

LEHRBUCH

Andreas Maercker *Editor*

Trauma Sequela

 Springer

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This book is a translation of the original German edition „Traumafolgestörungen“ by Maercker, Andreas, published by Springer-Verlag GmbH, DE in 2019. The translation was done with the help of artificial intelligence (machine translation by the service DeepL.com). A subsequent human revision was done primarily in terms of content, so that the book will read stylistically differently from a conventional translation. Springer Nature works continuously to further the development of tools for the production of books and on the related technologies to support the authors.

ISBN 978-3-662-64059-3

ISBN 978-3-662-64057-9 (eBook)

<https://doi.org/10.1007/978-3-662-64057-9>

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The registered company address is: Heidelberger Platz 3, 14197 Berlin, Germany

Preface to the Fifth Edition

For more than 20 years, this textbook and reference book on the psychological consequences of traumatic experiences has been available. From the very beginning, it was directly dedicated to those affected, the victims and survivors of trauma, and this is also the intention for the new edition. It is for their sake that specific approaches to understanding their trauma and stress-related disorders and therapeutic knowledge are needed to heal or alleviate their suffering.

This fifth edition represents a major international change in the concepts and models of the underlying psychotraumatology. In its 11th edition (ICD-11) published in 2018, the International Classification of Diseases and Causes of Death (ICD) of the World Health Organization added three further diagnoses to “post-traumatic stress disorder,” which together form the “trauma-related disorders” or, in the terminology of ICD-11, the “specific stress-related disorders.”

The other diagnoses in these categories are: “complex post-traumatic stress disorder,” “prolonged grief disorder,” and “adjustment disorder.” The present book has been completely restructured compared to the previous edition in order to adequately reflect this development. By the way, the fact that the ICD-11 does not use the term “trauma disorders” arises from the fact that WHO does not want to encourage “inflation of the trauma label”; according to reports from countries with low health system resources, this inflation has driven parts of the psychopathological body of knowledge into oblivion. This concern of the WHO is also supported by the authors of this book.

The restructuring of this edition can be seen in the two or more chapters corresponding to each of the four diagnoses mentioned – first the four individual basic chapters, followed by the chapters on therapy in the second part of the book. PTSD, as the most prominent diagnosis, has been assigned several newly written therapy chapters, including those on cognitive-behavioral, psychodynamic, and low-threshold procedures. The treatment of “complex PTSD” is represented in two newly written chapters. Another new chapter is devoted to a culture-sensitive therapy approach, which is aimed at those patient groups who come from other cultures outside the Western world and for whom new access routes are needed.

As editor, I would like to thank all co-authors for their willingness to contribute to the fifth edition. Special thanks go to the past authors, who are no longer represented in this edition, for their previous good cooperation in the dissemination of psychotraumatological knowledge. In honor of their memory, I would like to mention the late chapter author Günther Deegener, for many years of service in the German Child Protection Association (Deutscher Kinderschutzbund e.V.), and the highly esteemed colleague Lutz Goldbeck, who was supposed to take Günther's place but then passed away unexpectedly. In this book, as in the previous editions, there are again original chapters by English-speaking first authors. My thanks go to Dr. Iara Meili, who was involved here as a translator. I would also like to thank the team at Springer-Verlag, especially Renate Scheddin (book planning), Anja Herzer (project management), and Dr. Brigitte Dahmen-Roscher, who once again helped advance this edition in a friendly and imaginative manner.

An English language translation has now (in 2021) become possible for the fifth edition. I thank all chapter authors who have reviewed and corrected this translation. Martin Bohus has replaced the chapter written in the German edition by Kathrin Priebe with a completely new chapter in single authorship.

We would like to point out that for reasons of better readability, we use mainly the generic masculine in this book. This always implies the female form, of course. To some extent, we proceed the other way around by using the generic feminine, which also implies the masculine form. If gender is important, we will of course differentiate linguistically.

It would be nice if this joint book project could again contribute to the benefit of those affected and patients.

Andreas Maercker

Zurich, Switzerland

January 2019 and December 2021

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Basics

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The History of Psychotraumatology

H. -P. Schmiedebach

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Psychological reactions to shocking events have been known since ancient times. In the Iliad, it is told how Achilles threw himself on the ground after the death of his friend Patroclus, pulled up his hair and cried. The means to overcome such “nervous breakdowns” were consoling care of the affected or common mourning performed in ritual. The professional examination of trauma sequelae, which only began in the nineteenth century and is linked to modern ways of living and working and the creation of new social and health care systems, raised questions about the causes of the psychological consequences and about targeted therapeutic interventions. While doctors and psychiatrists initially dominated these debates, other professions such as lawyers and psychologists later joined in. The discussions more or less revolved around the central question of how the relationship between body and psyche developed with regard to a physical and/or psychological trauma, which mechanisms were responsible for the diagnosed symptoms and which individual disposition (constitution) might have existed. The significance of the unconscious and the will as well as the question of simulation also played a role. The names that changed again and again in the course of these debates, such as “Railway Spine“, “traumatic neurosis“ or “post-traumatic stress disorder” are indications of how views on etiology, pathogenesis, therapy, etc. changed and how social evaluations shifted. Contemporary differences in social, legal and political conditions also had a determining influence. The development of the last 150 years was characterized by the fact that, on the one hand, the spectrum of traumatizing causes widened considerably and, on the other hand, the number of possible diagnoses decreased more and more, until finally the term “post-traumatic stress disorder” became established as the central diagnosis.

1.1 Of the Diversity of Diagnoses

The London surgeon John Eric Erichsen was one of the first to causally link the persistence of psychovegetative disorders with an accident in his paper “On railway and other injuries of the nervous system” (Erichsen, 1866). Although he is referred to as the creator of the term “Railway Spine“, he rejected this term and spoke of a “concussion of the spine”. This spinal cord concussion was considered to be a common effect of railway accidents and the consequence of a violent impact, but it was not possible to describe exactly the “molecular changes” in the spinal cord. Secondly, inflammatory changes occur in the spinal cord which, after a certain latency, lead to back pain, sensory and movement disorders in the extremities, constipation, functional disorders in the urogenital region, etc. The involvement of the brain was also given by memory, thinking and sleeping disorders.

Increased attention to these trauma sequelae at this time was determined by various cultural, scientific, social and legal factors (Fischer-Homberger, 1970, 1975). For example, as a product of the industrial revolution, the railway stood for the overcoming of long distances at an unprecedented speed, as a symbol of the new rhythm of modernity, which promised to make travel, exchange of goods and the opening up of new regions possible on an unprecedented scale. However, the numerous railway accidents highlighted the dangers and the risks involved. Accordingly, a socio-political reconciliation with the new innovation was sought through insurance and compensation claims. In England, the Fatal Accidents Act had existed since 1846, which made compensation claims possible for the first time and which in 1864, 2 years before Erichsen’s publication, also included the victims of railway accidents by means of an additional article. In addition, around

the middle of the nineteenth century, neuro-anatomical and physiological research, with its work on spinal reflexology, nerve electricity (Brazier, 1988) and brain architecture (Hagner, 2008), also provided a wealth of ideas for interpreting the phenomena in question with the help of these new scientific findings. Even though Erichsen attributed a certain role in the development of the symptoms to the fright and anxiety that can cause acute or chronic inflammation (Erichsen, 1866, pp. 47–48), and thus to a psychological reaction, the somatic basis was still very much in the foreground.

Hermann Oppenheim, who had compiled about 100 cases in Berlin from 1883 until his publication on traumatic neurosis in 1889 – which mostly comprised industrial workers who had suffered accidents, some of whose disorders had to be compensated under the newly created accident insurance scheme – also attached great importance to anatomical-physiological alterations. Possible causes included increased blood flow through the brain and “molecular” changes. However, Oppenheim rejected myelitis as the cause of the symptoms and regarded the brain as the central location of the event. The attempt to establish a correlation between the symptoms that were detectable during life and post-mortem changes on the basis of post-mortem examinations did not show convincing results, considering the relatively small number of cases. The observation that certain individuals show functional disorders and/or anatomical changes after a startle event and others do not led to the question of a special individual nature of the nervous system. Influenced by the degeneration theory and the heredity paradigm, an individual susceptibility based on a “neuropathic/psychopathic burden” was assumed, that is, a disposition of the nervous system in the form of an invisible structural and material difference, which was also considered an expression of a hereditary “inferiority”.

Over the years, Oppenheim attributed an increasingly important role to psychological factors as the cause. He named both the fear experienced and the shock to the psyche as pathogenetic factors and explained that the physical injuries would not gain any significant importance “if the pathologically aged psyche in its abnormal reaction to these physical ailments did not create the permanent illness” (Oppenheim, 1892, p. 178). These shifts in Oppenheim’s concept were due to the fact that he had to deal more intensively with Jean-Martin Charcot’s theories on hysteria (Micale, 1990, 2001) and had to review his own concept against this background. Although Oppenheim understood traumatic neurosis as a separate entity and did not want to subsume it under hysteria as Charcot did, he concurred that in a few cases even hysterical forms of psychological alteration could be observed among trauma patients (Oppenheim, 1892, p. 130). As a therapy, he recommended first and foremost that patients should be kept away from harmful activities and that they should not be subjected to strenuous work. He attributed a high relevance to the observance of rest. In some cases the treatment of the head with galvanic current helped against headache, dizziness and insomnia, in other patients he resorted to bromine preparations and administered sulfonal, paraldehyde or in severe cases chloral hydrate and morphine (Oppenheim, 1892, pp. 189–194).

As early as the 1880s, not everyone followed Oppenheim’s ideas. The Leipzig neurologist and psychiatrist Paul Julius Möbius counted traumatic neurosis among hysteria (Möbius, 1888). Oppenheim himself contributed to the blurring of boundaries when he admitted that there were cases that could be safely described as traumatic hysteria or traumatic neurasthenia (Oppenheim, 1892, p. 9). The increasing proximity and overlap between traumatic neurosis, hysteria and neurasthenia and the demarcation necessary for an assessment provoked an intensive

debate among experts. With all these diagnoses the question of individual disposition came into play. In the case of a particular disposition in the form of hereditary nervous weakness, this meant that a physical or psychological trauma could only have a trigger function for the development of the symptoms, but not its own causal significance. When the discussion of shell shock reached a climax in 1916 during World War I, the Oppenheim concept was abandoned for good and hysteria and neurasthenia were increasingly diagnosed (Lerner, 2001).

The “American Nervousness” repeatedly described by New York neurologist George Miller Beard between 1869 and 1883 spread to Europe under the term neurasthenia (Gijswijt-Hofstra et al., 2001). The emergence of neurasthenia was also intended to influence the evaluation of trauma in psychovegetative disorders. If the spread of neurasthenia as a modern condition was linked to the rapidly changing cultural, industrial and social innovations, especially in cities, in the “nervous age” (Radkau, 1998), then an increase among workers was also likely. The occurrence of severe states of exhaustion, linked to a permanent mental overload with loss of mental energy due to noisy and accelerated working and living conditions, was seen as a typical disease of civilisation. Studies also confirmed the spread of neurasthenia among workers (Leubuscher & Bibrowicz, 1905). If neurasthenia was present, the trauma was only considered to have a trigger function.

A traumatic genesis of psychoses was also occasionally mentioned. As early as 1883 Emil Kraepelin spoke of psychoses that would develop under the influence of the small stimuli of everyday life (Kraepelin, 1883, p. 16); in 1901 he used the term “fright psychosis” („Schreckpsychose“), which could arise, for example, from chronic physical overexertion or profound persistent emotional excitement. In these psychoses of shock, there is a profound upheaval of the entire state of mind, whereby the distur-

bances only slowly disappear, possibly not at all (Kraepelin, 1901, p. 266). In 1918, Karl Kleist also considered real psychoses after psychological trauma to be possible, which he also described as „fright psychosis“. He did not attribute these states to organic brain damage and emphasized that they could also occur without a psychopathic disposition (Kleist, 1918). Possibly due to Bonhoeffer’s fierce opposition to this view, however, these isolated positions on the traumatic genesis of psychoses were not able to gain acceptance among experts.

Between 1880 and 1914, an insurance law background also promoted the discussion of traumatic neurosis (Schmiedebach, 1999). In Prussia, a law on compensation for railway accidents had existed since 1838, which had been extended to employees in mines, quarries and factories in 1871. In a reform process lasting several years, the German Reich finally passed a new accident insurance law in July 1884, which, after various changes, affected 27 million people in 1911. In this context, traumatic neurosis, as distinct from hysteria and neurasthenia, with its aetiology related to a specific accident, determined medical assessment practice. Although the number of those who received a pension as a result of traumatic neurosis only accounted for 0.26–2% of all industrial workers who received a pension (Bleuler, 1918, p. 388), the question of simulation soon gained increasing importance, which was also discussed further after the First World War (Moser, 1991; Neuner, 2011). In the fight against simulation, political statements and attacks on social democracy were not unknown. Some sanatoriums were considered centres of social democratic activity, where patients were trained to pretend to have symptoms of traumatic neurosis (Seeligmüller, 1891, pp. 981–982).

A further decisive shift in pathogenesis resulted from the new importance attributed to the imagination and will as causal factors. In 1891, Möbius spoke of “a will associated with imagination” and sought to identify the

mechanisms of suggestion that would produce the symptoms in the person in question (Möbius, 1891). By emphasizing the will, he assumed a more or less intentional action, which relativized the pathological character of the disorder and associated the behavior with a status of consciousness. It was in this context that the concept of “desire” (Fischer-Homberger, 1975) was born, caused by questionable insurance legislation. Robert Gaupp, director of the neurological clinic in Tübingen, also emphasized the strong role of affects, naming the “emotive imagination” as the core of the disorder. He thus identified the ideas and feelings of the affected person as pathological (Gaupp, 1906). On the basis of these considerations, many doctors advocated a reduction in pensions or a one-off payment. In addition, coercive measures were demanded to force patients to work or to educate them to work (Leppman, 1906). The change from a somatic to a suffering of the individual constellation of will and feelings combined with a special disposition had thus already been largely completed before the First World War (Lengwiler, 2000).

1.2 Nervous Disorders and War

Under the conditions of war, these already existing positions were strengthened (Eckart, 2005; Hofer, 2004). In addition, the psychiatrists developed new systems for the effective use of the remaining workforce of the approximately 180,000 affected soldiers in the German armies. The diagnoses for the post-traumatic symptom complex with paralysis, trembling, speech and visual disorders, etc. remained varied. Out of 100 mentally conspicuous soldiers at the Berlin Charité, who were hospitalized there from 1915–1918, the doctors diagnosed a psychopathic constitution in 45 of them and hysteria in 46 (Linden et al., 2012). According to Petra Peckl’s research, which was based on a

random sample of 352 medical files of “war neurotics” from the holdings of the Federal Archives-Military Archives (Bundesarchiv-Militärarchiv), only about 10% of the mental disorders presented were classified as neurosis. For the most part, the physicians diagnosed hysteria (about 39%) or neurasthenia (about 36%), whereby neurasthenia was by no means limited to officers’ ranks, but also affected crew ranks. The diagnosis hysteria, however, had a frequently detectable pejorative connotation among doctors (Peckl, 2014). Because will and ideas were in the centre of the fight against the symptoms, the doctors were primarily concerned with the reversal of the will, which should be achieved in about one-third of the cases by radical and brutal measures (Riedesser & Verderber, 1996). There were differences in the therapy of neurasthenia and hysteria. While the neurasthenics were treated rather cautiously, especially by restorative food, sedatives (e. g. Bromine, Veronal) and the prescription of extended rest periods, rigid means were applied in about 43% of the hysterics (Peckl, 2014, p. 62). These included, for example, the application of painful currents, forced exercises or the so-called surprise method, in which strong alternating currents and the use of word suggestion in the form of commands and exploitation of the subordination relationship were intended to force a cure in just one session. The patient was to be subjected to the doctor’s will in a forced treatment, which he could not avoid. In addition, habituation or education for work was to be promoted and military use or integration into work contexts was to be achieved as soon as possible. To this end, a modern management system was developed in which the soldiers in convalescence were subjected to a multi-stage assessment, the aim of which was to enable the individual to be assigned to a job or military task in accordance with his individual capabilities, even without a definitive cure. In order to take advantage of habituation to work and

immediate availability of labour, neurotic stations were sometimes set up near factories and farms (Lerner, 2003). In this newly created system, which was based on needs analyses and purposeful use of resources, the doctors were integrated into a “rational” functional process in their interaction with the military, ministries and companies. With regard to the number of discharges, the results vary from institution to institution. About a quarter of the neurasthenia patients were estimated to be fit for war, a good 30% to be fit for garrison service, that is, not fit for front-line service, and 16% to be fit for work. The figures were different for the hysterical patients. Only 14% were considered fit for war, 26% for garrison use; about 24% were classified as fit for work, but about 22% were classified as unfit for service (Peckl, 2014, p. 79).

Although there are various similarities between the German and French doctors with regard to the genesis and therapy of “war neuroses”, differences are also apparent. For example, the question of pension entitlements played a far less important role in France, although the term “*sinistres de guerre*” was introduced into the debate in 1915 when the legal situation was similar (Michl, 2007, p. 214). The concept of neurasthenia also received far less attention. Basically, in France, there was a greater interest in the psychological mechanisms involved in accident and war injuries, and the question of the connection between mechanical and mental shocks. French doctors attributed far greater importance to fear and emotions. While in Germany, an anxious and depressive mood in individual patients was regarded as a predisposition to various diseases, the French doctors attempted to record the fear of war in its physical and psychological manifestations and to determine its pathological effect on the entire organism. In doing so, they assumed that fear could also be acquired through the effects of war. Fear built a bridge to the emotional neuroses that had

already been discussed in French psychiatry before the war and to which increased attention should be paid through the experiences of the war (Michl, 2007, pp. 253–259). In England, “shell-shock treatment” showed a wide spectrum in which the application of faradic currents, medication (bromine) and resting recovery were used, but depending on military rank as well as the type of hospital, in which Peter Leese distinguishes three quality levels. According to his investigations, the diagnosis of neurasthenia has played a more important role in English war psychiatry than in France (Leese, 2001).

War neurotic symptoms were also identified in the Wehrmacht during the Second World War, although there was also an increased shift towards psychosomatic symptom complexes (Kloocke et al., 2005a). Since there is no medical report and the names of the diagnoses were still very different, hardly any valid figures are available. In a comparison of the different statements, a figure of 3–5% of all hospital admissions for nervous and mental disorders seems likely, whereby this figure also includes psychotic disorders and thereby does not exclusively concern “war neurotic” cases. In an attempt to overcome the confusion in diagnostic terms and to avoid terms that established a connection between war and psychological symptoms, in 1944 German doctors decided at the Fourth Meeting of Consultative Medical Specialists to make a distinction according to whether a somatic disorder was present or not. According to this decision, an abnormal experiential reaction, which only occurred in the psychological sphere and did not show somatisation, was distinguished from a psychogenic functional disorder. In this “abnormal mental reaction” physical phenomena such as trembling, paralysis, contractures etc. occurred. With regard to therapy, the methods of the First World War was used but supplemented by electroconvulsive therapy, which as a new achievement strengthened the spectrum and was used in various ways. For the treat-

ment of traumatized soldiers, a graduated system was used. In a first step, the soldiers were taken to relaxation rooms near the front. If the symptoms did not improve after a certain time, they were taken to the next field hospital. If no satisfactory result could be achieved here either, the person was transferred to a war hospital with its own psychiatric department. If there was no lasting improvement here either, the patient could either be transferred to a reserve hospital of the Reserve Army at home or, in case of “treatment incapacity”, to a special department of the Reserve Army. In these departments, a strict regime was applied in an attempt to strengthen the character and discipline of the person concerned in order to obtain useful soldiers for the field army. As soon as they were admitted to the special unit, the sick were informed that if they could not be reassigned to the troops, they were threatened with a court-martial or transfer to a concentration camp. Some of these Wehrmacht members were murdered in extermination camps (Blaßneck, 2000, p. 61).

