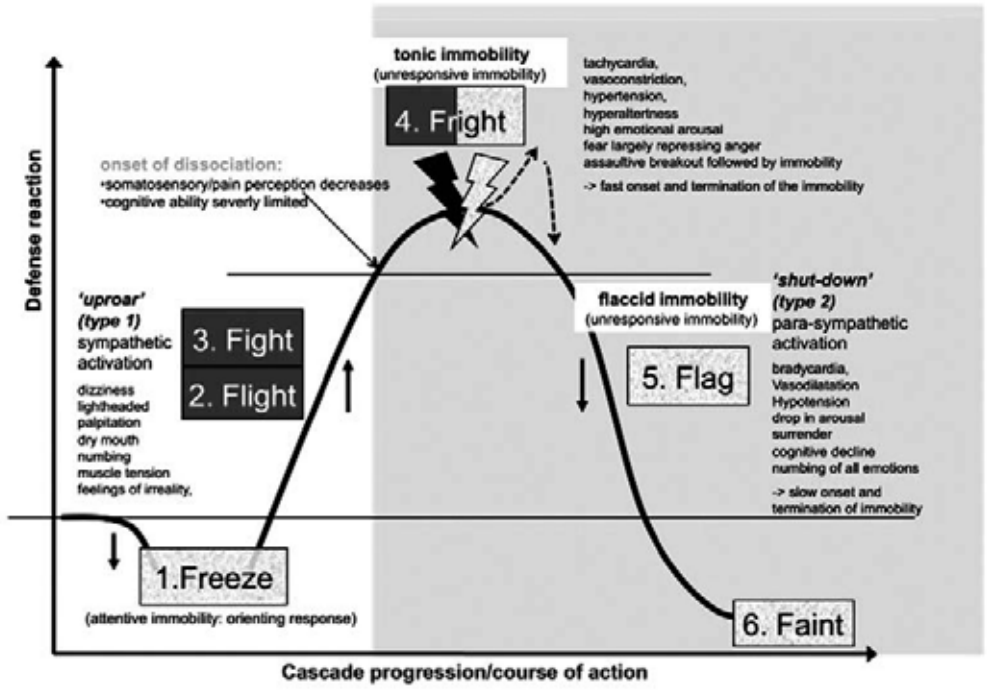

Figure 1. Schematic illustration of the defense cascade as it progresses along the course of different actions. The "uproar" sympathetic arousal reaches a maximum at the fright stage, eventually superseded by the onset of dissociative "shut down" (gray area). During life threat, not every stage of the defense cascade is necessarily passed through by the individual. The actual sequence of trauma-related response dispositions carried out in an extremely dangerous situation depends on several factors: The defense reactivity is organized to account for ability to defend oneself (chances to win a fight) of the threatened individual – i.e., the appraisal of the threat by the organism in relation to its own power to counteract (age, sex, physical condition, defensive abilities, etc.) and, not least, the threat specifics (type of threat, type and speed of approach, context, threat involving blood loss, etc.). In addition, a particular response may be classically conditioned and thus depend on previous experiences with threatening events. Adapted by permission from "Dissociation following traumatic stress: Etiology and treatment" by Maggie Schauer and Thomas Elbert, *Zeitschrift für Psychologie/Journal of Psychology, 218, 109–127* (doi: 10.1027/0044-3409/a000018). © 2010 Hogrefe Publishing.

vasovagal fainting (-like) response (absence of efferent motor commands and functional deafferentation; Figure 1). The actual sequence of trauma-related response dispositions carried out in an extremely dangerous situation depends on the appraisal of the threat by the organism in relation to its own power to act (e.g., age, sex), as well as the perceived characteristics of the threat/perpetrator.