1.3 Discussion After 1945

In the German textbooks on psychiatry, the psychological trauma after 1945 has hardly been addressed. In the 1970s, the ICD-8 term “abnormal perceptual reaction” became established for persistent psychotraumatic disorders. In the early 1990s the term “post-traumatic stress disorder” found its way into textbooks (Kloocke et al., 2005b). In the early 1960s, various events took place in the USA at which both the consequences of the Holocaust and the consequences of violence in other catastrophes were discussed and relatively uniform symptom patterns were identified regardless of the type of violence involved (Venzlaff et al., 2004). In 1964, Baeyer, Häfner and Kisker published a comprehensive work that focused on the various extreme stress situations in connection with

National Socialism and the traumatizations suffered in the process as well as their effects on psyche and personality. The psychological changes triggered by fear and anxiety are located in a complex system of reference. For example, in discussing traumatic neurosis, a reference is made to the involvement of personality layers far removed from consciousness, in which the person is exposed to his “complexes”. In addition, the authors ask whether an approach more closely linked to the “meaning of the traumatic experience itself” might not lead to a better and more realistic understanding of abnormal experience and behaviour in and after extreme stress situations. In connection with the discussion of the concept of psychological trauma, the extended and complicated connections such as, among others, the “energetic-psychodynamic theory of the Freudian school” and finally also “existential-anthropological research” are mentioned. With this, the psychological trauma has come out of its “isolation”; nevertheless, the worn-out term cannot be completely dispensed with, since man is a vulnerable being, in whom the lesions of the “mental-spiritual structure” can have a pathogenic effect (von Baeyer et al., 1964, p. 34). The authors deal with a broad spectrum of possible lesions, including the burden of war, deportation and persecution, imprisonment, hunger, flight, forced sterilization, social and cultural uprooting. In 1964 at the latest, a tableau of traumatization possibilities not previously available in this extent is thus named. The psychiatrists did not, however, propose a general diagnosis for all these disorders that could be attributed to trauma. For the diagnostic classification of the experience-reactive consequences, chronic-reactive depression and paranoid malpositions were discussed. In the period that followed, the Vietnam War with its consequences in particular greatly supported the development of a separate psychotraumatology (Seidler, 2013, p. 10). The spectrum of triggering inju-

ries expanded continuously from the 1960s onwards - among other things, the violation of physical-sexual integrity soon played an important role -, while at the same time the number of diagnostic possibilities decreased until 1980, when a single overarching diagnosis was included in DSM III: post-traumatic stress disorder (PTSD). One of the psychiatrists who, in his work since 1976, has published significant studies for the empirical identification of criteria for PTSD was Mardi Horowitz (Horowitz, 2011). Currently, the frequencies of PTSD are given as follows, depending on the type of trauma: approx. 40% after the rape, approx. 35% after sexual abuse in childhood, approx. 25% after other violent crimes, approx. 25% among civilian war victims, approx. 15% among former soldiers, approx. 35% among victims of torture and persecution, approx. 10% in serious traffic accidents (Maercker, 2017, pp. 31–32).

Against the background of this expanded understanding of causes, it has also been possible in recent German history to research the trauma consequences of imprisonment in GDR prisons under this diagnosis. However, this was not limited to the consequences of imprisonment, but the psychological effects of political persecution were also addressed (Freyberger & Spitzer, 2014; Spitzer et al., 2007), and political traumatisation in the GDR was spoken of in this context (Trobisch-Lütge & Bomberg, 2015). The transitions between physical and psychological traumatisation through imprisonment and everyday repression are considered fluid (Priebe et al., 1996) so that everyday experiences in the GDR could take on traumatic features. This extension of the concept of trauma to everyday experience in political dictatorships is paradigmatically explored in Germany using the example of the GDR. In this context, it is important to bear in mind that the psychological decomposition of individual persons intended by the “operative psychology” of GDR state

security with the help of the findings of psychology (Richter, 2001) was a particular cause of traumatisation in everyday life in the GDR.

The development outlined above illustrates how, in the context of traumatisation, starting from the psychovegetative disorders following railway accidents based on myelitis, the psychic has expanded into an independent sphere that characterises the individual. The variety of causes of traumatisation, which are classified under a single diagnosis, shows how the psychological has approached the physical on an equal footing, at least in terms of vulnerability. This process has been supported by professional input as well as influenced by socio-political changes, political circumstances, changing anthropological conceptions, psychodynamic concepts, and different images of the man.

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Post-traumatic Stress Disorder

Andreas Maercker and M. Augsburger

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Main Criteria of Post-traumatic Stress Disorder

- Experience of a trauma
- Re-experiencing/intrusions (involuntary and stressful memories of the trauma)
- Avoidance behaviour
- Perception of a current threat/continuous physiological hyperarousal (over-excitation)
- Persistence of symptoms over a certain period of time
- Significant functional limitations

These criteria are described in more detail in the following sections.

2.1 Definition of Trauma and Trauma Types

2.1.1 Trauma Definition According to ICD-11 and DSM-5

The first of the PTSD criteria is the so-called trauma criterion.

Trauma Criterion

- According to ICD-11, trauma is defined as an event or series of events of exceptional threat or catastrophic proportions (WHO, 2018). Another new addition is a trauma definition for the complex form of PTSD, which specifies the traumatic event in terms of duration and intensity (for details ► Chap. 3).
- The American DSM-5 describes trauma as follows: “Confrontation with actual or imminent death, serious injury or sexual violence” (A-criterion, APA, 2013, p. 369).

Other experiences, which can also be colloquially described as **personal trauma** (e.g. disappointed expectations, the break-up of a relationship), do not meet the above-mentioned trauma criterion, which focuses on a death threat or other extremely dangerous situations.

In the former DSM-IV, a distinction was still made between two aspects of the trauma criterion – an objective constellation of events and the subjective perception of fear, helplessness or horror (APA, 2000). Similarly, in ICD-10 it was also necessary for the traumatic event to trigger deep despair (World Health Organization; WHO, 1994). In the currently valid versions of both classification systems, this distinction was omitted. The reason for this was the occurrence of some constellations in which, despite the experience of a traumatic event, the subjective sensation was not present. This is the case, for example, with (Maercker et al., 2013a):

- repeated or prolonged experiences of violence,
- experience of violence in children and young people or trained professional emergency services,
- altered states of consciousness even during the trauma.

DSM-5 also provides a list of (non-exhaustive) examples of traumatic events and four possible forms of trauma exposure.

Forms of Exposure According to DSM-5 (APA, 2013)

- Direct experience
- Personal testimony
- Experiencing a sudden and violent event in the close family or with close friends
- Repeated or extreme confrontation with aversive details of an event

2.1.2 Classification of Traumas

2

The many different traumatic events to which such definitions apply can be grouped or classified according to various aspects. As an orienting scheme, classifications into

- human-caused vs. random trauma,
- short (Type I) vs. long term (Type II) trauma – recently extended by
- medically induced trauma (■ Table 2.1; first version in Maercker (1998)).

Type I traumas are usually characterized by acute danger to life, suddenness and surprise, while Type II traumas are characterized by a series of different traumatic single events and

by low predictability of further traumatic events (Terr, 1989).

The status of the medically induced traumas has not yet been finally clarified. DSM-5 limits the inclusion of medical conditions as traumatic events by emphasizing that a medical situation must be accompanied by a sudden catastrophic event in order to be considered a traumatic event (e.g., waking up during surgery, anaphylactic shock; APA, 2013). Particularities of PTSD prevalence and in the course of these traumas are reasons for separate treatment (► Chap. 23) and further research needs for this trauma category.

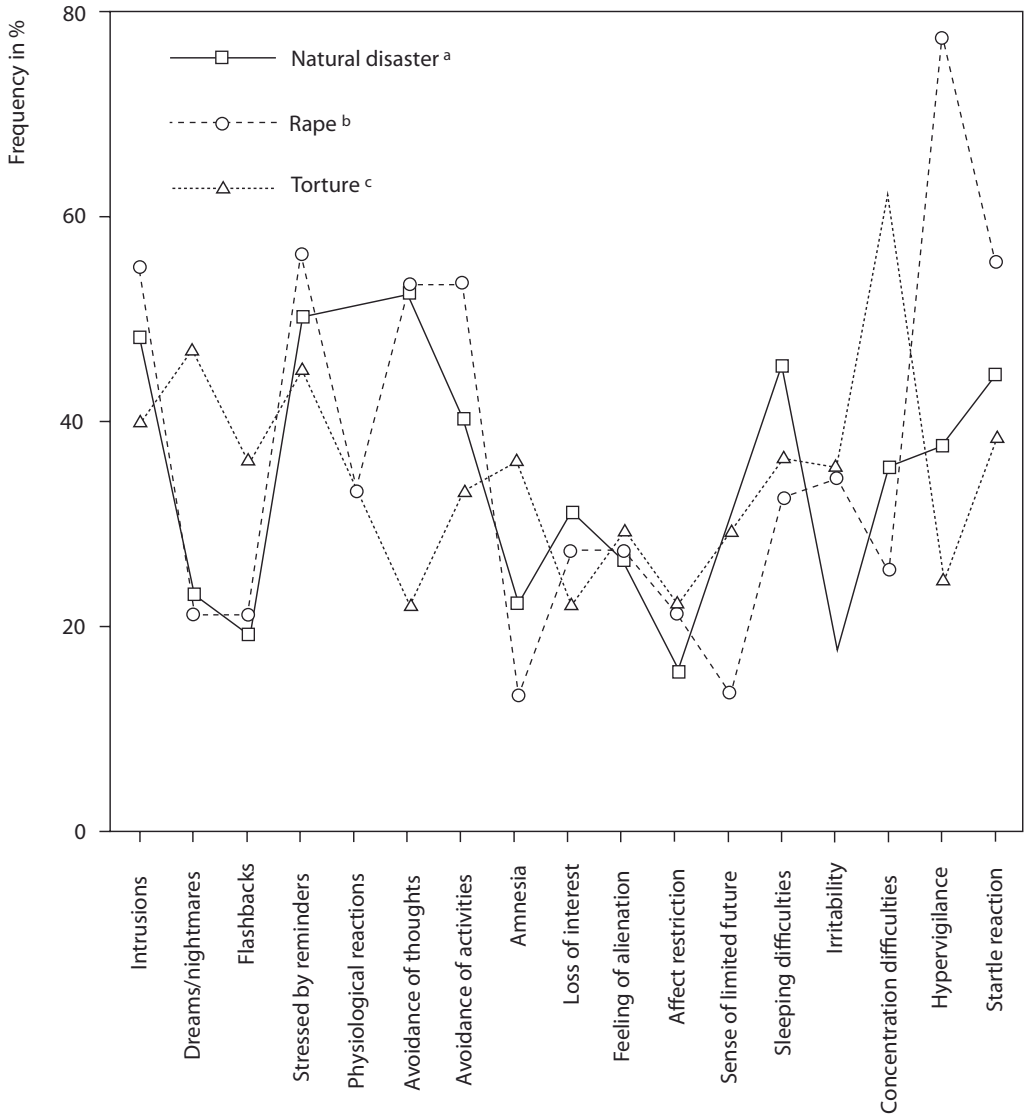
Since the initial description of PTSD, many studies have been conducted to investigate whether the different traumatic trigger events

■ Table 2.1 Schematic classification of traumatic events (further developed according to Maercker (1998))

	Type I trauma (one-off/short-term)	Type II trauma (multiple/long-term)	Medically induced trauma ^a
Incidental traumas	Serious traffic accidents		Acute life-threatening diseases (e.g. cardiac, pulmonary emergencies)
	Job-related trauma (e.g. police, fire brigade, rescue services)	Technical disasters (e.g. poison gas disasters)	Chronic life-threatening/severe diseases (e.g. malignancies, HIV/AIDS, schizophrenia)
	Short-term disasters (e.g. hurricane, fire)	Long-lasting natural disasters (e.g. earthquakes, floods)	Medical interventions experienced as necessary (e.g. defibrillation treatment)
Interpersonal traumas (man-made)	Sexual assault (e.g. rape)	Sexual and physical violence/abuse in childhood and adulthood	Complicated course of treatment after assumed treatment error
	Criminal or physical violence	Experiencing war	
	Civil life of violence (e.g. bank robbery)	Hostage-taking	
		Torture, political imprisonment (e.g. concentration camp detention)	

^aThe status of this classification is still the subject of scientific studies

lead to the same disorder. When examining



■ **Fig. 2.1** Symptom profiles of different types of trauma. (Mod. according to Green et al., 1990; Foa et al., 1995; Başoğlu et al., 1994)

large groups of sufferers, it was unanimously confirmed that symptoms from the main symptom groups of PTSD (► Sect. 2.2) are found in a wide variety of trauma types, regardless of whether the sufferer has been traumatised by, for example, natural disasters, crime, rape or some other traumatic event (Davidson & Foa, 1993).

■ Figure 2.1 shows that there is a similar symptom profile in different traumas, which supports the assumption of a uniform disorder pattern.

However, it has been shown that, on the one hand, intentionally man-made traumas and, on the other hand, Type II traumas of longer duration can in many cases lead to more severe,

complex symptoms and more chronic psychological consequences than the other forms. Based on these findings, the clinical picture of complex PTSD was defined in the new ICD-11. More details are described in the following

chapter (► Chap. 3). In contrast, the symptoms of PTSD (also known as “classic PTSD”) will be explained here.

2.2 Clinical Picture of PTSD

Case Study: Victim of a Criminal Attack

A 60-year-old patient reports:

Since the robbery, I have become a completely different person. In the evening I lie in bed and then these thoughts and images come, and then I lie awake forever. I have now reached a point where I realize that it simply cannot go on any longer ...

When I'm somewhere and there's a sudden noise, I flinch. There it is again. You can't turn it off. Think of it this way: It's like an electric shock. And it goes right up and makes me sweat. My nerves are completely shot.

My friends keep trying to cheer me up. They say I should forget all this and try to have a nice

life for once. It hurts like hell. It hurts because I can't even imagine what it would be like...

I have not been able to visit the park where the robbery took place since then. Even in the evening or in the darkness I hardly dare to go out the door for fear of another robbery ...

I have no more hope. My friends really want to help me, but I can't. No one can help me. I have to do it myself. But I can't stop thinking about that Saturday. And then I always notice that I have to bear this burden until my death ... My friends feel so sorry for me. Therefore, contact with me is very stressful for them. I, therefore, withdraw from my friends.

2.2.1 Symptom Triad of PTSD

In the case example, the patient describes symptoms of the three main symptom groups of PTSD, which must be present regardless of the underlying classification system:

- intrusions/re-experience,
- avoidance,
- perception of current threat/hyperarousal.

2.2.1.1 Intrusions/Re-experience

Patients with PTSD are characterized by vivid impressions of the traumatic event, which unintentionally and uncontrollably “enter” the awake state of consciousness as well as sleep.

Symptoms of re-experience can occur in the form of many individual symptoms or complaints. ■ Table 2.2 names and describes these symptoms in the order in which they are listed in the American DSM system.

In addition, it is marked whether these are required for diagnosis according to ICD-11 or DSM-5. The ICD-11 has chosen to include only particularly severe and specific symptoms due to the better clinical manageability and in accordance with scientific findings. For example, the symptom “intrusions/re-experience” is not included because it also frequently occurs in traumatized patients without a PTSD diagnosis.

Table 2.2 Individual symptoms of the symptom group re-experience

Abbreviation	Explanations	ICD-11-diagnosis	DSM-5-diagnosis
Intrusions/ re-experience	Unwantedly recurring and stressful memories or memory fragments; occur spontaneously or are caused by key stimuli		x
Stressful dreams or nightmares	Recurring dreams that contain memories or memory fragments of the trauma. In nightmares, the memories can be very distorted. Often follow the same pattern for years	x	x
Flashbacks	Memory attacks, which are characterized by their suddenness and liveliness. They are usually short-lived and are accompanied by the feeling of reliving the traumatic event. Proximity to illusions, hallucinations and dissociative states of misunderstanding. A total loss of perception can occur	x	x
Emotional stress through symbolic triggers	Strong emotional reaction (e.g. fear, anger) with accompanying great psychological stress, if the person affected is confronted with the traumatic event or remembers the event through key stimuli triggers (e.g. the same objects, sounds, smells)		x
Physiological reactions to memory	Involuntary bodily reactions such as sweating, trembling, breathing difficulties, palpitations or palpitations, nausea or gastrointestinal complaints when suddenly confronted with traumatic key stimuli and memories or fragments of memories		x

2.2.1.2 Avoidance

Those affected often try with all their might to “switch off” the thoughts that are flooding them, i.e. to stop thinking about what has happened. Despite these intensive attempts, in most cases, this does not succeed. The individual symptoms or complaints are described in more detail in **Table 2.3**.

2.2.1.3 Perception of Current Threat/Physiological Overexcitement

The body reacts after a trauma, even if the affected persons often do not see the physical consequences in connection with the trauma. The excitation threshold of the autonomic nervous system is lowered, i.e. even smaller subsequent strains lead to stronger arousal

(hyperarousal). **Table 2.4** describes individual symptoms.

2.2.2 Additional Symptoms

In addition to the symptom groups already mentioned, DSM-5 formulates further typical symptoms that describe changes in cognitions and moods. These are listed or explained in **Table 2.5** In the ICD-11, these symptoms are predominantly assigned to the pattern of disturbances of complex PTSD (**Chap. 3**).

Symptom Patterns in Children

For traumatized children, some abnormalities in the symptom pattern are observed, which leads to the description of some specific fea-

■ **Table 2.3** Individual symptoms of the symptom group avoidance

Abbreviation	Explanations	ICD-11	DSM-5
Avoidance of thoughts and feelings	Conscious avoidance of thoughts and feelings that remind one of the traumas (e.g. own thought-stop attempts or self-comments: “ <i>Otherwise I will only drive myself crazy</i> ”) Regardless of the success of the avoidance efforts	x	x
Activity or situation avoidance	Avoiding activities or situations that bring back memories of the trauma (e.g. bypassing the site of the trauma; not leaving the house at the time of day when the trauma happened). This includes avoiding people or conversations that are related to the traumatic event	x	x

■ **Table 2.4** Individual symptoms of the symptom group perception of current threat/excitement

Abbreviation	Explanations (based on DSM-5)	ICD-11	DSM-5
Excessive vigilance	Technical term hypervigilance: the constant feeling of not being able to trust. A persistent and unrealistic feeling of danger. Everyday situations are perceived as excessively dangerous. This concerns both situations associated with the trauma and unrelated situations. May (after human-induced trauma) lead to weapons being carried for possible defence or surveillance equipment being installed	x	x
Excessive startle response	After the trauma, very slight frightening, which can be triggered by slight noises and movements	x	x
Increased irritability/ outbursts of anger	Slight “coming up to 180”, often outbursts of rage without a clearly visible reason, for which there was no inclination before the trauma. Can often be badly judged by the person concerned and can only be answered indirectly by asking “ <i>would your relatives see it that way?</i> ” to explore		x
Self-destructive behaviour	Behaviour that can be risky and thus potentially self-damaging (e.g. driving at excessive speed, excessive drug or alcohol consumption, but also suicidal or self-harming behaviour). Has been studied in the research context, especially among war veterans		x
Concentration difficulties	Pronounced difficulties in concentrating on simple procedures (e.g. reading a book, watching a film, filling in a form). It may be clear or unclear to those affected that they have intrusive memory flashes at such moments		x
Difficulty falling asleep and sleeping through	Post-trauma sleep disorders of both types, partly – but not necessarily – in connection with intrusions or stressful dreams or nightmares		x

Table 2.5 Individual symptoms of the symptom group cognitive changes and changes in mood (only in DSM-5)

Abbreviation	Explanations
(Partial) Amnesia	Important elements of the traumatic event can no longer be remembered (e.g. getting from place <i>x</i> to place <i>y</i>). In extreme cases, the entire traumatic event can no longer be remembered; only blurred memories or fragments of memories prevail. The amnesia must not be explainable by simple forgetfulness or by organic causes (e.g. craniocerebral trauma)
Persistent negative basic beliefs	Global and persistent negative beliefs about oneself or the world (“ <i>I can no longer trust anyone</i> ”) that develop as a result of the traumatic experience
Persistent distorted cognitions	The causes or consequences of the traumatic event are permanently cognitively distorted. This leads to blaming oneself or uninvolved persons towards
Persistent negative emotional state	Persistent negative emotional state (e.g. persistent guilt, anger, fear, grief)
Reduction of interest	Significantly reduced interest in important activities of daily life or in activities that the individual liked to carry out before the traumatic experience (e.g. career efforts, hobbies)
Feeling of alienation	Feeling detached or alienated from other people who have not experienced the same traumatic event. The subjectively insurmountable perceived gap between the others and oneself (and corresponding fellow sufferers). Feeling of alienation even towards family members
Limited positive scope for effect	Feeling that since the trauma no more positive feelings can be perceived (e.g. the ability to love someone, to be happy). The affected people complain about damage to their emotional world, all positive feelings seem to be levelled out. Since DSM-5, this so-called numbing (flattening of the general reactivity) only refers to positive affects

tures of PTSD in childhood. Details can be found in ► Chap. 22.

2.2.3 Diagnosis Assignment According to ICD-11 and DSM-5

The above tables explain the main and additional symptoms that occur in PTSD. Different diagnostic algorithms have been developed in the two classification systems ICD-11 and DSM-5 respectively, each requiring a different number of symptoms to be diagnosed.

Both classification systems agree on the necessity of significant functional impairments for diagnosis. Furthermore, the time criterion indicates that the immediate psychological consequences of a traumatic event (after hours or a few days) are not considered PTSD. However, they are described as an acute stress reaction (additional code in ICD-11) or diagnosed as acute stress disorder (DSM-5).

The following overviews show the criteria in detail.

Symptoms of Post-traumatic Stress Disorder According to ICD-11 (WHO, 2018)

- The persons concerned are exposed to an extremely threatening or catastrophic event or series of events
- Re-experiencing the traumatic event or events in the form of vivid intrusive memories, flashbacks or nightmares accompanied by strong and overwhelming feelings of fear or horror and strong physical sensations or feelings of overwhelming or experiencing the same intense feelings experienced during the traumatic event
- Avoidance of thoughts and memories of the event or events, or
- Avoidance of activities, situations or persons that recall the traumatic event or events
- Persistent perception of an increased current threat, e.g. through hypervigilance or an increased fright response to stimuli such as unexpected noise
- The symptoms must persist for at least several weeks and cause significant impairment in personal, family, social, educational, professional or other important areas of life

Conditions for a Diagnosis of Post-traumatic Stress Disorder According to DSM-5 (No Criteria for Children) (APA, 2015)

- A. Event criterion must be fulfilled
- B. Symptom group: Re-experience (one symptom, ■ Table 2.2, necessary for diagnosis)
- C. Symptom group: Avoidance (one symptom, ■ Table 2.3, necessary for diagnosis)
- D. Changes in emotional state and/or cognitions (at least two symptoms necessary)
- E. Symptom group: chronic overexcitation (two symptoms, ■ Table 2.4, necessary for diagnosis)

- F. Duration of impairment (symptoms of criteria B, C, D and E) is longer than 1 month
- G. The disorder causes clinically significant stress or impairment in the social, occupational and other important functional areas
- H. Not caused by a substance (alcohol, drugs, medication) or other medical cause (illness)

— Additional classification

- **Dissociative subtype**
- **Delayed start (at least 6 months after the event)**

— Note

- **For the diagnosis of children under 6 years of age, different descriptions of symptoms apply**

When comparing the two classification systems, it is noticeable that the criteria for DSM-5 are more detailed and complex. The diagnostic algorithm allows for less leeway. In contrast, the presence of symptoms from each of the three main groups is sufficient for the ICD-11. Any unspecific symptoms that overlap with other disorders are not included in the diagnosis. This reduction to the essential symptoms represents one aspect of the fundamental changes to the diagnostic criteria in the ICD-11. This is intended to ensure cross-cultural applicability and ease of use with the aim of maximizing clinical utility (Maercker et al., 2013a).

DSM-5 also differs in that it lists symptoms of altered cognitions and emotional states (symptom group D, see ► Sect. 2.1.2). DSM-5 does not know the diagnosis of complex PTSD, but the PTSD subgroup “PTSD of the dissociative subtype” does.

This is problematic in everyday practice if it means that different people may receive a PTSD diagnosis with one diagnostic system but not with the other.

■ Agreement of PTSD Diagnosis According to ICD-11 and DSM-5

A review by Brewin et al. (2017) shows that, depending on the classification system used, the diagnostic procedure leads to significant differences. In adults, PTSD rates are lower when diagnosed according to the new ICD-11 criteria compared to ICD-10 or DSM-5. It should be noted that interviews and questionnaires based on DSM-IV were used in these studies. As a result, the findings may be different if procedures specifically designed for ICD-11 are used. In children and adolescents, on the other hand, prevalence rates according to ICD-11 are comparable to DSM-IV and DSM-5. Furthermore, only adolescents with PTSD impaired according to ICD-11 are classified, who do not fulfil the criteria for diagnosis according to DSM. Thus, after these initial studies, it appears that it has been possible to simplify the diagnostic criteria and to counteract an inflationary allocation of the diagnosis PTSD, as criticised in ICD-10 (see Maercker et al., 2013a). However, other disorders that also occur more frequently after experiencing traumatic events should definitely be taken into account when making a diagnosis.

Under the Magnifying Glass

A consistent result of epidemiological studies of traumatized persons is the high co-morbidity with other diagnoses. Depending on the study, it is reported that comorbid disorders are present in 50–100% of patients with PTSD. In most cases, patients with PTSD have more than one other comorbid disorder (Brunello et al., 2001).

2.2.4 Dissociation and Emotional Changes

2.2.4.1 Dissociation

It is agreed that dissociative psychological processes play an important role in post-traumatic symptoms. Flashbacks can be regarded as classical dissociation states: The reference to reality in the here and now is lost and the affected persons feel transported back into the traumatic event. This leads to misperceptions and misinterpretations of the surrounding situation. The (partial) amnesia (a DSM-5 criterion) is another dissociative phenomenon that can improve during recovery. Within the framework of complex PTSD or the dissociative subtype, further such symptoms occur (► Chap. 3).

2.2.4.2 Shame and Guilt

A very common effect found in trauma victims is shame. Shame is an emotional and physical state of being exposed and the fear of being rejected by others. Shame is encoded as both verbal and sensory memories.

Guilt refers to the feeling of being responsible for what happened or not having done everything in one's power, but also a "survivor guilt" (e.g. self-blaming of having survived the Holocaust, "survivor guilt", see Horowitz, 2011 [1976]).

Shame and guilt have very often been found to be maintaining factors of PTSD, regardless of the type of traumatic event and with a higher probability of occurrence after experiencing multiple events (Aakvaag et al., 2016; Andrews et al., 2000).

Inappropriate feelings of guilt on the part of traumatised persons are subsequent attempts by the affected persons to re-attribute (e.g. "*I am very much to blame for what happened*") in the service of an illusion of the controllability of the trauma cause (e.g. "*If I had not acted like this, none of this would have happened*"). However, the social feelings mentioned above can also be induced in people who are close to

the trauma victim or have professional dealings with him or her (e.g. feelings of guilt for not being able to respond adequately to the person affected).

2

2.2.4.3 Disgust

Shame is often accompanied by disgust. This emotion often dominates in patients with PTSD as a result of sexual violence (Fairbrother & Rachman, 2004), in the form of feelings of disgust with themselves and with certain stimuli (e.g. foods whose smell, taste or texture remind patients of the traumatic situation).

2.2.4.4 Anger

Anger and revenge effects and thoughts have also often been described in traumatized persons (Olatunji et al., 2010), especially in PTSD after wartime operations and in many crime victims (Orth & Wieland, 2006). They can refer to the central actors during the trauma (perpetrators) or also to persons with whom one interacted after the trauma (e.g. “*The emergency responders at the scene of the accident made everything worse – they were the purest criminals*”). Persistent anger can lead to continued hyperarousal, which also prevents trauma processing. Findings suggest that anger is a secondary emotion that arises as a result of the stress of PTSD core symptoms (Orth et al., 2008). Glück et al. (2017) were able to show by means of network analysis that rumination about one’s own feelings of anger plays an important role in PTSD.

PTSD and Increased Aggression

When anger develops into a willingness to take action in order to seek revenge, it can lead to a victim becoming the perpetrator himself (e.g. father of the air crash victim who murdered an air traffic controller). A cycle of violence can also be clinically proven in individual cases by expert opinion in the case of later perpetrators of violence traumatised in childhood and youth. This is particularly significant in fragile areas of the world where a persistent social spiral of violence can develop, which not only results in an increased risk of attacks on the family and community but also permanently hinders the peace process. Corresponding findings have been made, for example, in Burundi and South Africa (Augsburger et al., 2017; Sommer et al., 2017).

2.3 PTSD in the Context of Stress-Related Disorders

Table 2.6 shows the neighbouring diagnoses of PTSD. The first two can only be diagnosed in childhood and have so far only been clinically diagnosed in cases of prior complete physical and psychological neglect in infancy and toddlers (e.g. untreated war orphans or in children’s homes, see von Klitzing, 2009). The other disorders of adulthood mentioned are described in the following chapters.

In underserved regions of the world, WHO working groups have decided to use all stress-related disorders collectively as a diagnostic category and, where necessary, to simultaneously target large-scale intervention programmes on stress, trauma and grief (Tol et al., 2013). This is countered by the fact that the respective main symptoms are psychopathologically closely related:

- PTSD and complex PTSD: symptoms of re-experience,
- Adaptation disorder: preoccupations (mental arrest, ▶ Chap. 5),
- Persistent grief disorder: yearning and longing (▶ Chap. 4).

“Continuous” Instead of “Post-traumatic” Stress

Some researchers stress that the term “post-traumatic” is not applicable in many regions of the world. It is a concept that can only be applied in peaceful societies, with a clear endpoint of the traumatic situation. Due to the ongoing

Table 2.6 Neighbouring diagnoses of PTSD in ICD-11 and DSM-5

ICD-11	DSM-5
Reactive attachment disorder (childhood)	Reactive attachment disorder (childhood)
Disinhibited social engagement disorder (childhood)	Relationship disorder with disinhibition (childhood)
Complex PTSD	Adjustment disorder
Adjustment disorder	Acute stress disorder
Persistent grief disorder	

ing threat in many countries and the associated risk of being exposed to violent acts, the term “continuous stress” is more appropriate (Kaminer et al., 2013; Stevens et al., 2013). In their paper, Maercker and Augsburger (2017) point out that the inclusion of a corresponding disturbance pattern was discussed when the ICD-11 was adopted. Due to insufficient scientific interest in this constellation, however, the decision was initially made against it.

2.4 Epidemiology and Course of PTSD

2.4.1 Epidemiology

The prevalence of PTSD depends among other things on the frequency of traumatic events. At least for some of the traumas, it is obvious that they vary in frequency in different regions of the world or political areas. There are regions with more frequent natural disasters (e.g. also some parts of the USA) and countries where wars and political persecution are common. Therefore, epidemiological data on PTSD must take into account the regional origin of the prevalence rates. A distinction must also be made between whether data reflect a period prevalence, e.g. 1-year prevalence, or lifetime prevalence – the latter includes cured cases and is usually higher than 1-year prevalence.

To date, prevalence data from the USA are frequently cited (National Comorbidity Survey; Kessler et al., 2005), where a lifetime prevalence of 6.8% was found. This is much higher than in Europe, where an average lifetime prevalence of 1.9% was found (Alonso et al., 2004). Additional factors that influence prevalence data

- **Gender:** higher for women than for men, e.g. in Germany 2.2% for women and 1.0% for men (e.g. Perkonig et al., 2000)
- **Age groups:** usually higher prevalence rates among younger people compared to older people (Kessler et al., 1995), but in countries with a wartime past an increase for the “war generation”, e.g. in Germany in a study from 2008 among people over

65 years of age with 3 times higher 1-year prevalence rates than among 14 to 29-year-olds (Maercker et al., 2008)

- **The classification system used:** higher prevalence with the ICD-10 and DSM-5; slightly lower prevalence with the earlier DSM versions and the ICD-11 (e.g. Stein et al., 2014).

In Germany, for example, a 1-month prevalence of 1.5% for PTSD was found in a study based on ICD-11 criteria (Maercker et al., 2018).

From [Table 2.7](#) it can be seen which are the most frequent traumas and which traumas are most likely to be associated with PTSD.

Frequent traumas in these examinations are witnessing accidents or violence, (serious) accidents and physical violence. However, these most frequent traumas are not at the same time those which are subjectively assessed as the worst trauma and after which PTSD most frequently develops.

List of the four most pathogenic traumas in the study cited above

- Captivity
- Rape (narrow definition without sexual harassment)
- Maltreatment and sexual abuse in childhood
- Physical violence

- It must be noted that epidemiological data only ever provide probability data. Even in the case of a “less” pathogenic trauma, the full symptom picture of PTSD can emerge.

2.4.2 Course

Following the experience of trauma, PTSD can occur at any age, including childhood and old age (Maercker, 2015). If a PTSD symptom develops, it can decrease spontaneously over the next weeks and months. A spontaneous

Table 2.7 Frequencies of different traumas and 1-month prevalence of PTSD after ICD-11 in a representative German sample

Type	Frequency of trauma (%)	Frequency of disturbances after trauma (%)
Child abuse (<14 years of age)	2.5	11.1
Rape	2.5	16.7
War experiences	3.7	6.3
Captivity/abduction	0.6	20.0
Physical violence	6.9	11.1
Serious accidents	7.7	7.4
Witness to a traumatic event	11.5	3.4
Natural disasters	3.5	7.1
Life-threatening disease	4.7	8.0
Other traumas	4.6	11.1
Multiple traumas	5.9	/

Adapted according to Maercker et al. (2018)

^aMultiple entries possible

remission rate can be observed after about 4 years in half of the cases (Morina et al., 2014). Several long-term studies of specific traumatised populations provide evidence of both spontaneous remission and up- and down-hill courses over several decades, e.g. in disaster victims (Holgersen et al., 2011), former political prisoners (Maercker et al., 2013b) and Israeli military veterans (Solomon & Mikulincer, 2006).

These studies show that the individual course of PTSD is difficult to predict. A review summarises that in rare cases (about 7%) a delayed form of PTSD can occur after symptom-free months, years or decades (Andrews et al., 2007). An increase in symptoms can occur after critical life events or role changes in the biography (e.g. retirement).

Overall, there is evidence that, at least in the German-speaking countries, untreated post-traumatic symptoms increase in frequency and severity at an advanced age

(Maercker et al., 2008). ► Chapter 26 deals with these aspects in detail.

2.5 The Development of PTSD: A Multifactorial Framework Model

According to the World Mental Health Survey, 70.3% of the persons participating in the study have experienced at least one traumatic event (Liu et al., 2017). However, only a small proportion of these develop PTSD – for many, resilience leads them to recover (Bonanno, 2008). In this chapter, we will discuss various psychological and social factors and explanatory models involved in the development and maintenance of PTSD. The framework model is based on epidemiological findings and various PTSD research approaches.

It describes the following five etiological factor groups (► Fig. 2.2).

- Risk or protective factors (**pre-traumatic**),
- Event factors (**peritraumatic**),
- Maintenance factors (**post-traumatic**),
- Resources, health determinants (**post-traumatic**),
- Post-traumatic processes and results.

maintenance factors (mean correlations of $r = 0.23-0.40$).

➤ Although often referred to only as risk factors in the literature, a number of these factors can also be called protective factors, depending on whether they are present or absent.

2.5.1 Risk or Protective Factors

In a meta-analysis 77 studies were evaluated, which named the following predictive factors (Brewin et al., 2000):

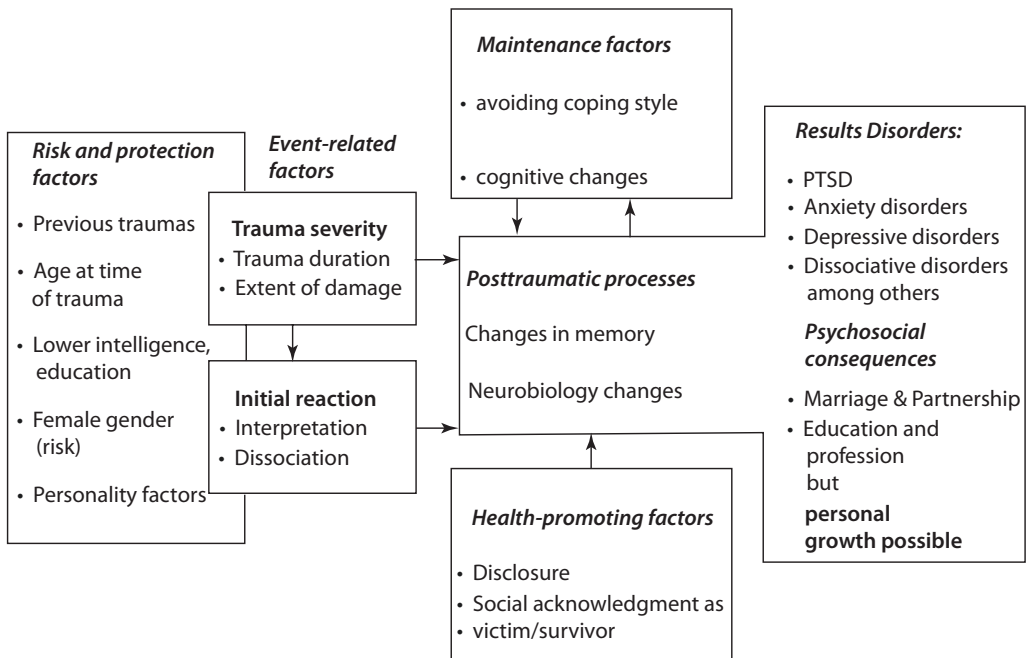
- Previous traumatisatioin in childhood (abuse and other traumas),
- Younger age at the time of traumatisatioin,
- Low intelligence or education,
- Female sex.

It turned out that these factors together had a much lower predictive power (mean correlations of $r = 0.06-0.19$) than the event and

Maercker (1999) found a U-shaped relationship for the relationship between trauma age and PTSD risk: children and adolescents have the highest risk, young and middle-aged adults a comparatively lower risk and older adults a higher risk.

■ Personality Traits

Whether **personality traits** existing before the trauma pose a risk to PTSD training cannot be conclusively answered. It is methodologically difficult to obtain retrospectively reliable information about personality traits before the trauma. To date, there are very few longitudi-



■ Fig. 2.2 Framework model of the etiology of trauma consequences

nal studies in which individuals were examined **before** the trauma occurred. These show heterogeneous findings. Lee et al. (1995), for example, analyzed data of adolescents who had been examined before they were sent to war as soldiers. They found that lower emotional maturity before the trauma was related to the later development of PTSD. Other older longitudinal studies did not find significant correlations between pre-traumatically measured personality traits and later psychological complaints (Breslau et al., 1995; Noelen-Hoeksema & Morrow, 1991). However, the assessment methods used in these studies are often inadequate (in some cases no direct PTSD examination), which probably explains the inconsistency of the results.

2.5.2 Event Factors

2.5.2.1 Trauma Severity

It can be considered empirically proven that the severity of the trauma can be measured by objectifiable parameters (e.g. duration of trauma, the extent of damage, degree of injury, number of deaths), thus establishing a dose-response relationship (Brewin et al., 2000; Kaysen et al., 2010). The magnitudes of this relationship are usually comparatively small (correlations of $r = 0.20-0.30$), which indicates that psychological factors of the event appraisal play a role. In a meta-analysis of 68 studies, Ozer et al. (2003) found a weighted correlation of $r = 0.26$ for the predictor “perceived life threat”.

2.5.2.2 Initial Reactions

Different forms of initial reactions are an important predictor of whether PTSD develops or not. Maercker et al. (2000) showed that initial reactions predicted PTSD symptoms to a greater extent than the objectifiable trauma severity.

however small – during the traumatic event, the post-traumatic consequences will usually not be so marked.

The appraisal (interpretation) during the trauma of giving up or not giving up has been investigated in rape trauma and former political prisoners (Ehlers et al., 2000). It was found that patients with PTSD who were able to maintain a sense of autonomy during the trauma (even if this sense hardly or not at all changed the situation) and who did not give up on themselves had better results in psychotherapeutic symptom reduction than a control group.

Mental dissociation during trauma (**peri-traumatic dissociation**) was initially assumed to have a protective effect, but it is also a predictor of the later extent of PTSD (Marmar et al., 1998). This was confirmed by the meta-analysis of Ozer et al. (2003) with a weighted effect strength of $r = 0.35$.

2.5.3 Maintenance Factors

2.5.3.1 Post-traumatic Life Stresses

Overall, these are the most influential factors for the existence of chronic stress disorders. In a methodologically excellent study involving more than 1600 former Vietnam war veterans, it was found that post-traumatic influencing factors accounted for the largest part of the PTSD disorder variance in women (before the event and pre-traumatic factors) and the second-largest part of the PTSD disorder variance in men after event factors and before pre-traumatic risk factors (King et al., 1999). This was also confirmed for other types of trauma (Brewin et al., 2000). These post-traumatic stressors include family and professional problems (e.g. spousal separation, incapacity to

➤ If the trauma victim is in a position to see for himself an opportunity to influence –

work) or the medical, physical and material/financial damage that has occurred.

2.5.3.2 Cognitive-Emotional Changes

Changed attitudes of trauma survivors towards the world and themselves are the subject of various psychological theories and models of PTSD. **Guilt** plays a particular role here.

2.5.4 Resources or Health Determinants

Resources or health-promoting factors are defined as those that lead to recovery after a temporarily acute phase. All in all, the factors mentioned above enable those affected to better integrate traumatic experiences into one's own past.

2.5.4.1 Sense of Coherence

The psychological construct of the sense of coherence was developed in the context of psychotraumatology by Antonovsky (1987). It was intended to capture the ability to mentally grasp and understand what happened and to give it meaning. Persons with a well-developed sense of coherence should have good abilities to predict even terrible events on the basis of their understanding of the world. This construct can be assessed by a revised version of the sense of coherence questionnaire, which has better psychometric characteristics than the original questionnaire, which is flawed in its methodology (Bachem & Maercker, 2018; Mc Gee et al., 2018).