The cascade of these responses to stress is directed by four bodily systems (overview Elbert & Rockstroh, 2003; McEwen, 2002; Teicher, Andersen, Polcari, Anderson, & Navalta, 2002). The hippocampus is primarily responsible for functions associated with the build-up of memory, and the hypothalamic-pituitary-adrenal (HPA) axis is the elite force of the defense cascade and involved in the feedback regulation of cortisol, a stress hormone secreted by the adrenal gland. A second axis involves the amygdala (related to the development and processing of emotions), locus coeruleus, adrenal gland, and sympathetic nervous system, all crucial for directing blood flow, increasing awareness, and mobilizing the corresponding defense response. A third, less-explored axis involves the vasopressin-oxytocin peptides. Finally, in addition to these three axes, the immune system is involved in adaptive and maladaptive responses (see Segerstrom & Miller, 2004, for an overview): short-lasting acute and naturalistic stressors are associated with adaptive up-regulation of some, but down-regulation of other, parameters of immunity, while chronic stressors lead to immune suppression. All of these systems – when functioning properly – help us to deal with crisis. They are also involved in the stress-protective effect of positive social interaction, while, in turn, a dysregulated metabolism of specific biological systems may be associated with clinical disorders.

When unremitting stress forces the three axes of stress response to tilt in one direction, the result can be anything from a long-lasting head cold to depression. When tilted the other way, toward a flattening of the rhythm of stress hormones, undesirable consequences may be abdominal fat, loss of muscle mass, and mental ailing. When the danger is over, the stress response shuts down – at least in wild animals. Humans, however, seem to be unique in that they can keep the HPA axis going indefinitely. The stress hormones ultimately make their way back to the brain, affecting both behavior and health. The various stages of the defense cascade have evolved to allow adequate responding, such as running for escaping acute danger or dissociative responding or even fainting, when a predator has come too close, something invasive enters the body (i.e., penetration of sharp objects), or contamination with bodily fluids is impending. However, a flight-fight response, as well as fainting, may be inappropriate in a modern human – after, e.g., a traffic accident or a bomb attack. Still, the same physiological responses (such as the supply of additional blood and oxygen to muscles, etc.) may be activated in the face of modern stressful stimuli, which cannot be attacked, or escaped by running away. Prolonged stress with its permanent initiation of the warding off stress will turn the adaptive physiological responses into maladaptive disease in the form of aches and pains, loss of appetite, or overeating. When repeated activation of the memories keep the defense responses activated, organs, including the brain, will be damaged.

Increasing evidence suggests that the brain is affected in various ways by stressful environments and experiences (Bremner, 2002). Two prime targets for stress hormones in the brain are the hippocampus and the amygdala. It is well established that acute elevations of adrenal stress hormones (catecholamines and glucocorticoids) enhance memory consolidation of emotionally arousing, contextual (hippocampus-dependent) information in a dose-dependent manner in animals (Roozendaal, de Quervain, Ferry, Setlow, & McGaugh, 2001) and humans (Buchanan & Lovallo, 2001; Cahill, Prins, Weber, & McGaugh, 1994). These enhancing effects of stress hormones are mediated by structures within (the basolateral nucleus of) the amygdala (Cahill, Babinsky, Markowitsch, & McGaugh, 1995; McGaugh, 2002). Whereas the support of stress hormones might be adaptive, whenever lasting memories of vital information (e.g., dangerous situations) have to be established, this mechanism may become maladaptive in conditions of extreme stress, when persistent and intrusive memories of a traumatic event promote the development of trauma-related disorders. However, acute elevations of glucocorticoids not only have enhancing effects on memory consolidation, but also impairing effects on memory retrieval (de Quervain, Roozendaal, & McGaugh, 1998; de Quervain, Roozendaal, Nitsch, McGaugh, & Hock, 2000; Roozendaal, Griffith, Buranday, de Quervain, & McGaugh, 2003). Furthermore, chronic glucocorticoid excess can lead to disruption of brain synaptic plasticity, atrophy of dendritic processes, and reduced neuronal ability to survive a variety of coincident insults (Sapolsky, 1999). Moreover, perinatal stress changes the HPA axis, delays cognitive and emotional development, and may impair avoidance learning for the rest of a person's life (Bock, Helmeke, Ovtscharoff, Gruß, & Braun, 2003; Meaney, Aitken, van Berkel, Bhatnagar, & Sapolsky, 1988; Teicher et al., 200Thus,

stressful experiences differentially activate a variety of responses designed by evolution to counter danger. The different chemical messengers may cause deficits in hippocampus-based learning and memory, and their effects on the amygdala and the medial prefrontal and cingulate cortex may lead to impaired inhibition of fear responses. As a result, emotional and autobiographic memory may become fragmented (see Section 2.2). In addition, repeated or chronic exposure to traumatic stress may result in long-term dysregulation of these systems, leading to impaired functioning and to symptoms of stress-related disorders such as hyperarousal, dissociation, flashbacks, avoidance, and depression.