2.5.4.2 Interpersonal Socio-cognitive Factors

In the meta-analysis by Brewin et al. (2000), it was found that **social support** – an umbrella term covering various relevant processes – is the comparatively most important predictor for the severity of PTSD, far outperforming other

pre-, peri- and other post-traumatic factors. The interpersonal embedding (vs. isolation) of the traumatised person, their possibilities to communicate about what they have experienced (so-called “disclosure”) as well as the recognition as trauma victims experienced by the environment are therefore very central (► Sect. 2.7).

2.5.5 Post-traumatic Processes and Outcomes

For the immediate and later trauma consequences, memory changes and neurobiological changes are of central importance (► Chap. 6).

2.5.5.1 Psychosocial Consequences

Secondarily, there are often considerable psychosocial consequences, such as unfinished training, job difficulties, career breaks, frequent separations or divorces, educational problems and cross-cultural conflicts with superiors or authorities. They require means of psychosocial reintegration or practical social work (Soyer, 2006).

2.5.5.2 Post-traumatic Growth

An important phenomenon for many traumatised people is that, in retrospect, they believe that this experience set in motion a personal growth process. Viktor Frankl, a psychologist who survived a concentration camp himself, already pointed this out early on (Frankl, 1973). Many traumatised people report – often only when asked about it – that they no want to miss the experiences and insights they had for their future life. Post-traumatic growth has been intensively investigated over the last decade (Calhoun & Tedeschi, 2006; Tedeschi & Calhoun, 2004; Zöllner & Maercker, 2006).

The Janus Face Model of Post-traumatic Growth

As psychological processes that play a role in the development of post-traumatic growth, constructs of finding

meaning, coping, growth and wisdom development were examined. Maercker and Zöllner (2004) have described in their Janus face model of posttraumatic growth that self-perceived posttraumatic growth has, in addition to a functional side (“*I have really experienced anew how much friends and relatives are connected to me; this was not so important in my life before*”), also an illusory side (“*If it has already happened, then at least it must have been good for something*”). Here the illusory gain is usually not lasting (see Pat-Horenczyk et al., 2015).

- In addition to symptom reduction and health stabilization, one’s own post-traumatic growth can be an important additional goal for psychotherapeutic treatment.

2.6 Memory Models

Various psychological explanatory approaches can be summarized as trauma memory models, which ascribe the central role for the development and maintenance of PTSD and other trauma sequelae to the anchoring of the traumatic experiences in memory. In recent years, numerous important new findings have emerged in this area, often corresponding with neurobiological PTSD research (▶ Chap. 6).

- Common to the various models is the core idea that the structure and function of central memory contents are permanently impaired by the traumatic experience.

As early as 1889 Pierre Janet had described the condition of some traumatized patients as memory phobia (Janet, 1989). Those affected could not bear the confrontation with memories and re-experiencing and therefore tried to avoid and repress it. From this he developed ideas on the dissociation of conscious and unconscious memory content and behavioural representations, some of which are still being discussed today (Van der Hart et al., 2006).

In Horowitz’s groundbreaking model ideas on trauma syndromes (1976, 2011), the dynamics of the incompatibility of the new traumatic experiences with the previous representations

of concepts (or memory schemata) of self, others and the world occupied a central place. Based on psychoanalytical ideas, Horowitz postulated a completion tendency of the memory contents: The new traumatic experience must be brought to consciousness in the form of intrusions until it can be integrated into the memory without considerable stress. He embedded these general assumptions in specific ideas about types of schemata (e.g. victim and perpetrator schemata) and personality styles.

2.6.1 Fear Structure Model

Based on learning theory, Foa and Kozak (1986) described the memory structures altered by the trauma as **fear structures**.

Earlier learning theory ideas had explained PTSD by the two-factor model of anxiety development (Mowrer, 1960). It states that a traumatic event leads in the first phase to a coupling of fear to a cognitive element (key stimulus) and in the second phase to avoidance behaviour through operant conditioning. However, this simple conditioning theory cannot explain the intrusions as the predominant symptoms of PTSD.

According to Foa and Kozak (1986), a fear structure is characterized by a high level of fear and activation combining different elements. The fear structures consist of three types of elements:

- Cognitive elements (stimuli; including the trauma with its characteristics),
- Physiological reactions,
- Emotional meanings.

- Post-traumatic fear structures develop when an extremely emotionally significant stimulus (usually fear of death) is coupled with one or more cognitive elements and physical reactions.

This coupling occurs in the form of sustained activation of a comprehensive memory struc-

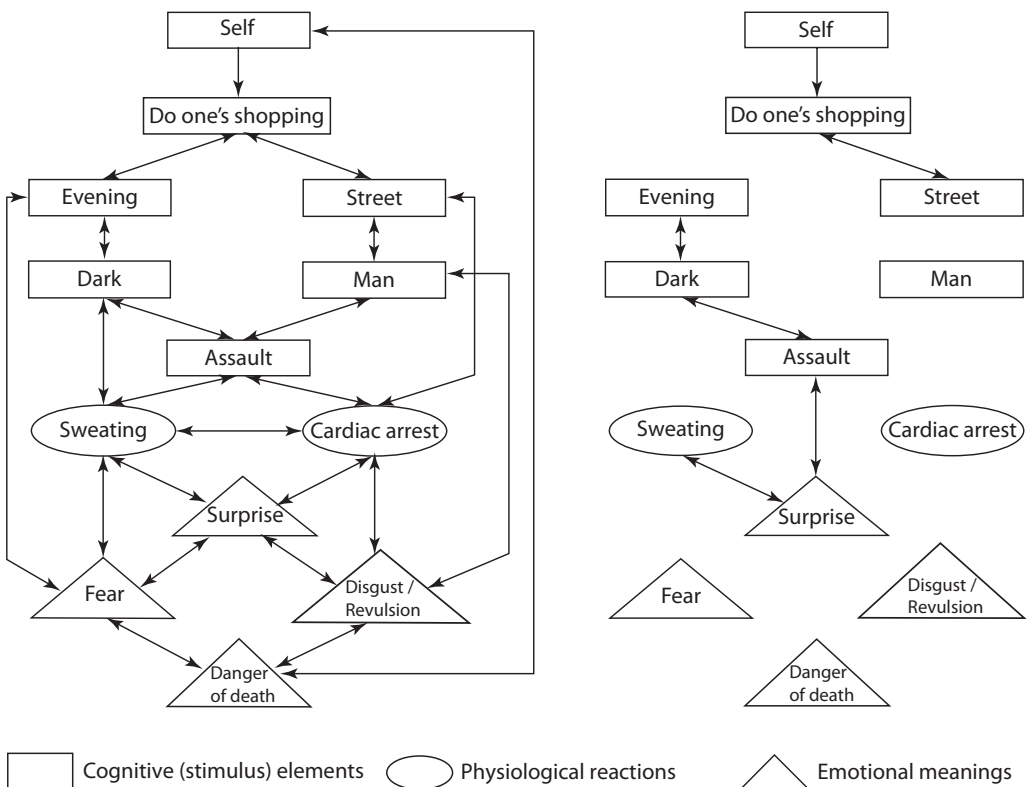
ture. The result is a fear structure that is easy to activate and comprises many elements (e.g. facts only loosely associated with the trauma). Once the fear structure has been formed, it can be easily activated from all elements by key trigger (facts, body reactions, emotions). The more elements the fear structure contains, the more often it will be activated by various triggers and the more strongly the PTSD symptoms will be developed. For example, the intrusive symptoms are based on the activation of cognitive elements by corresponding triggers.

The example of a fear structure after rape is shown in [Fig. 2.3](#), where the left side shows a fully developed pathological fear structure and the right side a deactivated fear structure (e.g. as a result of successful psychotherapy).

According to Foa and Kozak (1986), the spontaneous development of a fear structure after the experience of trauma is a normal process. In the pathological case, however, there is no spontaneous remission of the fear structure in the first days or weeks after the trauma.

According to the models, the modification of persistent fear structures can only be achieved through a complete and comprehensive mental confrontation, in which all kinds of elements (facts, emotions, body reactions) are therapeutically activated and as a result, habituation (remission) of the fear activation occurs ([▶ Chap. 13](#)).

The spontaneous partial activations of the fear structure that take place in most traumatized persons – e.g. through sudden memories or intrusions – do not achieve remission or



■ Fig. 2.3 Fear structure after an attack at night. **Left side:** Pronounced fear structure in the presence of PTSD, **Right side:** Deactivated fear structure in a recovered patient (e.g. after exposure therapy). (Mod. after Foa and Kozak (1986))

deactivation. Instead, this spontaneous activation of parts of the fear structure can lead to an increasingly distinct avoidance in the wake of the rise in fear.

There are several experimental findings that support the validity of the assumptions of the fear structure model. For example, it was found that patients with PTSD developed a selective attentional increase for trauma-related stimuli (e.g. sounds, photographs, words) compared to persons after trauma without PTSD and healthy controls (Litz & Keane, 1989). McNally et al. (1990) examined Vietnam veterans using Stroop tasks (colour naming tasks). The colour of the writing in which the trauma-specific terms were written was detected more slowly by patients with PTSD than in the control groups. It was concluded that a larger fear structure was probably activated, which delayed switching to the actual task, naming the font color. Comparable effects were found in women with PTSD after rape (Cassiday et al., 1992; Foa et al., 1991) as well as in a recent study with war veterans in the recognition of terms related to combat in relation to other trauma-related terms without military reference (Khanna et al., 2017).

It has been shown in various ways that fear or anxiety are not the only ways of activating the trauma-related memory structure. Two extensions of the fear structure model were therefore discussed: the inclusion of anger and of disgust (Chemtob et al., 1997).

2.6.2 Dual Memory Model

Brewin postulated a dual representation model of PTSD (Brewin, 2003; Brewin et al., 1996). The starting point of this model is the assumption that memory has two different encoding paths and that traumatic memories are stored qualitatively differently than normal non-traumatic memories. More recently, the model was revised to adapt it to current neuroscientific findings (Brewin et al., 2010). Corresponding

details on neurobiological findings can be found in ► Chap. 6.

The model is shown in schematic form in ■ Fig. 2.4.

The Two Processing Systems of Memory Contents According to Brewin et al. (2010)

- Representations in contextual memory (C-reps)
 - **Verbally accessible memory (VAM)**
 - **Memories can be retrieved and changed deliberately; they are accessible via language**
 - **Memories are integrated into other autobiographical memory contents (past, present and future aspects): spatial and temporal aspects are stored**
- Representations in sensation-based memory (S-reps)
 - **Situationally accessible memory (SAM)**
 - **Storage of low-level information: sensory (e.g. sounds, visual images), perceptual (e.g. changes in heartbeat, body temperature and pain) and affective (e.g. fear, disgust)**
 - **No deliberate retrieval or description by words possible**
 - **Activation only involuntary through trigger stimuli from the environment without contextual reference (e.g. a physically unjustifiable abdominal pain)**

Both representations of memories also occur in healthy individuals. In encoding normal memory content, an initial sensation-based perception and temporary storage (S-reps) leads to a long-term encoding of memory content at higher levels (C-reps). Over time, the S-reps then fade away and are hardly accessible.

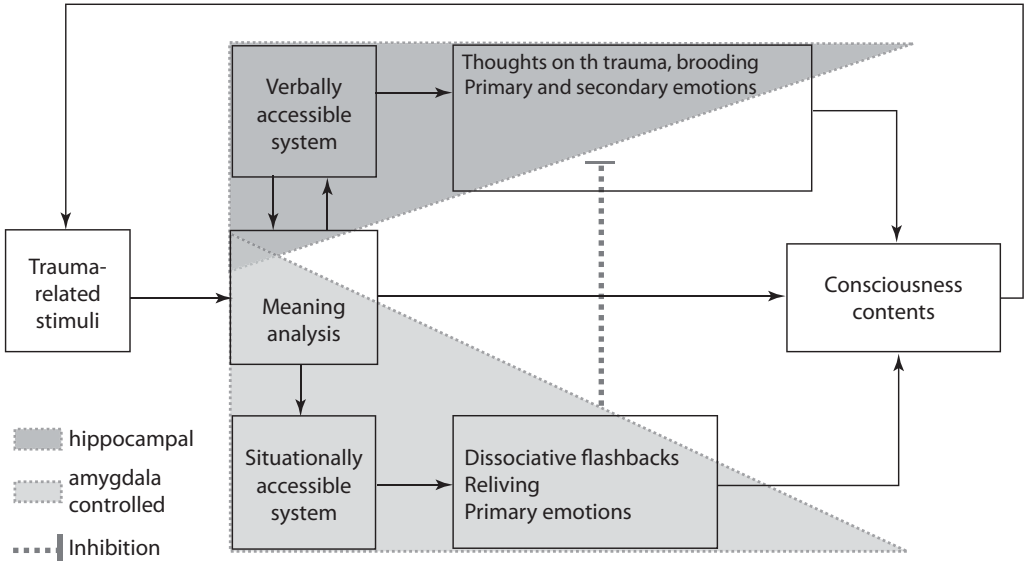


Fig. 2.4 Development of re-experience and flashbacks in the extended dual representation model. (Mod. according to Brewin et al. (2010))

As **Fig. 2.4** illustrates, S-reps are more strongly developed than C-reps when experiencing a traumatic event due to the high level of arousal. At the same time, connections between the two systems are severely impaired. This hinders integration at the level of C-reps. Flashbacks are caused by the formation of S-reps without corresponding C-reps – integration into autobiographical memory with corresponding context information does not take place. The automatic and uncontrollable activation of the S-reps leads to the typical emotionally charged detailed sensations (Brewin, 2014; Jobson et al., 2014).

The initial premises of the model are confirmed by the clear phenomenological distinction between arbitrarily recallable trauma memories and involuntary flashbacks (Hellawell & Brewin, 2004). The different amounts of information and processing depths in the VAM/C-reps and the SAM/S-reps can also be confirmed by general memory psychological findings (Brewin, 2003). For example,

Brewin (2014) in his review illustrates empirical support for the long-term but selective storage of sensory inputs (S-reps). Furthermore, he shows that PTSD patients are characterized by an improved perceptual memory but limitations in episodic memory, which speaks for the functional independence of the two systems. Jobson et al. (2014) could show that across different cultures (study participants from Australia, Great Britain and Iran) there were consistently deficits in autobiographical memory recall in persons with PTSD in contrast to healthy persons.

2.7 Cognitive Models

2

Cognitive Schemata

Cognitive schemata are defined as information patterns represented in memory that control and organize perception and behavior. Clinically relevant schemata are the self-scheme, which in turn can be broken down into different compartments (multiple self-schemes, self-images or roles), as well as the schemata of important reference persons and global world schemata (or world views).

2.7.1 Altered Cognitive Schemata

Various authors focus their etiological concepts on the change from schemata to trauma (Horowitz, 2011 [1976]; Janoff-Bulman, 1995, 2015). Theories of altered cognitive schemata are based on the following PTSD symptoms in particular. The typical shattered attitudes of non-traumatized persons postulated by Janoff-Bulman (1995) have become classic.

Typical Attitudes of Non-traumatized Persons

- Assumption of the own inviolability
- Assumption of the world as meaningful, understandable and controllable
- Assumption of the self as positive and valuable

These attitudes are changed by a traumatic event: Traumatized persons

- consider themselves injured and vulnerable in the future,
- see the world as hostile, incomprehensible and unjust,
- consider themselves damaged and worthless.

► Example 1: Changed the World Scheme

A person who has had a high degree of trust in other people up to now (trusting world scheme), trains a complete loss of trust in other people through a criminal attack (new world schemes: “*The world is abysmally bad*”, “*People are abysmally bad*”). ◀

► Example 2: Changed Self-Image

A previously self-confident person suddenly experiences himself as weak and shaken by the trauma. His self-image after the trauma remains for a long time: “*I am weak and vulnerable*.” This self-image is in conflict with the still remembered earlier self-image: “*I am competent and stable*”. ◀

2.7.1.1 Cognitive-Psychodynamic Concept

The explanatory approach of Horowitz (2011 [1976]) focuses on the changes in self or role schemata. According to this approach, the trauma primarily leads to a change in the self-image or the structure of the roles of the person affected. Horowitz assumes that the traumatically changed schemata remain activated in the memory until they have achieved a capacity to fit in with the earlier and other schemata through further information intake and processing, i.e. until the new schemata can be integrated. For example 2, this means that the traumatically altered schemata remain activated until the person affected can accept that he or she is temporarily a weak and vulnerable person. Details can be found in ► Chap. 13.

In the activation phase of the schematic representations and before they have been integrated, there are intrusions and a strong emotional strain. In order to reduce this burden, Horowitz outlines, cognitive **control** or **defence processes** take effect, for example in the form of avoidance, denial or emotional numbness. Whenever cognitive control is not fully achieved, the trauma is intrusively re-experienced, which in turn leads to strong emotional stress and thus to renewed avoidance or denial.

- ▶ According to Horowitz, restoration of health is achieved by working intensively through the traumatically altered cognitive schemata.

This **working through** can happen independently and spontaneously in a patient in the recovery process if it is not or hardly inhibited by control processes. If these control or defence processes are more pronounced, only psychotherapy can bring about the normalisation or recovery process. The psychotherapeutically guided working through has therefore two starting points:

- Altered cognitive schemata (attitudes, beliefs),
- Control processes (avoidance and defence tendencies).

2.7.1.2 Empirical Evidence on Horowitz's Explanatory Approach

Of the components of Horowitz's theory (changes in self-regulation, control processes), changes in cognitive schemata, in particular, have so far been empirically proven. Various studies have found indicators of typical post-traumatic changes in self- and world cognition (Krupnick & Horowitz, 1981; Resick & Schnicke, 1992; Roth & Lebowitz, 1988). In a study of traffic and crime victims, the following self-relevant topics were found most frequently through content categorizations of patient statements (Krupnick & Horowitz, 1981):

- Frustration over one's own vulnerability,
- Self-reproaches,
- Fear of future loss of control over one's feelings.

2.7.2 Cognitive Disorder Model

Based on clinical observations and building on previous models, Ehlers and Clark (2000) have developed an approach to the development and maintenance of chronic PTSD, focusing on the

explanation of persistent anxiety symptoms and strong emotions such as anger, shame or grief. They assume that chronic PTSD only develops when the affected person processes the traumatic event and/or its consequences in such a way that he or she perceives a severe current threat and damage, based on a negative interpretation of the trauma, the specifics of the traumatic memory and a persistently perceived threat (for details see ▶ Chap. 13).

■ Negative Interpretation of the Trauma

The negative interpretation of the trauma and its consequences can lead to a persistent perception of the threat and damage: This includes not only interpretations of the occurrence of the trauma (e.g. *"I am not safe anywhere"*), but also one's own experience and behaviour during the trauma (e.g. *"I deserve bad things to happen to me"*). Furthermore, the initial symptoms are interpreted negatively (e.g. *"I am dead inside"*) as well as the reactions of others after the trauma (e.g. *"Nobody is there for me"*).

■ Specifics of Trauma Memory

The specifics of the trauma memory and its embedding in other autobiographical memory structures also lead to a persistent feeling of threat.

Trauma memory is characterized by the following features:

- The intrusive re-experience usually takes place in the form of sensory impressions that have a here-and-now quality and do not convey a sense of the past as is usually the case with autobiographical memories.
- There are emotions without memories, in that people with PTSD experience physical reactions or emotions from the trauma without having conscious memory of the trauma (e.g. disgust reactions in sexually traumatised people).
- In PTSD, the autobiographical memory is insufficiently elaborated for the traumatic memories. Autobiographical memories are usually stored in the memory in an ordered and abstracted manner and are arranged,

for example, according to personally relevant topics and periods of time, which prevents an extremely vivid and emotional re-experience. This inadequate elaboration and integration of trauma memories is related to easy retrieval of sensory impressions of the trauma and related emotions.

■ Persistent Perceived Threat

This produces a series of cognitive changes and behaviors that are designed to reduce perceived threat but maintain the disorder. An example of a dysfunctional cognitive strategy that exacerbates PTSD symptoms is thought suppression. When patients try to force their unwanted thoughts about the trauma and intrusions out of their heads, this has the paradoxical effect of increasing the frequency of intrusions. Another typical example is safety behaviour and other exaggerated precautions taken to prevent or mitigate expected harm (e.g. constant carrying of weapons). However, this prevents the verification of the assumption that the disaster will occur if the safety behavior is not executed.

■ Empirical Findings on the Cognitive Model

In a series of studies with different groups of trauma victims or with analogue experiments, the core assumptions of the model could be proven. The negative interpretation of the experienced intrusions (e.g. “*The images in my head drive me crazy*”) was found in cross-sectional and longitudinal studies (3-year follow-up) to be an essential factor in the development and maintenance of PTSD (Ehlers et al., 1998; Mayou et al., 2002; Steil & Ehlers, 2000). Intrusive re-experience appears to act as a warning signal, as it contains predominantly fragments of memories of what happened immediately before the traumatic event or shortly before the experiences with the greatest emotional impact (Ehlers et al., 2002). This

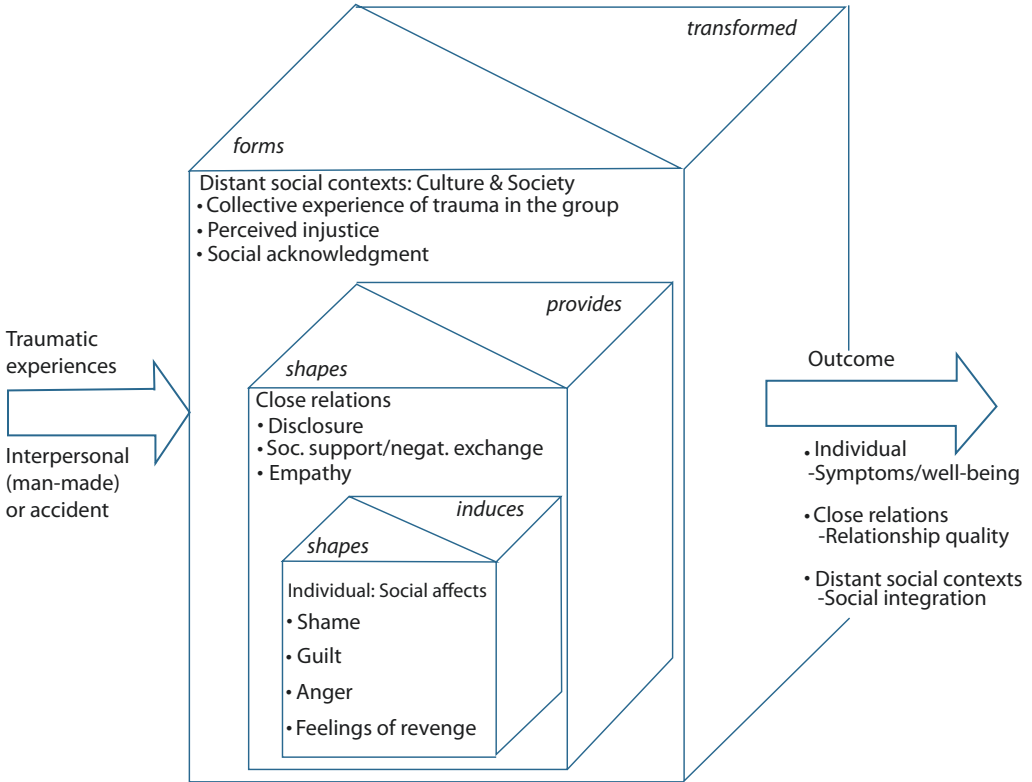
may explain why the intrusions are accompanied by a persistent feeling of danger.

As a characteristic of traumatic memories, a high degree of memory disorganization (e.g. fragmentation, jumps, repetitions) was found using text-analytical methods (Halligan et al., 2002, 2003). The extent of reported memory dissociation (e.g. frequent confusion, altered sense of time) was also used as evidence of altered memory (Murray et al., 2002). Posttraumatic cognitive changes such as increased use of thought suppression and persistent beliefs about one’s own impairment were found in various groups of patients with PTSD (Ehlers et al., 2000; Mayou et al., 2002). Shahar et al. (2013) were able to show in a prospective Israeli study that negative cognitions and increased symptoms of PTSD are mutually reinforcing at different points in time and thus a kind of vicious circle exists.

In studies that examined the model in summary, positive evidence was found, for example, that the central model variables are specific only for PTSD and are not equally found in depression and phobias of traumatised persons (Ehring et al., 2008). However, the model of Ehlers and Clark has not yet been tested in comparison with other explanatory psychological models.

2.8 The Social-Interpersonal Model

Based on clinical experience about the important role of interpersonal factors in trauma processing and specifically justified by the main finding of the meta-analysis by Brewin et al. (2000), which showed social support as the most important PTSD predictor, the social-interpersonal model of PTSD was described by Maercker and Horn (2013) and Maercker and Hecker (2016), respectively. The basic assumption of this model is that social or interpersonal processes on several levels decisively



■ Fig. 2.5 Social-interpersonal model of PTSD (Maercker & Horn, 2013)

influence the development and course of PTSD. The model is summarized in ■ Fig. 2.5.

Overall, the model does not claim to replace the psychological or neurobiological models in the narrower sense, but rather to complement them. However, it postulates that the described interpersonal-social cognitive processes have a very high predictive power for the development of or recovery from PTSD. Its three blocks are schematically divided into two to state that not only the affected persons change, but that they can also change their environment (e.g. shame develops in them, and at the same time, in unfavourable cases, they can induce shame in others).

The model begins in the innermost block with the so-called social effects, that is, feelings that manifest themselves in interaction with other people, such as the emotions

described in ► Sect. 2.2.4 Shame, guilt, anger and feelings of revenge.

2.8.1 Close Relations and Society

2.8.1.1 Importance of Close Relations

A subjectively perceived social recognition as a trauma victim (Maercker & Müller, 2004) is a protective factor in trauma processing. However, the reactions of the environment can vary qualitatively and quantitatively: from the greatest possible support (e.g. helpful presence of friends) to social isolation. If traumatised persons feel permanently excluded from others (“*Since this thing happened I feel excluded from everything*”; “*Nobody wants to hear my story anyway*”) this increases their coping problems. These processes take place bidirec-

tionally, that is, both from the affected persons and from the environment.

2

In the course of time after a trauma, the reactions of the others typically change: at first, the traumatised person is supported, then the support decreases and gives way to an enforced normalisation (e.g. “*Life goes on. You should stop thinking about what happened*”). With regard to other people, problems with empathy sometimes arise (so-called compassion fatigue; Figley, 1995, 2002). For example: “*I don’t care about the problems of others anymore*”).

2.8.1.2 The Importance of Society and Culture

The very fact whether a collective (e.g. effects of war, natural disasters) or individual trauma (e.g. sexualised or criminal violence) was experienced has an influence on the later course of events. After collectively experienced trauma, the frequency of subsequent PTSD is comparatively lower.

Under the Microscope: Intergenerational Transmission

Societies can continue to exist in various ways after natural disasters or wars and are “marked” by the traumatic events for varying lengths of time – sometimes for one or more subsequent generations.

A sense of injustice can be a reinforcement of earlier latent attitudes (e.g. “*The rich were much better cared for and treated after the disaster than we poorer people*” – after the hurricane in New Orleans).

The values of society also influence individual processing. The reactions of others reflect their cultural values and norms. The attitude behind the Chinese proverb “*You master life with a smile or not at all*” can make it difficult for those affected to cope. Value attitudes that emphasize the individual claim to well-being lead to different consequences than collectivist value attitudes (e.g. whether the life of a soldier is important or negligible).

2.8.1.3 Consequences of the Experience

As a result, the consequences of traumatisation are felt on several levels: Individually, there is post-traumatic symptomatology and/or a lasting impairment of well-being. The **level of close relationships** can be characterised by interpersonal complications such as increased rates of separation from partnerships or divorce and conflicts at work or in the social reference group. The **distal social level is concerned** with social integration or conflict in a given society.

2.8.2 Empirical Evidence on the Social-Interpersonal Model

2.8.2.1 Influence of the Dyadic Interaction

A questionnaire on disclosure styles was developed (Müller et al., 2000), which records how, even after the trauma, one assesses the possibilities of telling other people about one’s own experiences. An adapted version of this questionnaire can also be used for relatives of traumatised persons.

There have been only a few studies on affected relatives’ dyads to date. Renshaw et al. (2008) showed that spouses of traumatised soldiers always had a higher burden of their own when they considered their partner’s symptom burden to be higher than the one they assessed. This means that the agreement of both partners in the assessment of posttraumatic symptoms acts as a buffer for the burden on the relative.

Pielmaier and Maercker (2011) examined dyadic interaction more closely in relation to self-opening. In victims of severe accidents, they found that significant proportions of the victim’s PTSD severity could be explained by dysfunctional disclosure styles (e.g. secrecy) and the interaction between the disclosure styles of both partners. A high degree of dys-

functional disclosure in both partners dramatically increased the extent of PTSD.

2.8.2.2 Social Inclusion and Cultural Value Orientations

The consequences of social exclusion and compassion fatigue have been demonstrated in experimental studies in patients with PTSD (Nietlisbach & Maercker, 2009; Nietlisbach et al., 2010).

A questionnaire (Maercker & Müller, 2004) is available on social recognition as victims or survivors in order to record this specific factor from the perspective of the affected persons. Sommer et al. (2017), among others, were able to show in a therapy study with traumatized young offenders in South Africa that a higher experienced general lack of understanding (of a facet of social recognition) hindered an improvement of PTSD symptoms. Social recognition and disclosure opportunities were confirmed as protective factors in war refugees in the Caucasus (Maercker et al., 2009b).

Complex correlations of cultural value orientations of the trauma victims themselves (traditional vs. modern) were investigated comparatively in China and Germany among crime victims, whereby only modern values were positively associated with social recognition as trauma victims and with lower PTSD symptoms (Maercker et al., 2009a).

2.8.2.3 Role of the Environment

The role of the wider environment has been studied in various ways: Fontana and Rosenheck (1994) have demonstrated the social rejection of traumatized Vietnam war soldiers. Pennebaker and Harber (1993) showed a decreasing supportive reaction of the environment in Californian earthquake victims. For the role of value attitudes on the part of non-traumatized reference persons or the

surrounding society, there are still no meaningful studies.

- ▶ Of particular practical importance for those affected is the possibility of disclosure and the social recognition they experience. A lack of appreciation can contribute to the continued trauma consequences, as studies and clinical experience with various traumatised groups have shown.

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Complex PTSD

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3.1 Definitions, Clinical Picture and Symptoms

Some people who experience traumatic experiences develop a clinical presentation that goes beyond PTSD (▶ Chap. 2).

3.1.1 Trauma Criterion

Typically, complex post-traumatic stress disorder (CPTSD) is caused by prolonged traumatic experiences consisting of multiple or recurring traumatic events (▶ Chap. 2, ■ Table 2.1). The ICD-11 additionally states that these are usually events from which escape is difficult or even impossible (e.g. torture, slavery, genocide campaigns, continued domestic violence, repeated sexual or physical abuse in childhood).

The definition in the ICD-11 deliberately makes only prototypical statements, so

- also, unique traumatic experiences can cause a CPTSD;
- definitional problems, which are to be understood as “longer lasting”, are avoided (e.g. in the case of a one-hour hostage-taking, war actions lasting several days), since an exact definition of what is to be assessed as long or short in terms of its psychological effect is not possible due to the subjectivity of the experience of time and the different contexts of life;
- even after prolonged or repeated traumatic experiences in the pathological case, the “classic” PTSD and not CPTSD can develop;
- the traumas experienced can in principle occur in all phases of life, even if the majority of traumatic experiences experienced in childhood or adolescence are triggers for a CPTSD;
- in particular, interpersonal trauma (also: man-made or intentionally caused) can be a trigger for CPTSD, in contrast to accidental trauma (■ Table 2.1).

3.1.2 Clinical Picture

Some characteristic symptoms of CPTSD versus PTSD are described in the following statements from two patients who experienced trauma either in childhood or in young adulthood.

▶ Example 1: Experience of Sexualised Violence in Childhood

Report of a 23-year-old female patient who was subjected to repeated sexualised violence at the age of 9–14 years:

- *“For a long time, I could not talk about what I experienced then. Somehow I couldn’t get it together ... To this day I’m very angry with my mother than with M. [her stepfather]; [mother] should have gotten me out of it. I still can’t feel anything when I sleep with someone. The whole thing is completely screwed up for me.”*
- *“I know others might call me a ‘hooker’ because I’m tripping into that now so often. I don’t know ... In the days that followed - now I’m completely lost, I’ve already been found somewhere in the city and brought home, and I don’t know anything. “Completely torn without alcohol or drugs...”*
- *“I feel so dirty - direct, which is why I have to shower so often. But somehow I am also completely dirty and depraved as a person. I drag the others down with me in the mud. Yes, I also destroyed M, who was actually a good person, he cried a lot because of me.*
- *“My feelings are bullshit. I can’t do anything with them. I’m always wrong about it. The [people who are] good to me, I get incredibly aggressive and hurtful towards them, so I only feel good when they feel bad. And vice versa...”*
- *“Nobody knows what it’s like not to feel yourself. I look at my arm - it’s not mine. “I don’t have a body, but I don’t feel a body...”*
- *“I’ve been told that I’m gifted and that I could become something - and I’m trying to*

do that, but I don't think I have the inner strength to do it after all. Somehow I don't have anything to build on..."

(Collected by A. Maercker) ◀

▶ Example 2: Political Imprisonment

A 45-year-old patient, who was imprisoned at the age of 21 for political reasons in the former (East-)German Democratic Republic and spent two and a half years in prison, reports:

- *"I'm not like this anymore, I've changed. I try not to let many things get to me anymore. Many things just don't interest me anymore. But if something gets close, I overreact, sometimes aggressively and more intolerantly. If something gets me, I have to fight for it, have my pride and my honour. And that causes me problems..."*
- *"I have problems with anything that resembles any kind of coercive mechanism. Either you freeze in front of it and don't dare to move, or you rise against it and don't take it seriously at all. The intermediate form, what would be appropriate, that's what I lack. And that, of course, affects the workplace. I am more unemployed than I have a job because I cannot internalize the hierarchies. and I can't find the right response..."*
- *"And then when I see that the [former perpetrators] are doing well again, which causes me such a massive tummy ache, then I'm not responsive for two or three days, because I have the impression that they suddenly have the victory again..."*
- *"I went there and talked to the rooms over ... You need that for your own mental health. "You have to torture people a bit..."*
- *"As long as I live, I will hate anything to do with them. I'm a fighter and that hasn't made me many friends..."*
- *"I have come to my wife at times in incomprehension very angry, very, very angry..."*
- *"You had the victim mentality, you simply expected the environment to understand*

you. But that was not there, there was such a wall of silence, the complicity of silence. You continued to shut yourself in..."

(Collected by A. Maercker) ◀

3.1.3 Diagnostic Criteria of Complex PTSD

In the following, the presentation is mainly based on the ICD-11, since DSM-5 lists the "dissociative subtype of PTSD" as a counterpart to the CPTSD, which is also described here.

PTSD Core Symptoms and Disorders of Self-Organisation

The fault is characterized by

- the core PTSD symptoms of re-experiencing, avoidance and feeling of threat, and
- further symptoms, summarized as disturbances of self-organization:
 - emotional regulation problems including dissociation tendency in stressed states
 - self-deprecating attitude
 - difficulties in maintaining relationships

ICD-11 Diagnostic Guidelines on the Symptoms of CPTSD

- Presence of the core symptoms of PTSD (reliving the trauma in the present, avoiding memories of the trauma, persistent feeling of threat)
- After the onset of the stress experience and accompanying the PTSD symptoms, development of persistent and profound impairments in the regulation of emotions, persistent beliefs about one's self as inferior, inferior or worthless, and persistent difficulties in

maintaining relationships, which are described in more detail below

- The problems of affective dysregulation are characterized by increased emotional reactivity, difficulties in recovering from minor stress, violent emotional expressions, self-endangering or self-harming behavior, and a tendency to dissociative states in stressful situations. Besides, emotional numbness can occur, especially the lack of the ability to experience joy or positive feelings. This includes an increased tendency to dissociate (see below).
- The pronounced convictions of oneself as inferior, inferior and worthless stand for a persistently impaired sense of identity. In addition, there are pronounced convictions of having done something wrong in life and leading a damaged and worthless life, as well as permanent feelings of guilt and shame.
- The relationship difficulties show themselves as an inability to interact on equal terms as partners. There is a susceptibility to exaggerated views and expectations of a relationship and an inability to trust intimate relationships.
- The general criterion for functional impairments in personal, family, social, educational, work and other important areas is given.

It should also be noted that the 3 PTSD core symptoms need not be in the foreground within the overall symptomatology and may even be very difficult to diagnose because problems from the area of disturbed self-organisation may present themselves more superficially. Therefore, in an epidemiological study, CPTSD was defined in such a way that all symptoms of impaired self-

organisation must be present and the three core symptoms of PTSD only to a sub-syndromal extent (Maercker et al., 2018).

In a survey study of clinic patients with complex PTSD on their own perception of the symptoms, it was shown that the patients initially perceived the symptoms as ego-syntonic, that is, they were convinced that, for example, their violent emotional reactions or dissociative states were an uninfluenceable character trait and thus part of their personality (Stadtman et al., 2018). If they were able - under the guidance of therapists - to recognise the connection between the earlier traumatising and the subsequent symptoms, which they had accepted to exist for years or decades, they were often able to perceive these as symptoms of illness. This made them feel less dominated by uninfluenceable “forces” or automatisms.

■ Dissociative Subtype of PTSD (DSM-5)

In the “dissociative subtype”, PTSD must be present according to the DSM-5 definition (► Chap. 2), including the symptom group of cognitive changes and mood changes defined only there, and in addition, the following symptoms must be present as a reaction to the trauma or trigger stimuli that recall the traumatic event:

- Depersonalisation: Feelings of unreality or detachment from one’s own body (e.g. the feeling of observing the body from the outside) and/or
- Derealisation: Perception of one’s environment as unreal (e.g. far away or distorted).

A schematic comparison of the ICD-11 and DSM-5 definitions is shown at ► Table 3.1.

In clinical work, it can be assumed that the two definitions lead to the identification of similar patient groups. However, this has not yet been systematically investigated in the research. An individual study by Powers et al. (2017) was able to show that African-American patients with CPTSD had high

■ **Table 3.1 CPTSD (ICD-11) and the dissociative subtype of PTSD (DSM-5) in comparison**

	CPTSD ICD-11	Dissociative PTSD subtype DSM-5
Trauma criterion	Minor additional comments on the PTSD trauma criterion	Identical for PTSD and the subtype
Required symptom ranges	Re-experience Avoidance Persistent sense of danger Emotional regulation problems Self-deprecating beliefs Persistent relationship problems	Intrusions / re-experience Avoidance Cognitive and mood changes Continuous overexcitation Dissociative depersonalisation and/or derealisation
Importance of dissociative symptoms	Implicitly: belong to the emotion regulation problems. Includes depersonalisation and derealisation as well as dissociative neurological symptoms, e.g. movement disorders, stupor, seizures	Explicit, but limited to non-neurological dissociative states

values of dissociative symptoms beyond the phenomena of derealisation and depersonalisation.

3.2 Historical Development of Diagnosis

For some time, there have been suggestions for formulating complex trauma sequelae (see Sack et al., 2013). These include the

- Persistent personality change after extreme stress (ICD-10), precursor diagnosis of CPTSD (ICD-11);
- Complex PTSD according to Herman (1994): without the PTSD core symptoms, but with 6 symptom areas;
- Developmental trauma disorder according to van der Kolk et al. (2005): without the PTSD core symptoms, with 2 symptom areas and impairment in social functions;
- **Disorders of Extreme Stress not Otherwise Specified (DESNOS)**: research diagnosis in DSM-IV.

Herman (1994) described very early on that the diagnosis of PTSD, as it had been defined until then, did not accurately reflect the situation and symptoms of many survivors of prolonged and recurrent trauma. The diagnostic criteria of PTSD are primarily tailored to survivors of narrowly defined traumatic events such as war missions, disasters or rape.

Herman proposed further diagnostic criteria such as changes in affect regulation, consciousness functions (e.g. dissociative symptoms), relationships with others, self-perception and the value system. This concept became known in German-speaking countries through Sack et al. (2013) and has been implemented in the clinical practice of many treatment institutions.

This extended CPTSD concept and its slightly modified variant of van der Kolk (2005) on the “developmental trauma disorder” was not otherwise specified and tested in DSM-IV as a diagnosis of disorders due to extreme stress (DESNOS). However, DESNOS was not included in the DSM-5

due to an assessment by experts that was considered to be inadequate.

The diagnosis “Persistent Personality Change” after extreme stress from the ICD-10 (code: F62.0) has been used in various expert opinions but has hardly been used in the international research literature. The international ICD-11 working group decided on the scientifically based introduction of the complex post-traumatic stress disorder (Maercker et al., 2013) based on preliminary work by Cloitre (e.g. Cloitre et al., 2011) and the internationally expressed need for clinicians from all parts of the world.