When confronted with trauma reminders, survivors typically "replay" their original response of the traumatic event (e.g., Keane, Zimering, & Caddell, 1985; Schauer & Elbert, 2010). When the original threat has triggered a fight/flight response, a corresponding alarm response with high emotional arousal and sympathetic responding may be elicited by the reminding cues. However, if a parasympathetically dominated shutdown was the prominent peritraumatic response to the traumatic incident, comparable dissociative responses may dominate responding to subsequently experienced threat and may also reappear when the traumatic memory is reactivated during therapy. The current concept of PTSD does not distinguish whether the reminder of the traumatic experiences results in a fight–flight alarm, an "uproar" or in a dissociative block, a shutdown with a subsequent excessive vagal tone. For the therapist, however, it is mandatory to note if the physiological responding during exposure is dominated by high emotional arousal or by a dissociative responding. To understand responding during trauma-focused treatment, it is thus necessary to understand the response repertoire humans have when confronted with various forms of threat to their lives (Figure 1).
Patients who respond to trauma with numbing, freezing, dissociation, or even fainting would be predicted to produce a muted or reduced psychophysiological response when recalling the event. Intrusions can be understood as repetitive displays of fragments of the event, which then elicit a corresponding combination of hyperarousal and dissociation, depending on the dominant physiological response during the threat.

We have suggested that repeated experience of traumatic stress may produce at least two major subtypes of clinical symptom profiles, depending on the physiological responding during the exposure (Schauer & Elbert, 2010): Those patients who showed (mainly) sympathetic activation in response to the stressor show little sign of dissociation and passive avoidance during exposure treatment, whereas those who went down the whole defense cascade via fright to fainting, which leads to parasympathetic dominance during the trauma, will produce a corresponding replay of physiological responding when reminded. The latter condition requires the management of dissociative stages (fright and faint) during treatment. Although each patient could be located in a two-dimensional space, e.g., with cumulative peritraumatic sympathetic and parasympathetic arousal as axes, we will, for the sake of simplicity, note that two subtypes appear in this two-dimensional space: Those who only showed repeated sympathetic arousal and those who also produced strong vagal responses at least in response to some traumatic stressors. We will call these two presumed subtypes "uproar-PTSD" (sympathetic-action PTSD) and "shutdown-PTSD" (vagal-dissociative PTSD).

An evolutionary perspective suggests, that shutdown enables survival in the following situations:
- When the organism is in direct and close encounter with a dangerous perpetrator, e.g., when there is skin contact;
- in the presence of body fluids with danger of contamination, e.g., blood or sperm;
- when bodily integrity is already injured, or in the face of impending or enforced invasion, e.g., sexual penetration, sharp objects (e.g., teeth or knife) at the skin, or medical procedures.

These situations require physiological adaptations, including immobility and analgesia for pain (in order to "play possum," avoid tearing tissue, pretend entire submission; for details, see Schauer & Elbert, 2010), and with them, "switches" in consciousness, information processing, and behavior, which are perceived as strange because they are outside the range of ordinary experiences.

2.1.3 Violence: The Major Source of Traumatic Stress

Forms of Violence

Violence appears in different forms. Prominent classifications of violence are defined according to context (Derriennic, 1971). A major dimension for qualifying types of violence rests on the degree of organization. Examples of unorganized types of violence include assaults, domestic violence, sexual abuse, and other violent crimes against individuals. Organized violence includes wars, armed conflict, political persecution, and any other systematic violation of human rights. Political motives provide the context for a more sys-

tematic order of organized or state-sponsored violence, which include torture, massacres, hand-to-hand combat, crimes against humanity, and bombardments. Organized violence is not a psychological crisis, such as a pervasive or chronic mental health issue like schizophrenia would be. It is important to be aware of the political context of war and torture and to comprehend the meaning of organized violence for individuals and society. Similarly, it is important to acknowledge the implications of domestic violence and abuse for the life of an individual survivor.