Important

It seems important that the previous PTSD (▶ Chap. 2) should not be called “simple PTSD” but “classic PTSD” in the language of everyday clinical practice in contrast to complex PTSD.

3.3 Evidence of CPTSD Diagnosis

Although the precursor diagnoses of ICD-11 CPTBS have been used clinically many times, their psychometric quality characteristics (e.g. internal consistency, reliability) remained weak. In a study in which the concept of Herman (1994) was tested in a group of former political prisoners, for example, only a low internal consistency of $\alpha = 0.55$ was found, especially since only values above 0.80 are satisfactory (Maercker, 1998).

For the CPTSD definition of the ICD-11, it was found - in addition to improved consistency values - that patients with “classic PTSD” as well as patients with CPTSD can also be distinguished well from patients with a borderline personality disorder by differential diagnosis. This was shown by a latent class analysis of 280 female patients, all of whom had a history of child sexual abuse (Cloitre et al., 2014; Fig. 3.1).

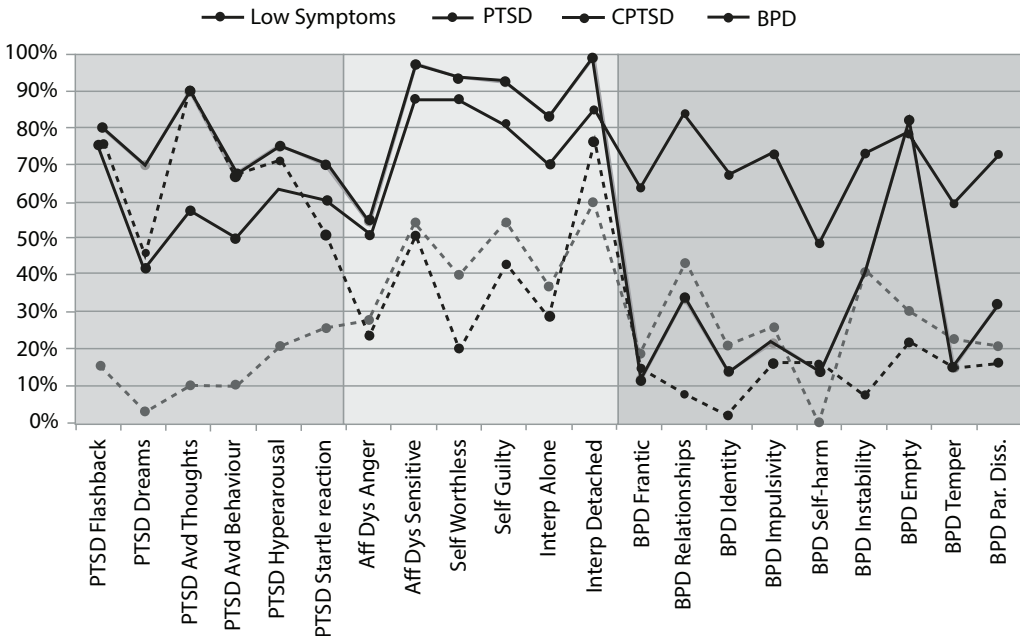


Fig. 3.1 Different symptom profiles of PTSD, KPTBS and borderline personality disorder. (From Cloitre et al., 2014; © 2014 Marylène Cloitre et al.)

The study also points to differential diagnostic differences between CPTSD and borderline personality disorder (► Sect. 3.5.1): these can be derived from all symptom profiles in which the symptomatology of CPTSD and borderline personality disorder does not overlap. In ► Fig. 3.1 the only symptom overlap is for the single symptom of the feeling of emptiness.

However, there are also isolated studies that could not distinguish PTSD from CPTSD (e.g. Wolf et al., 2015 in American war veterans). Here, a further specification of the two diagnostic definitions may be necessary.

Using the statistical method of network analysis of symptoms, Knefel et al. (2018) have investigated which individual symptoms are particularly central to CPTSD. Data of 1590 persons with very different traumatic experiences from 4 countries were analysed. All 12 individual CPTSD symptoms examined were connected in a correlative network, that is, they occur regularly in the form of a symptom pattern. Furthermore, the symptoms that were consistently present in all patients can be determined, even if the CPTSD symptoms are incomplete. These “central symptoms” are:

- the feeling of worthlessness (symptom of self-deprecating beliefs),
- increased frightfulness (symptom of a persistent feeling of danger).

This empirically found centrality can be used as a promising starting point for the formulation of explanatory models (► Sect. 3.7), whereby the feeling of worthlessness for the lasting impairment of the psychological organisation of the self-concept and the increased frightfulness point to underlying neurobiological processes (► Chap. 6).

3.4 Epidemiology

Epidemiology has to answer the following questions regarding the CPTSD in particular:

- After which types of trauma does CPTSD most often manifest itself?
- How common is the CPTSD in the population?
- How common is CPTSD in clinical populations - also compared to classical PTSD?

So far, there is only a limited amount of data available on the CPTSD, so the following statements should be interpreted with caution. They are taken from the studies of Ben-Ezra et al. (2018), Maercker et al. (2018) and Perkonigg et al. (2016).

3.4.1 Trauma Types and CPTSD

From the available studies, the most pathogenic trauma types for CPTSD are the following:

- sexualised violent experiences, including sexual abuse of children,
- physical violence in adulthood,
- unspecified other extreme stress experiences.

3.4.2 Population Prevalence

As with the corresponding data on PTSD, it should be noted that the rate of these disorders changes according to the frequency of trauma in the society concerned, that is, the prevalence is higher in countries with a high propensity to violence, war, etc. Also, so-called point prevalences (referring to a specific point in time) are lower than lifetime prevalences (referring to the entire lifetime).

- Germany: 0.5–0.7% (point prevalence) and 1.8% (lifetime prevalence),
- Israel: 2.6% (lifetime prevalence),
- USA: 1.0–3.3% (lifetime prevalence).

3

3.4.3 Prevalences in Clinical Populations

In specialized trauma clinics and outpatient clinics, CPTSD prevalence rates of over 32% were found worldwide, rising to as high as 64% in a clinic in the UK. In contrast, patients with “classic” PTSD were found in a frequency of 15–43% in these facilities (overview in Brewin et al., 2017).

For war refugees in humanitarian aid facilities in the countries to which they fled (Lebanon, Switzerland, West Papua), the ratio of CPTSD to PTSD was usually two-thirds CPTSD to one-third “classical” PTSD (e.g. Hyland et al., 2018).

3.5 Differential Diagnostics

The consequences of severe and repeated traumatic experiences are manifold and can manifest themselves in a wide range of disorders, including in particular affective, anxiety, eating and substance dependence disorders. Particularly relevant for the differential diagnosis of CPTSD are

- borderline personality disorder (Borderline PS),
- dissociative disorders, especially **partial dissociative identity disorder**.

3.5.1 Borderline Personality Disorder

In the case of **borderline PD** (according to ICD-11: Personality disorder with borderline pattern), traumatic experiences can be proven in the vast majority of patients in their medical history (approx. 80%; Sack et

al., 2012). These experiences were often sexual abuse or persistent physical violence, in addition to aversive childhood experiences such as psychological or physical neglect. The main symptoms of borderline PD include instability in personal relationships, fear of abandonment, impulsive and self-damaging or self-harming behaviour. The following overview shows that some of the symptoms differ between the two diagnoses:

Borderline PD	Complex PTSD
Frequent impulsive outbreaks	Trigger-related violent expressions of emotion
Changing self-assessment	Persistent negative self-image
Fear of abandonment	Fear of being abandoned is not a characteristic
Frequent suicidal tendencies	Rare suicidal tendencies

As a diagnostic guideline, it has proved pragmatic that in cases where this distinction is difficult or impossible to make, in particular, the therapeutic procedure determines the order in which the diagnosis is made. If the focus is on the psychotherapy of borderline symptoms, this will be expressed in a corresponding diagnosis; if a phase-oriented, trauma-focused procedure is initiated (► Chaps. 16 and 17), the CPTSD diagnosis is again in the foreground.

3.5.2 Dissociative Disorders

Dissociative symptomatology can be part of the CPTSD symptomatology as described, for example, in the form of derealisation, depersonalisation, dissociative stupor or trance. Also, it is possible to alternatively consider completely own disturbance patterns by differential diagnosis (ICD-11 formulations, the **dissociative iden-**

tity disorder and the **partial dissociative identity disorder**. The very rare dissociative identity disorder can be more clearly distinguished from CPTSD, at least in its course. In this case, the focus is on the changes in self-representation that are not reflective for the patients themselves (see Nijenhuis, 2017).

■ **Partial Dissociative Identity Disorder (PDI: New in ICD-11)**

It is characterized by “an identity disorder in which two or more different personality states (dissociative identities) are accompanied by pronounced discontinuities in the sense of self- and action capacity. Each personality state comprises its pattern of experiencing, perceiving, feeling and relating to oneself, the body and the environment. A personality state is dominant and normally functions in daily life, but is influenced by one or more non-dominant personality states (dissociative intrusions). These intrusions can be cognitive, affective, perceptual, motor or behavioral.

The non-dominant personality states seldom assume executive control over the consciousness and functioning of the individual, but there may be occasional, limited, and transient episodes during which a pronounced personality state assumes executive control. These personality states manifest themselves in (transferred) behavioural and emotional states experienced during the trauma, for example, in re-enactments of the traumatic memory, and episodes of self-injury (WHO, 2018).

The diagnosis will again be based on the respective core symptoms, whereby in the case of trauma-related PDI, the focus will be on the alternation of adult and child self-representation. The child’s conditions should be biographically related to the traumatisa-tion (e.g. re-enact a phase during the traumatisa-tion). In addition, the diagnosis can also be assigned if helpful in the sequence of the therapeutic procedure, for example, if

antidissociative techniques are used first (Boon et al., 2013; Priebe et al., 2014).

3.6 Clinical Diagnostics

► Chapter 8 describes the available research tools on CPTSD, referring to earlier, broader definitions such as the DES-NOS concept.

In addition, the new ICD-11 specific clinical interview (ITI) and questionnaire (ITQ) on PTSD and CPTSD, which are still in the final stages of their psychometric development, are presented here.

3.6.1 International Trauma Interview (ITI) (Roberts et al., 2016)

The diagnostic interview was designed according to the CAPS (Clinician-Administered PTSD Scale; ► Sect. 8.2.2.1).

The interview first collects information about the traumatic event, followed by the recording of PTSD features, the re-experience-in-the-present symptoms (nightmares, flashbacks: with several sub-questions, severely stressful intrusions), the avoidance symptoms (thought/feeling as well as behavioral avoidance), the two symptoms of persistent threat (alertness, frightfulness) and the questions on the symptom-related restriction of psychosocial functioning.

The symptom areas of the disturbed self-organisation are then recorded:

- **Emotional regulation** in the two variants of
 - Overactivation (e.g. violent expressions of emotion, difficulty in recovering from minor stress),
 - Deactivation (e.g. emotional numbing, derealisation, depersonalisation),
- **Negative self-concept** (e.g. feelings of worthlessness, shame),

- **Relationship difficulties** (e.g. avoiding relationships, proximity problems),
- Concluding questions on the symptom-related limitation of **psychosocial functioning**.

3

The ITI ends with 9 questions on the leading symptoms of borderline personality disorder, which are important for differential diagnosis.

There exist only validation data from Sweden for the psychometric parameters of the interview (Bondjers et al., 2019).

3.6.2 International Trauma Questionnaire (ITQ) (Cloitre et al., 2018)

Until 2018 this questionnaire was used in longer preliminary versions for research purposes. The official version contains 18 questions in addition to the traumatic event (type, period): half on PTSD core symptoms and a half on CPTSD. ■ Table 3.2 names its items.

The ITI showed very good psychometric characteristics: internal consistency $\alpha = 0.79$; internal validity: clear 3-factor solution. It has been translated into several languages (Karatzias et al., 2017).

3.7 Explanatory Models

3.7.1 Risk and Protection Factors

The body of knowledge on the risk and protection factors of CPTSD is constantly expanding, although the diagnosis has only recently been defined. The following presentation arranges the findings into biopsychosocial factor groups.

3.7.1.1 Biological Factors

Some of the extensive knowledge of disorders for “classical PTSD” can also be transferred to CPTSD, especially when it comes to long-term or multiple trauma. It affects brain changes, the hypothalamic-pituitary-adrenal cortex axis, dissociation and disturbed emotional regulation (► Chap. 6).

■ Table 3.2 Arrangement of the 18 items in the International Trauma Questionnaire

PTSD criteria	Re-experience		Avoidance		Ongoing threat	
	1. disturbing nightmares	2. flashbacks	3. thoughts, feelings	4. situations, actions	5. vigilant	6. jumpy
Criteria of psychosocial functioning (PTSD part)	7. in relationships		8. in the ability to work		9. in other important areas such as education, parenthood, etc.	
CPTSD criteria	Regulation of emotions		Negative self-image		Maintenance of relations	
	10. self-calming difficulty	11. emotional dustiness	12. feeling of failure	13. feeling of worthlessness	14. feelings of distance	15. proximity problems
Criteria of psychosocial functioning (CPTSD part)	16. in relationships		17. in the ability to work		18. in other important areas such as education, parenthood, etc.	

Furthermore, Lanius et al. (2010) draw attention in particular to the factors associated with attachment and relationship trauma:

- Dopamine accumulating in the nucleus, which promotes the establishment of social bonds
- Early childhood deprivation consequences, which also manifest themselves in the nucleus accumbens through striatal hypoactivity,
- The same deprivation consequences that lead to a dysregulation of the cortisol regulation

Other factors were summarised by Marinova and Maercker (2015):

- There are indications for genetic factors, but not yet sufficient evidence.
- There is growing evidence for epigenetic mechanisms, in particular DNA methylation, which may lead to changes in immune function. In addition, genes responsible for antioxidative processes, neurogenesis, memory formation, etc. appear to be epigenetically altered (Marinova et al., 2017).
- The telomeres as protective proteins of the chromosomes become shorter as a result of childhood trauma and cannot regenerate under prolonged aversive conditions. This has been shown for high-risk populations, for example, with child sexual abuse, but not yet in patient groups with CPTSD.

3.7.1.2 Psychological Factors

The empirical findings to date do not yet suffice for a well-founded framework model of risk factors such as exists for PTSD (■ Fig. 2.2 and ► Sect. 2.5).

Plausibly supported by clinical experience and various individual studies (Gilbar et al., 2018: male Israeli soldiers; Hecker et al., 2018: refugees; Krammer et al., 2016: older Swiss after childhood traumatisation; Powers et al., 2017: female African-

Americans of a crisis centre), the following factors can be compiled:

- frequent previous (multiple) traumas in general,
- frequent sexual abuse of children,
- higher rates of co-morbidity with other mental disorders, especially depression and substance dependence,
- professional, long-term exposure to trauma, for example, combat missions during military service,
- continuing current stress and trauma after-effects, so-called post-migration problems such as isolation, separation from relatives, uncertain future.

3.7.1.3 Social Factors

The latter of the psychological factors play a role in the social sphere. The studies mentioned above also revealed the following social factors:

- lack of opportunities for disclosure and communication about the traumatic experiences,
- lack of social support and social recognition as victims.

The establishment of the CPTSD diagnosis will soon lead to further findings on risk or protective factors.

3.7.2 Premises of a CPTSD Disorder Model

Over the past years, various disturbance models have been developed for PTSD, which in particular served as starting points for the therapeutic procedure (► Chap. 2). For CPTSD, no elaborated disorder model is available to date. In the following, essential determinants for a later disorder model are compiled here.¹

¹ The following three points are partly cited from Maercker (2017), pp. 62–66.

1. In such a model, the dominant patterns of disturbance of affect regulation, relationship ability and self-perception after prolonged trauma and severe maltreatment can be explained first. Basic research in developmental psychology suggests that the ability to regulate effect, to form relationships and to perceive oneself should be summarized in the **concept of social-emotional competencies** (Malti & Noam, 2016). This refers to abilities to find one's way in the world as an adolescent and to assert oneself, which includes complex thinking, self-regulation and empathy. These competencies or skills cannot be built up as a result of traumatising in childhood or adolescence or are damaged again in young adulthood as a result of long-lasting traumatising (through war, flight or persecution). Complex traumatising means that the skills listed can either not be acquired at all or only partially.
2. The **attachment theory** can present additional explanations. According to it, people with a CPTSD have an insecure or disorganized attachment in their relationships with others and the world due to their lasting psychological damage (Charuvastra & Cloitre, 2008). This can be exacerbated if no secure early childhood relationship could be built up before the trauma occurred, which can lead to unfavourable dispositions in violent family milieus or certain crisis-ridden regions of the world. The therapeutic consequence is then to approach the emotionally damaged person by establishing security and trust (► Chap. 27). Incidentally, this explanation in terms of attachment theory is close to the psychoanalytical concept of the "inner child" (after C. G. Jung 1940, 1951), which has so far not been able to realise its attachment wishes in the case of complex traumatised persons.
3. The impaired self-perception and dissociation tendency affect the range of symptoms of flashbacks, avoidance and dissociative drifting embedded in CPTSD. The concept of **trauma-related structural dissociation** (Nijenhuis & Mattheß, 2006), based on Pierre Janet's (1892, 2001) descriptions, assumes that the integration of all perceptions, impulses and reactions to the environment is in itself a psychological performance, which can, however, be impaired in various degrees of severity. For example, some traumatised persons do not remember the traumatic experiences they have had, either spontaneously or after clinical questioning. This can change during the therapeutic process. Biological research findings by Lanius et al. (2010) fit in with structural dissociation, which demonstrated undermodulated emotional regulation in classic PTSD based on neuronal inhibition processes in the middle frontal brain and overmodulated emotional regulation and disinhibition processes in the same frontal brain area in CPTSD.

First empirical evidence for this model is available (Maercker et al., 2021) and will make the CPTSD easier to explain and treat in the future.

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Prolonged Grief Disorder

C. Killikelly and Andreas Maercker

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4.1 Definition

Grief is a natural and universal response to the death of a loved one. For many bereaved people, the loss can be extremely painful and distressing. Verena Kast describes the changes that accompany the death of a loved one as follows.

» It is a borderline situation in life that can change us, that can make us see the really essential things, and it is a situation that can also break us. (Box 2013, p. 15).

For several years, intensive research has been conducted to determine the point at which a normal grief reaction may be described as pathological. The new criteria of the eleventh version of the International Statistical Classification of Diseases (ICD-11) of the World Health Organization (WHO) provide a frame of reference to

answer this question. For the first time, the ICD-11 lists a clinical diagnosis for the syndrome of pathological grief reactions as “prolonged grief disorder” (Killikelly & Maercker, 2018; Maercker et al., 2013a). The new definition of prolonged grief disorder includes two core symptoms (intense longing or desire for the deceased person **and/or** persistent preoccupation with the deceased person or their death), emotional pain (e.g. grief, guilt, anger), and significant functional impairment (Table 4.1). In addition, the new definition includes a cultural criterion that requires that a diagnosis be made only if the grief reaction is more pronounced than social or cultural norms would suggest. The definition of prolonged grief disorder is the latest conceptualization of a pathological grief response and follows the new WHO standards for precise and clinically relevant diagnoses (Keeley

■ **Table 4.1** Characteristics of the ICD-11 criteria for prolonged grief disorder. (Adapted from Prigerson et al., 2009; WHO, 2018)

A. Event criterion	Death of a close person at least 6 months ago
B. At least one of the following symptoms	Strong and persistent desire(s) and longing for the deceased person Strong and persistent preoccupation with the deceased person or circumstances of death
C. Some of the accessory symptoms	Accompanied by intense emotional pain, for example: Sadness Feelings of guilt Anger Avoidance Denial Difficulties in accepting the loss Impaired sense of identity or self (concept) Inability to experience positive mood Emotional numbness Difficulties in participating in social life or activities
D. Time and impairment criteria	The prolonged grief reaction is more pronounced than social or cultural norms would suggest (at least 6 months or longer, depending on cultural and contextual factors) and leads to significant impairment of personal functioning

et al., 2016a). The narrative definition in the ICD-11 is

- » Prolonged grief disorder is a persistent and profound grief reaction that occurs after the death of a partner, parent, child or other loved one. The grief reaction includes a strong longing or preoccupation with the deceased person. These main characteristics are often accompanied by intense emotional pain (e.g. sadness, guilt, anger, avoidance, difficulty accepting the loss, impaired sense of identity, inability to experience positive moods, difficulty participating in social life or activities). The diagnosis of prolonged grief disorder is only given for relatively long grief reactions (death occurred at least 6 months ago) that are not in proportion to the bereaveds' social, cultural or religious norms. Longer lasting bereavement reactions that are in proportion to the cultural and religious norms of the bereaved are called normal grief and do not receive a diagnosis.

4.2 Development of Diagnosis

Until now, the diagnosis of a depressive disorder or an adjustment disorder has often been used as a substitute for a state of grief requiring treatment. As will be described below, a depressive episode after a bereavement can be distinguished from a prolonged grief disorder.

The current definition of prolonged grief disorder is the result of worldwide research efforts. In particular three research groups (Horowitz et al., 1993; Prigerson et al., 1999; Shear et al., 2011) have contributed to the development of diagnostic criteria for pathological grief. In 1974, Horowitz and colleagues documented similarities between symptoms of posttraumatic stress disorder (PTSD) and intense grief reactions that were associated with significant impairment and adaptation problems (Maercker &

Lalor, 2012). Subsequently, Horowitz's research group proposed the first diagnostic criteria for **pathological grief**. The core symptoms included preoccupation with the deceased or the circumstances of death, avoidance behaviour and adaptation problems. The term "complicated grief" was coined for this syndrome (Horowitz et al., 1997). Based on this classification of complicated grief as a stress reaction, Prigerson's research group developed further diagnostic criteria and procedures for recording complicated grief. Among other things, this research group published the self-assessment questionnaire "Inventory of Complicated Grief" (ICG) (Lumbeck et al., 2012; Prigerson et al., 1995) for recording pathological grief reactions (► Sect. 4.8). With the help of this instrument, it has been shown that complicated grief can be distinguished from major depression and anxiety disorder (Prigerson et al., 1995). In 1997, Prigerson's working group, together with other experts, specified the criteria for complicated grief. The resulting symptoms were classified into two superordinate categories:

- Impairments associated with separation from the deceased person (e.g. yearning for the deceased person)
- Traumatic symptom complaints (e.g. disbelief about the loss).

In the meantime, there is a multitude of criteria for recording pathological grief reactions as well as a number of survey procedures based on different definitions of grief. The lack of consensus is reflected in the terminology and the wide range of terms used to describe pathological grief (e.g. traumatic, abnormal, chronic or pathological grief) (Wagner & Maercker, 2010). The concept of **prolonged** grief was first introduced in 2008 as it allowed a clearer distinction from PTSD than the concept of traumatic grief (Prigerson et al., 2008). Finally, in 2009 an attempt was made to reach a common consensus with a panel of experts on the criteria for prolonged grief

disorder. The PGD-2009 consensus criteria were developed based on the results of the Yale Bereavement Study, a grief study involving a sample of 317 bereaved persons (Prigerson et al., 2009). The new ICD-11 criteria for prolonged grief disorder are based on these PGD-2009 consensus criteria.

Almost simultaneously, Shear's research group proposed alternative diagnostic criteria for complicated grief (Shear et al., 2011). These criteria are based on data from a clinical sample (i.e. mourners who have sought professional help after their loss) (Shear, 2015; Shear et al., 2006, 2011). The criteria for prolonged grief disorder differ from the

criteria for complicated grief in many ways. The symptoms themselves, the number of symptoms that must be present to make a diagnosis, the sample (clinical vs. non-clinical) and statistical analyses from which the criteria are derived (Reynolds et al., 2017). Persistent complex bereavement disorder (PCBD) is a compromise between complicated grief and prolonged grief disorder. In the appendix of the fifth version of the Diagnostic and Statistical Manual (DSM-5), persistent complex bereavement disorder was included as a research diagnosis (Prigerson et al., 2008; Shear et al., 2011; ■ Table 4.2).

■ **Table 4.2** The Persistent Complex Bereavement disorder in the DSM-5 Research Annex (APA, 2013)

A. Event criterion	Death of a loved one
B. Since death and on more than half of the days at least one of the following symptoms occurs in clinically significant manifestations for at least 12 months	Strong and persistent yearning or longing for the deceased person Intense emotional pain and intense sorrow in response to the death Preoccupation with the deceased Excessive preoccupation with the circumstances of the death
C. Since death and on more than half of the days at least 6 of the 12 symptoms occur in clinically significant form for at least 12 months	Difficulties in accepting the loss Disbelief or emotional numbness Difficulties in allowing positive memories of the deceased person to remain Bitterness or anger about the loss Dysfunctional evaluations of oneself in relation to the deceased person or death (e.g. self-reproach) Excessive avoidance of memories of the loss Desire to die in order to be close to the deceased person Difficulty in trusting others since the loss feelings of loneliness or distance from other people Feeling that life without the deceased person is meaningless -or empty, or the belief that one cannot function without the deceased person Uncertainty about one's own role in life or a diminished sense of identity difficulties or reluctance to pursue interests or plans for the future
D. Impairment criterion	The symptoms lead to significant impairment in social, professional or other functional areas or to significant suffering
E. Congruence with socio-cultural norms	The grief reaction is disproportionate or not congruent with cultural, religious or age-related norms

The new ICD-11 criteria for prolonged grief disorder are based on existing diagnostic criteria as well as the new World Health Organization guidelines for the ICD-11. Instead of prioritizing the clinical specificity and validity of disorders, the WHO in the new version focuses on the clinical and global applicability of the diagnostic criteria (Keeley et al., 2016a). Clinical applicability is to be achieved by simplifying diagnoses so that they can be better communicated and used, and by simplifying therapy planning (Keeley, 2016a; Reed et al., 2011). For further applicability, short diagnostic guidelines should be used, which include the core features as well as additional symptom information (e.g. time course, cultural aspects) (First et al., 2015). As can be seen from ■ Table 4.1, the core characteristics and a few additional criteria, as well as the consideration of cultural aspects, represent precise and concise criteria for prolonged grief disorder that improve the clinical and global application.

4.3 Symptom Picture

In general, grief is considered pathological due to two characteristics (Stroebe et al., 2008):

- the duration and severity of grief specific symptoms and/or
- significant stress or impairment in important areas of life

In terms of quality, however, pathological grief is no different from normal grief (Holland et al., 2009). It is not so much the symptom characteristics that underlie prolonged grief disorder as the intensity of the symptoms, their clinically significant burden or impairment and the duration of these impairments (Maercker et al., 2013b).

Pathological grief reactions comprise two core symptoms (Maercker et al., 2013b; Prigerson et al., 2009):

- Intensive stress due to the (physical and emotional) separation from the deceased person,
- Difficulties in accepting death

People who suffer from pathological grief are often caught in a vicious circle that is characterized by a strong longing for the deceased person. This longing leads to an intense preoccupation with the deceased, which can be accompanied by several impairments. The core symptoms of prolonged grief disorder and other additional symptom features have been statistically confirmed (Prigerson et al., 2009). The analysis showed that a diagnosis of prolonged grief disorder requires at least 5 additional emotional or cognitive symptoms in addition to the core symptom of longing (“yearning”). Additional symptoms include the avoidance of memories of the deceased person, emotional numbness, anger or bitterness over the loss, an impaired sense of identity and a sense of meaninglessness. This symptom pattern has been additionally confirmed by network analysis (Robinaugh et al., 2014). Network analysis is a method of empirical research that makes it possible to identify connections between different symptoms and the strength of these connections. In the study by Robinaugh et al. (2014), once again the intense longing for the deceased person as well as an impaired sense of identity were identified as core symptoms. These study results support the new ICD-11 criteria for prolonged grief disorder, which include a strong longing for the deceased, preoccupation, and additional symptoms of emotional impairment.

While many bereaved may experience the symptoms described above after the loss of a loved one, these acute grief symptoms usually subside within the first 6 months (■ Fig. 4.1). The exact time course of the transition from normative to pathological grief is currently the subject of intensive research (Wakefield, 2012). According to the

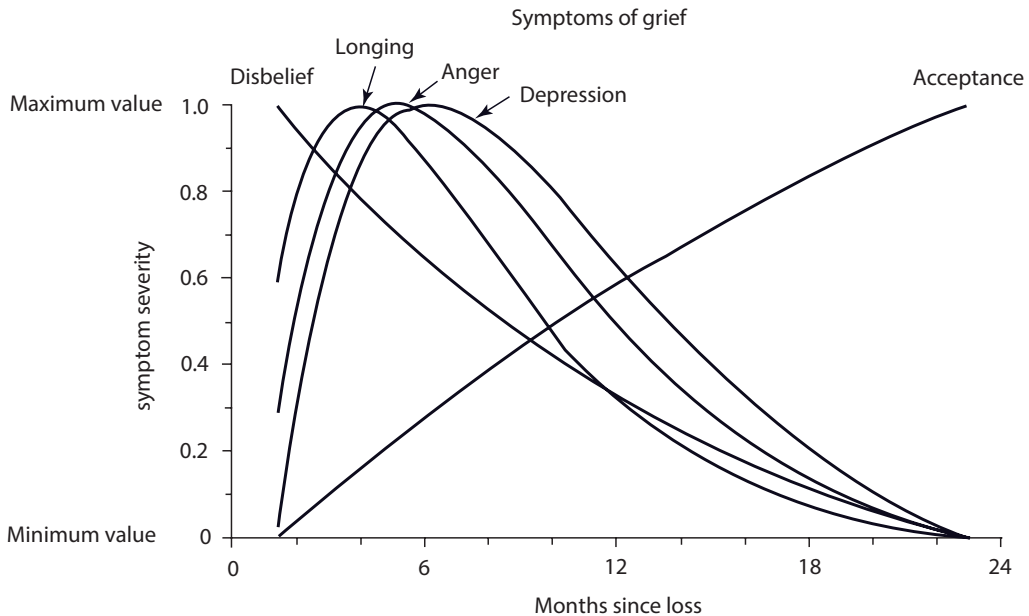


Fig. 4.1 Change patterns of selected grief symptoms as a function of time since the loss (Mod. according to Maciejewski et al., 2007)

current ICD-11 criteria for prolonged grief disorder, a loss should occur at least about 6 months before a diagnosis is made. However, this guideline is only a reference point for clinicians and it is up to the healthcare professional to determine the appropriate duration of symptoms for a diagnosis in each case. The criterion of approximately 6 months was not chosen arbitrarily, but is based on study findings: Maciejewski et al. (2007) found that the core symptoms (longing, anger, depressive symptoms) peak in the first 6 months after a loss. In addition, symptoms seem to best predict the presence of a prolonged grief disorder (according to the 2009 criteria 13–24 months later) when recorded approximately 6 months after the loss (Prigerson et al., 2009). In addition, a comparative cultural study confirmed the appropriateness of the temporal reference point for differentiating persistent from normative mourning (Keeley et al., 2016b).

In principle, the diagnosis of a prolonged grief disorder seems to be indicated only when symptoms appear more intensively

and for a longer time (Maciejewski et al., 2016). The temporal reference criterion of 6 months should be used clinically with reservation and only if grief reactions exceed societal or cultural norms.

4.4 Distinction From Normal Grief

80–90% of all bereaved do not develop a pathological grieving reaction as a result of loss, but rather a “normal” or normative grief reaction (Latham & Prigerson, 2004; Prigerson, 2004). Bonanno and colleagues were able to show in a longitudinal study that grief reactions are often characterised by resilience and only rarely lead to chronic problems (Bonanno, 2004; Bonanno et al., 2002). Various theories describe the normal grieving process. Probably the best-known theories describe grief based on a stage model and tasks. In the stage model, it is assumed that mourners have to cope with a number of emotional, cognitive, and behavioural symptoms before adaptation is possi-

ble (Bowlby, 1982; Kübler-Ross & Kessler, 2005). Task theories (Kast, 1999, 2013) assume that mourners actively have to cope with various tasks (e.g. processing the grief pain). The influential dual-process model of grief (“Dual Process Model”) extended existing theories by distinguishing between two styles of coping: loss-oriented and restorative coping (Stroebe & Schut, 1999). Loss-oriented coping attempts describe the processing of grief-related emotions and cognitions (e.g. looking at photos of the deceased person awakens memories of her/him). Restorative coping, on the other hand, refers to attempts to cope with life without the deceased person and to find a way back into life, for example by taking on new roles or tasks (e.g. finding new hobbies). While previous theories focused on the importance of loss-oriented processing, the DPM understands grief as a dynamic process characterized by an oscillation between the two attempts at coping.

Based on the stage and task theories, it was long assumed that mourners develop pathological grief when stages or tasks are not completed or mastered (Kübler-Ross, 1969); (see also ■ Fig. 4.1 in the figure based on an empirical study, Kübler-Ross’ phases of grief are recognisable as chronologically successive “symptom peaks”) While a gradual grief process has been confirmed in some studies (Chen et al., 2017; Maciejewski et al., 2007), research findings that suggest an individually varying mourning process predominate. According to this, many mourners do indeed go through the stages or tasks; however, the order and duration of these stages or tasks vary greatly between bereaved individuals, and a nonlinear grieving process is not seen as an indication of a pathological grief reaction (Holland & Neimeyer, 2010; Maercker et al., 2013a; Prigerson et al., 2009; Rosenzweig et al., 1997; Wakefield, 2012, 2013).

Many clinicians base the distinction between normal and pathological grief on how long ago the loss occurred and how long the grief symptoms have persisted. Based on the length of grief, Stroebe et al., (2000) identified different types of grief: delayed, absent, unresolved and chronic grief. The predictive value of the length of grief was also shown in a study by Jacob (1993), which investigated the presence of the main stages of grief over a period of 2 years. While longing for the deceased was the most common and intense symptom, negative emotional symptoms decreased in frequency during the study period. Depressive moods, disbelief and yearning decreased during the 2 years, and anger remained at relatively low levels. Acceptance of the loss, on the other hand, increased. This symptom pattern was replicated by Zhang et al. (2006) and in a sample that did not include people with prolonged grief disorder (Maciejewski et al., 2007). Interestingly, all symptoms occurred most often within the first 6 months after loss (Prigerson et al., 2008). These results suggest that regardless of normal or pathological grief, bereaved individuals experience similar symptoms and intensities during the first 6 months. While many mourners accept the loss and resume normal life after 6 months (Prigerson, 2004), people with pathological grief continue to suffer intense impairment. Despite the predictive role of the temporal course of grief reactions, this is not the only criterion that enables a distinction to be made between normal and pathological grief. In addition to the temporal course, a distinction can also be made by symptoms, their intensity and the functional impairment and stress. Furthermore, pathological grief can be differentiated from PTSD and major depression (► Sect. 4.7).

4.5 Grief as a Cultural Phenomenon

The experience and understanding of grief must always be considered against the respective cultural background (Kast, 1999, 2013). Although grief is a universal reaction to the death of a loved one, there are great cultural differences in the specific grief reactions and symptoms (Stroebe & Schut, 1998). These cultural variations challenge Western notions of how to distinguish pathological from normal grief and current diagnostic systems. A growing awareness of the importance of cultural factors in understanding grief is reflected in the new ICD-11 criteria for prolonged grief disorder. The new definition refers to the cultural context and encourages clinicians to only make a diagnosis if the grief response is more pronounced than would be expected given cultural and social norms. The worldwide prevalence of pathological grief reactions has been confirmed in both Western countries (Kersting et al., 2011; Newson et al., 2011; Simon et al., 2007) and Asia (Fujisawa et al., 2010). However, expectations of how pathological grief differs from normal grief, symptoms, length of mourning and functional impairment are culture-specific.

Studies found significant differences in the classification of grief reactions. In Western countries, grief is often referred to as primarily a feeling or emotion with thoughts associated. In other cultures, on the other hand, grief is described both as an emotion and a thought, the connection between which is much stronger than in Western cultures (Rosenblatt, 2008; Wikan, 1990). In Japan, for example, grief is often described as “a hole in my mind and heart” 心に穴が開く or “Kokoro ni ana ga aku” (Hasada, 2002). Grief seems to be understood here as a holistic process that affects the mind, emotions and the body. Cultural differences also show up on an emotional level. While in Western countries sadness is

one of the core emotions, in Rwanda the desire for retribution is perceived as appropriate (Bagilishya, 2000; Rosenblatt, 2008).

Comparative studies show that mourners from China and Switzerland differ with regard to the additional symptoms of prolonged grief disorder. After the loss of their child, Chinese parents increasingly reported feeling that their lives were meaningless and empty. Swiss parents, on the other hand, suffered more often from preoccupation with their deceased child. Both Chinese and Swiss parents have a strong longing and desire for their deceased child. The core symptom of longing may appear to be a universal symptom of grief, while additional symptoms such as emotional impairment vary more between cultures. Killikelly et al. (2018) found that refugees and survivors from conflict regions often (68%) feel a strong longing for the deceased person. The core symptom of prolonged grief disorder is also widespread among refugees from East Timor, West Papua and Burma (Myanmar) (Silove et al., 2017; Tay et al., 2016; Vromans et al., 2012). Accessory symptoms such as dreams of the deceased in refugees from Cambodia or behaviour imitating that of the deceased, in contrast, in Kurdish refugees were culture-specific (Hall et al., 2014; Hinton et al., 2013).

The extent of the functional impairment caused by grief is difficult to assess across cultures. In the Zulu culture in South Africa, for example, widows are expected to dress in black for a year and withdraw from society. To what extent this socio-cultural norm leads to stress or functional impairments as a result of grief per se is unclear. The importance of cultural norms and expectations is also reflected in the different mourning periods that are culturally considered appropriate. In Central Europe, the “year of mourning” is considered appropriate. In Bali, on the other hand, the public expression of grief at any time is considered pathological (Rosenblatt, 2008). These examples

illustrate the global significance of culture in the experience, expression, communication and understanding of grief.

4.6 Epidemiology

To date, there is a lack of large-scale population studies that provide information on the rates of prolonged grief disorder according to ICD-11. However, previous epidemiological studies, which have examined the prevalence rates of pathological, traumatic and complicated grief, allow estimates of the frequency of occurrence of the prolonged grief disorder.

Existing large-scale studies estimate the prevalence of prolonged grief disorder at around 10% (■ Table 4.3). In Germany, a conditional prevalence of complicated bereavement (i.e. calculated only for those who have experienced bereavement) of 6.7% was found, and a prevalence in the general population of 3.7% (Kersting et al., 2011). In a recently published meta-analysis, the population prevalence of prolonged grief disorder was 10% (Lundorff et al., 2017).

When epidemiological data on pathological grief are provided, it is important to consider which population group these data are based on. Studies with different sample groups, for example, elderly persons, widows and widowers or caring relatives, illustrate the variation in prevalence rates (Bonanno

et al., 2002; Forstmeier & Maercker, 2007; Nielsen et al., 2017). In a study involving 5741 older people, 4.8% of the general population met the criteria for complicated grief (ICG) (Newson et al., 2011). Besides, prevalence rates seem to be about 2 times higher in clinically indicated persons suffering from other mental disorders such as major depression or bipolar disorder (Kersting et al., 2009; Simon et al., 2007). The circumstances of death also play a role. After a violent or traumatic death, much higher prevalences of about 14–76% are often found (Kristensen et al., 2012). Disordered grief is particularly widespread among refugees with approximately 32% (Killikelly et al., 2018).

Prevalence rates also vary in different regions of the world. The majority of studies in western countries showed prevalences of less than 10% (■ Table 4.3) (He et al., 2014; Kersting et al., 2011). However, one study with Chinese mourners reported a lower prevalence rate of 1.8% (He et al., 2014). Similarly, high prevalence figures were found in a Japanese study. 2.4% of mourners met the criteria for complicated grief and 22.7% for subsyndromal complicated grief (Fujisawa et al., 2010). Besides, the prevalence rates of complicated grief differ according to the measurement instrument used in the epidemiological studies. Forstmeier and Maercker (2007) found a prevalence of 4.2% with the criteria for pathological grief proposed by Horowitz (Horowitz et al., 1997) and a significantly lower prevalence of 0.9% when grief symptoms were recorded using the Prigerson instrument (Prigerson et al., 1995). The more precise new ICD-11 criteria for prolonged grief disorder should enable improved estimation of prevalence rates.

■ **Table 4.3** Prevalence rates of large population studies

Study	Region	Sample size	Prevalence
Kersting et al. (2011)	Germany	1445	6,7%
Fujisawa et al. (2010)	Japan	969	2,4%
He et al. (2014)	China	445	1,8%

4.7 Differential Diagnosis

In clinical practice, the differential diagnosis of prolonged grief disorder must be distinguished from post-traumatic stress disorder

Table 4.4 Distinction of prolonged grief disorder from a post-traumatic stress disorder and major depression

Mental disorder	Prolonged grief disorder	Post-traumatic stress disorder	Major depression
Key Symptoms	Preoccupation with the deceased or the circumstances of death	Intrusions, avoidance, chronic hyperarousal	Decreased interest, avoidance of activity
Emotional symptoms	Longing for the deceased	Fear	Sadness
	bittersweet emotions	Negative Affect	
Behavioural symptoms	Search for closeness to the deceased person	Avoidance behaviour	Withdrawal in all areas of life

^aThe **highlighted** symptoms allow a differentiation of the disorders

(PTSD) and major depression (Table 4.4). Criteria of a prolonged grief disorder overlap significantly with the criteria of PTSD, for example, intrusions of the circumstances of death, emotional numbness and avoidance of memories of the deceased or things associated with death and dying. In PTSD, however, there is also a strong fear of reliving stressful memories. In people who suffer from a prolonged grief disorder, on the other hand, a strong sadness, as well as a strong longing for the deceased and the desire to be close to him or her, are the main factors. To this end, bereaved individuals, for example, consciously revel in memories of the deceased person (Shear et al., 2005, 2011). A pattern of approach and avoidance can ultimately be accompanied by ambivalent memories and feelings (Maercker & Lalor, 2012).