Survivors of Organized Violence

An obvious consequence of organized violence is that many people have to flee from their region of origin because of war or persecution. Figures released by the UN refugee agency for 2009 show that some 43.3 million people were forcibly displaced worldwide – the highest number of people uprooted by conflict and persecution since the mid-1990s. No matter where refugees or internally displaced people flee to after war and persecution, most exiles are not safe or accommodating (Karunakara et al., 2004). Many reports indicate that initial receptions by host government authorities and humanitarian agencies are impersonal and threatening, and that refugees assume roles of dependency and helplessness (Doná & Berry, 1999). While development of social networks, family reunions, and permanent settlements do occur (Castles & Miller, 1993), harsh living conditions, continued anxiety about forced repatriation, and uncertainties regarding resettlement can cause considerable stress for the refugees (Cunningham & Cunningham, 1997). Host country refugee policies are often dictated by domestic concerns, usually of a foreign policy nature, and not necessarily determined by security and protection concerns or by the wishes of host communities in receiving countries (Tandon, 1984). There are many reports that refugee camps and internal displacement camps breed violence, and people are often victims of violent acts perpetrated by the army, militias, humanitarian workers, and by their hosts (Malkki, 1995; Turner, 1999; UNHCR, 2002). For many women and children, the very acts of going to communal latrines (Martin, 1991) or collecting firewood and water can be extremely dangerous. In countries throughout the world, people are being detained and imprisoned arbitrarily without a fair trial. Many face torture or other forms of ill-treatment, as has been frequently documented by Amnesty International. They may be held in inhumane conditions that are cruel and degrading. Cumulative exposure to these stressors piles up and eventually results in PTSD, depression, and related disorders (see next section) (WHO/UNHCR, 1996).

Worldwide, millions of children under the age of 18 years have been, and continue to be, affected by armed conflict. They are recruited into government armed forces, paramilitaries, civil militia, and a variety of other armed groups. Often they are abducted at school, on the streets, or at home. Yet international law prohibits the participation in armed conflict of children aged under 18. Children routinely face other violence – at school, in institutions meant for their protection, in juvenile detention centers, and too often in their own homes. There are estimated to be between 100 million and 150 million street children in the world, and this number is growing. Of those, some 5–10% have run away from, or been abandoned by, their families.

Summary What is organized violence?

Organized violence is violence with a systematic strategy. It is put into operation by members of groups with a centrally guided structure or political orientation (police units, rebel organizations, terror organizations, paramilitary, and military formations). It is targeted for continuous use against individuals and groups who have different political attitudes or nationalities, or who come from specific racial, cultural, and ethnic backgrounds. It is characterized by the violation of human rights and disregard of women's and children's rights. The consequences reach far into the future of a society.

Survivors of Family Violence

The quality of parent–child interactions predicts the risk for psychopathology over the lifespan
Michael J. Meaney (2008)

Family violence, also known as domestic abuse, spousal abuse, child abuse, or intimate partner violence, has many forms including physical aggression (hitting, kicking, biting, shoving, restraining, slapping, throwing objects), sexual violence, or threats thereof. Unemployment, poverty, substance abuse (e.g., excessive alcohol consumption), and mental illness of spouse/parent are important risk factors for family violence (De Bellis, 2002; Dube, Felitti, Chapman, Giles, & Anda, 2003; Jaffee, 2005; Margolin & Gordis, 2000). Childhood trauma has psychopathological and developmental consequences including adverse emotional, behavioral, and cognitive consequences (De Bellis, 2002). High levels of stress, fear, and anxiety are commonly reported by victims of domestic violence. Depression is also common, as victims are made to feel guilty for "provoking" the abuse, and are constantly subjected to verbal abuse or intense criticism. It is reported that 60% of victims meet the diagnostic criteria

for depression, either during or after termination of the relationship, and have a greatly increased risk of suicidality (Barnett, 2001). In addition to depression, victims of domestic violence also commonly experience long-term anxiety and panic, and are likely to meet the diagnostic criteria for a Generalized Anxiety Disorder or Panic Disorder. The most commonly referenced psychological effect of domestic violence is PTSD (Vitanza & Vogel, 1995). Maltreatment of children, defined as neglect, physical abuse, sexual abuse, and emotional abuse (which includes witnessing domestic violence), has always been the most common cause of interpersonal trauma and PTSD in children and adolescents (De Bellis et al., 1999). Among other problems such as severe anxiety, depression, and externalizing behavior, from 10 victims of childhood abuse and neglect, about four develop PTSD (Widom, 1999). In clinically referred samples, the reported incidence rates of PTSD resulting from sexual abuse range from 42% to 90% (McLeer, Callaghan, Henry, & Wallen, 1994; McLeer et al., 1998) and are above 50% when arising from just witnessing domestic violence (Pynoos & Nader, 1989).

Children who grow up in an environment of violence and maltreatment later show severe forms of disorders of the trauma spectrum. Pathological levels of stress are thought to disrupt the normally integrative functions of mental activity, leading some aspects of experience to be segregated from conscious awareness. A number of studies have demonstrated significant associations between childhood physical or sexual abuse and dissociation (Dutra, Bureau, Holmes, Lyubchik, & Lyons-Ruth, 2009). Meta-analyses have confirmed the associations among infant disorganized attachment behavior, parental maltreatment, parental psychopathology, disturbed parent–infant interaction, and childhood behavior problems (Madigan et al., 2006). When intense and persistent stress occurs when the brain is undergoing enormous change, the impact may leave an indelible imprint on its structure and function (Matz et al., 2010; Teicher, et al., 2002). Especially childhood sexual abuse is a risk factor for the emergence of adult psychopathology such as depression (Andersen & Teicher, 2008), borderline personality disorder (Lieb et al., 2004; McLean, & Gallop, 2003), eating disorders (Schaaf & McCanne, 1994; Smolak & Murnen, 2002), somatization disorder (Farley & Keaney, 1997; Kinzl, Traweger, & Biebl, 1995; Morrison, 1989; Walker et al., 1992), and negative effects on physical health (Anda et al., 2005).

A recent prospective study (Widom, Czaja, & Paris, 2009) found that significantly more abused and/or neglected children overall met the criteria for borderline personality disorder (BPD) as adults, compared with controls, as did physically abused and neglected children. Having a parent with alcohol/drug problems and not being employed full-time, not being a high school graduate, and having a diagnosis of drug abuse, major depressive disorder, and PTSD were predictors of BPD and mediated the relationship between childhood abuse/neglect and adult BPD.

Early stress or maltreatment is an important risk factor for the later development of substance abuse. There are windows of vulnerability for different brain regions when they are exposed to stress (Section 2.2.4). The following modifications in brain structure and function are designed to adapt the individual to cope with continuous adversity and deprivation. Even as an adult, the survivor will maintain a state of vigilance, hyperarousal, sympathetic activation, and suspiciousness to readily detect danger, and the potential to mobilize immediate aggression when threatened with danger or loss. Early childhood abuse and neglect lead individuals into social isolation, hostility, and depression and substance abuse, and foster the emergence of disease processes.

In war zones, children are often victims of both organized and family violence. The combination of these two forms of adversities potentiates the vulnerability for trauma-spectrum disorders (Catani et al., 2009, 2010).

Summary What is familial violence?

Familial and domestic violence have many forms including physical aggression, sexual abuse, emotional neglect, verbal abuse, intimidation, and various forms of deprivation. Domestic and familial violence are common and thus often aggravate effects of other stressful experiences. Hence therapists should assess every client for these forms of violence. Survivors of early maltreatment and abuse often show a range of problems and severe symptoms of complex trauma. Compared with traumatic stressors experienced during adulthood, continuous and developmental trauma during development has even more serious consequences on the brain (see Section 2.2.4) and mind, and thus on the mental and physical well-being of the survivor.

2.1.4 The Concept of PTSD

The lasting pathological reactions to traumatic, stressful experiences are called posttraumatic symptoms. The prefix *post-* means "after" or "later" – so *post-traumat-*