Symptoms similar to prolonged grief disorder can also occur in major depression. The overlap is found between emotional symptoms such as sadness, guilt and a sense that life is meaningless, and behavioural symptoms such as social withdrawal and loss of interest in activities that used to bring pleasure. In major depression, however, these symptoms are experienced in different areas of life, while the symptoms of prolonged grief disorder relate specifically to loss.

Despite the high level of co-morbidity (84.5%) with other diagnoses (e.g. major depression, PTSD, anxiety disorders) (Simon et al., 2007), prolonged grief disorder can be distinguished from major depression and PTSD by differential diagnosis. Studies investigating symptom patterns in mourners usually find three groups (Djelantik et al., 2017):

- Mourners who suffer predominantly from symptoms of prolonged grief disorder,
- Mourners whose symptoms can be attributed to PTSD
- Mourners who show symptoms of prolonged grief disorder and PTSD.

These findings confirm both the overlap and the differential diagnostic delimitation of these three constructs. Differences in the temporal course, especially the onset of a prolonged grief disorder and that of PTSD, also confirm their qualitative independence. In a study by Djelantik et al. (2018), symptoms of prolonged grief disorder and PTSD could be predicted 18 months after loss through symptoms recorded 6 months after death. In addition, the symptoms of prolonged grief disorder could also be predicted independently of the PTSD symptoms occurring 1 year later.

4.8 Clinical Diagnostics

The new ICD-11 criteria for prolonged grief disorder represent the most current clinical diagnostic criteria (■ Table 4.1). The characteristics are based on previous definitions and criteria of pathological grief (Horowitz et al., 1997; Prigerson et al., 2009; Shear et al., 2011) and the diagnosis of persistent complex grief disorder (APA, 2013) listed in the DSM-5 research appendix.

In recent years, various self-assessment and clinical diagnostic procedures have been developed to assess the frequency and intensity of symptoms of grief reactions. The Inventory of Complicated Grief (ICG; ICG-R) has long been considered the gold standard for assessing the clinical severity of grief reactions (Lumbeck et al., 2012; Prigerson et al., 1995). With this self-assessment procedure, the symptom criteria of prolonged grief disorder are queried based on 19 items (e.g. “*I long for the deceased person*”). An extended version of the ICG is available with the ICG-R(revised), which includes 15 additional symptom criteria (Prigerson & Jacobs, 2001). An abbreviated version, which contains only the most indicated items, is the Prolonged Grief 13 scale (PG-13) (Prigerson & Maciejewski, 2007; Vogel et al., 2016).

Two newer clinical survey methods are available: the Traumatic Grief Inventory Self Report Version (Boelen & Smid, 2017) and the structured clinical interview for complicated grief (Bui et al., 2015). The former represents a self-assessment procedure (Boelen & Smid, 2017) and is based primarily on criteria of persistent complex bereavement disorder, enriched by a few items of the ICD-11 criteria for prolonged grief disorder. The structured clinical interview for complicated grief (Bui et al., 2015) is based on the criteria of complicated grief (Shear et al., 2011). With the International Prolonged Grief Disorder Scale (IPGDS), another measure is currently being devel-

oped to measure the frequency and intensity of symptoms of grief reactions. After an evaluation of the items by experts, the psychometric characteristics of the IPGD will be checked based on bereaved individuals from China, Japan and Switzerland. Compared to existing methods, the IPGDS will contain only the most informative items of existing survey methods and will therefore be more economical. At the same time, cross-cultural validation will contribute to the standardization of clinical and research methods. In addition to a self-assessment procedure, an IPGDS version for health care professionals will enable the diagnosis of prolonged grief disorder according to ICD-11 (Killikelly et al., in preparation).

4.9 Explanatory Models

Different approaches try to explain why some people develop complicated grief symptoms while others go through a normal grieving process. Sigmund Freud has explored grief and mourning. According to Freud, mourning refers to a series of psychological processes whereby the mourner slowly gives up the connection to the deceased person and learns to accept the loss. External and internal factors can influence the mourning process: a violent death, the quality of the relationship with the deceased or psychological defence mechanisms (Freud, 1917). If there is no detachment from the deceased person, the mourning process can be impaired. Research findings refute Freud’s assumption that mourners have to give up their relationship with the deceased in order to cope with their grief; instead of detachment, the relationship with the deceased may continue in a different form (Neimeyer et al., 2006).

Attachment-oriented approaches see insufficient internalisation of positive relationship experiences as a risk factor for the development of pathological grief reactions

(Mikulincer & Shaver, 2012; Shear et al., 2007). Early childhood bonding experiences and especially traumatisation (e.g. abuse or neglect), as well as an insecure bond, can increase the risk of developing prolonged grief disorder (Silverman et al., 2001; Vanderwerker et al., 2006; Boelen et al., 2013). The relationship with the deceased person (e.g. kinship, relationship quality, dependence) can also influence the severity of grief both positively and negatively. The death of a child, for example, is often regarded as the most severe loss (van Doorn & Prigerson, 1998; Zetumer et al., 2015; Xiu et al., 2016).

Different external and internal risk and protection factors can influence the development and course of a prolonged grief disorder (Znoj, 2016). Person-specific factors such as lower education, female gender or existing mental illness increase the risk of a prolonged grief disorder. Event factors such as an unnatural, violent death (e.g., murder, suicide) are also predictive factors. Refugees and immigrants who have been exposed to violent and traumatic loss have an increased risk of developing prolonged grief disorder. Other predictive factors include inadequate social support after the loss, dysfunctional cognitive beliefs and increased stress levels at the time of death. A high level of social support and precautions for imminent death can be protective factors.

Research also shows that the death of a loved one and the associated grief reactions also have neurobiological and cognitive effects. A wide variety of physiological changes were documented immediately after the loss. These include dysregulated sleep patterns, immunosuppression, increased release of stress hormones, and changes in blood pressure and heart rate (Buckley et al., 2012; Stelzer et al., in preparation). Physiological changes may contribute to the development or maintenance of a prolonged grief disorder. For example, mourners who did not report sleep disturbances during their grief had a lower risk of suffering

depressive symptoms 2 years later. There are also cognitive differences between bereaved with a normal vs. pathological mourning process. Mourners who suffer from pathological grief reactions process grief-related information less quickly (Maccallum & Bryant, 2010) and experience higher levels of interference from grief-related stimuli, which can be seen as an indication of the cognitive difficulties in prolonged grief disorders (O'Connor & Arizmendi, 2014).

Cognitive models place maladaptive mental processes at the centre of their etiological explanatory concepts. Altered cognitive schemata (attitudes, beliefs; e.g. negative self-image, devaluation of the future) in combination with avoidance behaviour contribute to the maintenance of prolonged grief disorder (► Chap. 20; Znoj, 2016). A similar explanatory approach is found in the cognitive-behavioural grief model (Boelen et al., 2006), which assumes that dysfunctional cognitions (e.g. mental arrest) prevent acceptance and integration of the loss.

Other therapeutic approaches are based on other explanatory models and consider certain aspects as risk or protective factors. Humanistic approaches, for example, focus on the search for a meaning to life. Systemic approaches aim to restore a balance in relationships. Gestalt therapy focuses on the technique of the empty chair as a projection surface. The new ICD-11 criteria for prolonged grief disorder will stimulate a more intensive elaboration of existing and new explanatory and therapeutic models.

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Adjustment Disorder

R. Bachem

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5.1 Definition

Maladaptive reactions to critical, non-traumatic life events are called adjustment disorders. Such life events can be both single events such as a break-up of a relationship or loss of a job, as well as chronic stressors such as poverty, migration or a serious physical illness. A critical life event (trigger of adjustment disorder) differs from a traumatic event (trigger of post-traumatic and complex post-traumatic stress disorder) in particular by the lower intensity of the stressor. Besides, there are differences in the dynamics and severity of the syndrome compared with post-traumatic stress disorder. The symptoms of adjustment disorder develop within 1 month after the first occurrence of the stressor and usually regress within 6 months after its termination.

5.2 Evolution of the Adjustment Disorder

5.2.1 Previous Concepts

For the first time, the diagnosis adjustment disorder appeared in DSM-III (APA, 1980)

as a kind of collective diagnosis for those patients who did not meet the criteria of a more specific diagnosis such as depression or anxiety disorder. In its 10th revision, the ICD-10 (WHO, 1992) also included the term adjustment disorder. Since its introduction, the diagnosis of adjustment disorder has been controversially discussed because opponents feared that normal difficulties in life would be pathologized (e.g. Fabrega & Mezzich, 1987). On the other hand, the introduction of the diagnosis of adjustment disorder allowed broader coverage and cost coverage of therapeutic interventions by the health care system. Despite small changes in further editions of the classification systems (Table 5.1), until the publication of the ICD-11 adjustment disorder remained an exclusion diagnosis, which was only diagnosed if the criteria for another diagnosis were not met. Consequently, research interest has focused more on full-fledged diagnoses such as depression or anxiety disorders, while far less attention has been paid to adjustment disorder (Casey, 2014). This is in marked contrast to clinical practice, where adjustment disorder is among the most frequently treated mental disorders with prevalence rates of up to 30% (Casey, 2014; Evans et al., 2013).

Table 5.1 Evolution of adjustment disorder in the classification systems

DSM	ICD
DSM-I (1952): Transient situational personality disorder DSM-II (1968): Transient situational disturbance	ICD-9 (1978): Transient situational disturbance, divided into acute stress reactions and adjustment disorders
DSM-III (1980): Adjustment disorder	ICD-10 (1992): Adjustment disorder (Chapter F43: Reactions to severe stress and adjustment disorders)
DSM-III-R (1987): Etiological criterion changed from psychosocial stressor to stressor	ICD-11 (2018): Adjustment disorder (Chapter 06: Disorders specifically associated with stress)
DSM-5 (2014): Included in the chapter on trauma and stressor-related disorders	

5.2.2 Recent Developments

An important innovation in the current ICD-11 and DSM-5 diagnostic systems is the introduction of the new chapter on specific trauma and stressor-related disorders. Both diagnostic manuals now also list the adjustment disorder in this chapter, although the conceptualisation of the adjustment disorder differs in terms of content. In contrast to its predecessors, the ICD-11 has made a paradigm shift and defines adjustment disorder for the first time based on specific symptoms (Maercker et al., 2013), while DSM-5 continues to list it as a diagnosis that is essentially established via exclusion criteria.

5.3 Symptoms of Adjustment Disorder

5.3.1 Diagnostic Criteria in the ICD-11

The ICD-11 understands adjustment disorder as a full-fledged disorder with a symptom profile. Adjustment disorder is placed on a stress continuum, as are acute stress reaction, post-traumatic stress disorder, complex posttraumatic stress disorder and persistent grief disorder. It is assumed that similar symptoms are characteristic of the stress response of adjustment disorder as for post-traumatic stress disorder. This concept of adjustment disorder as a stress-response syndrome was originally developed by Mardi J. Horowitz (1973) and is consistent with the decision made by DSM-5 and ICD-11 to bring together all the diagnoses triggered by confrontation with a psychosocial stressor.

The symptoms of ICD-11 adjustment disorder include preoccupation with the stressor or its consequences and failure to adapt symptoms.

Symptoms of Adjustment Disorder

— Core symptoms:

- **Preoccupation** such as excessive worry, recurrent and distressing thoughts about the stressor, or constant rumination about its implications
- **Failure to adapt** manifested in a loss of interest in work, social life, relationships with others and leisure activities. The person concerned may have problems concentrating or sleeping and experience an inability to emotionally recover and find emotional equilibrium

In the ICD-11, an adjustment disorder is still a transient disorder that develops within 1 month after the onset of a stressor. The symptoms should typically disappear within 6 months unless the stressor persists for a longer period. However, in contrast to previous concepts, the ICD-11 adjustment disorder is no longer treated as an exclusion diagnosis but can occur in combination with other mental disorders, provided there are substantial non-overlapping symptoms. This could be the case, for example, in the presence of specific phobias, panic disorder or somatic stress disorder. In addition, the two comorbid disorders must show different temporal development of symptoms. However, a separate diagnosis of adjustment disorder should not be given if critical life events merely lead to an exacerbation of already existing symptoms. Finally, the last substantial change in the ICD-11 concerns the elimination of different subtypes of adjustment disorder.

5.3.2 Diagnostic Criteria in the DSM-5

The DSM-5 describes adjustment disorder as a reaction to a critical life event, with the symptoms developing within 3 months after the occurrence of the stressor. The symptoms must either be clinically significant (beyond the response one would normally expect in response to the specific stressor) or cause significant impairment in social or professional functioning. They must not be caused by another psychiatric diagnosis and must not be attributable to bereavement. Different subtypes are distinguished:

- with depressed mood,
- with anxiety,
- with mixed anxiety and depressed mood,
- with disturbance of conduct,
- with mixed disturbance of emotions and conduct.

There is no minimum number of symptoms that must be present for a diagnosis of adjustment disorder. In DSM-5, adjustment disorder continues to be treated as a diagnosis of exclusion and is not applicable when a comorbid mental disorder is present.

5.4 Problem Areas and Solutions

In a global study involving over 5000 psychiatrists, adjustment disorder was named as the seventh most common diagnosis. At the same time, it was rated as one of the five most problematic disorders in terms of diagnostic ease of use (Evans et al., 2013; Reed et al., 2011). The problems include the question of whether the subclinical status of adjustment disorder is justified and the unclear boundaries between pathological and normal stress and between adjustment disorder and other disorders. Furthermore,

the subtypes that are still used in DSM-5 are poorly validated (O'Donnell et al., 2016).

5.4.1 Adjustment Disorder: Subclinical or Full Diagnosis?

Because adjustment disorder is treated as an exclusion diagnosis, it is often used as a diagnostic residual category for those patients who do not reach the threshold of another diagnosis (Baumeister & Kufner, 2009). Clinical studies have attempted to investigate the severity of stress in patients with adjustment disorder and other full-fledged diagnoses and reported diverging results. Some studies found no difference in symptom severity between adjustment disorder and, for example, depression (Casey et al., 2006), while other studies ranked adjustment disorder as less severe, but with symptom burden in the middle range (Doherty et al., 2014; Fernández et al., 2012). In a longitudinal analysis, patients with adjustment disorder after a serious accident showed a significantly lower quality of life, more depressive and anxiety symptoms than healthy persons, but they were less severely burdened than those suffering from other mental disorders (O'Donnell et al., 2016).

Particularly revealing, however, are those studies that examine adjustment disorder in connection with suicidal behaviour. Up to 12-fold increased risk of suicide was found in patients with adjustment disorder (Casey et al., 2015; Gradus et al., 2010). Furthermore, it was found that adjustment disorder in suicide victims seems to be the most common mental disorder in some cultures, both among adults (Manoranjitham et al., 2010) and adolescents (Lönngqvist et al., 1995). Taken together, these results suggest that the diagnosis of adjustment disorder should be granted the status of a full-fledged diagnosis.

5.4.2 Differentiation From a Normal Stress Reaction

The core problem of distinguishing adjustment disorder from normal stress reactions is due to the fact that until the appearance of the ICD-11 no specific symptoms were defined, as is standard for most other mental disorders. Critical life events trigger a stress reaction in most of those affected, but this reaction does not necessarily reach the extent of a mental disorder. Where the border between normal and pathological stress lies, however, is difficult to determine and in the case of adjustment disorder is thus left to the clinical judgement of the diagnostician. The criteria of clinical significance and functional impairment can be used as guidelines, which are also evaluated by the clinician. The ICD-11 has addressed the problem of the inability to distinguish between normal stress and adjustment disorder through its specific symptom profile. First field studies validate this conclusion and indicate that the reliability of the ICD-11 adjustment disorder has improved compared to the previous version (Reed et al., 2018). In contrast, these difficulties persist for DSM-5 diagnostics.

5.4.3 Differentiation From Other Mental Disorders

Because of the significant overlap with other subclinical and clinical disorders, especially in the area of depression symptoms, adjustment disorder has been described as “too broad to be clinically helpful” (Semprini et al., 2010). For example, it was found that people who suffer from a somatic disease and consequently develop adjustment disorder often report various other syndromes such as somatisation, demoralisation and alexithymia. These syndromes suggest more specific psychotherapeutic and psychophar-

macological interventions than the diagnosis of adjustment disorder does, at least in the earlier ICD-10 and DSM-5 conceptualisations (Grassi et al., 2007). The ICD-11 also attempts to counter this problem with the new disorder concept of adjustment disorder, since the definition of specific symptoms allows for more targeted interventions.

Study results illustrate how poorly the older concepts of adjustment disorder can be distinguished from other disorders. For example, it was found that the prevalence of adjustment disorder varies greatly depending on whether a clinical or structured interview is conducted. In the clinical interview, 31.8% of patients were diagnosed with adjustment disorder, while 19.5% were diagnosed with depression. However, a SCID interview led to a reversal of the prevalence rates with 7.8% adjustment disorder and 36.4% depression.

The extent to which the ICD-11 concept improves the ability to differentiate from other disorders will become apparent in clinical practice in the future and should be specifically evaluated in scientific studies. Due to the decision to bring the symptom profile of adjustment disorder conceptually closer to post-traumatic stress disorder, the differentiation from post-traumatic stress disorder is of particular interest. A first evaluation study found that despite the conceptual similarity, the two diagnoses could be well distinguished by clinicians (Keeley et al., 2016).

5.4.4 Subtypes Poorly Validated

The subtypes of the former ICD-10 and the current DSM-5 are considered empirically poorly validated and have been repeatedly criticized for their insufficient reliability (Baumeister & Kufner, 2009; Strain & Diefenbacher, 2008). The advantage in determining a subtype is that it contains clinical information from which interventions can be derived. This is particularly

important for a narrative diagnostic description without specific symptoms. In this respect, it seems likely that therapists working according to DSM-5 benefit from the existence of the subtypes in everyday clinical practice. In the ICD-11, however, the low reliability of the subtypes has led to their abolition, a decision that has proven to be justified in an Israeli population sample (Lorenz, Hyland, et al., 2018). Furthermore, the new concept with a specific symptom profile also offers concrete starting points for clinical interventions.

5

5.5 Explanatory Models

There are currently only a few theoretical models that are dedicated to the aetiopathogenesis of adjustment disorder. By definition, there must be a causal link between symptomatology and a critical life event, which distinguishes adjustment disorder from most other mental disorders. Three different theoretical models (Caplan, 1964; Horowitz, 1986; Selye, 1956) can be used to explain adjustment disorder in terms of a stress-response syndrome. This approach is in line with the decision of both diagnostic manuals to place adjustment disorder in a new chapter of specific stress-related disorders but is particularly consistent with the ICD-11 concept of adjustment disorder.

5.5.1 Adjustment Disorder According to Horowitz

Mardi Horowitz (1986) was the first to conceptualise adjustment disorder as a stress-response syndrome and to emphasise its similarities with other stress-related disorders such as post-traumatic stress disorder, acute stress disorder and complicated grief. This explanatory model thus emphasizes the conceptual proximity to post-traumatic stress disorder and forms the basis on which

the ICD-11 concept with its two symptom clusters of preoccupation and failure to adapt is based.

The model postulates that the stress reaction takes place in four successive phases. In the first phase, the focus is on realizing what has happened, accompanied by emotions such as fear, anger or sadness. This is followed by a second phase in which an attempt is made to repress the event and its implications. In the third phase, such repression results in memories with an intrusive character regaining consciousness. The content of these intrusive memories is incompatible with the existing mental schemata and makes their adjustment necessary, which happens in the fourth phase of working through the experience. The fourth phase can have different outcomes. The process of working through usually leads to achieving a relative emotional stabilization, adapting to the changed situation and finally completing the process of coping with the life event.

However, if the process takes on pathological proportions, a mental disorder can manifest. If this happens, an acute stress reaction, a post-traumatic stress disorder, a brief psychotic disorder, a prolonged grief disorder, or an adjustment disorder may result. For example, the phase of repression can result in dysfunctional avoidance, or intrusions can lead to pathological mental preoccupation with the stressful situation. Problems in the phase of working through may also be expressed as psychosomatic or other psychopathological symptoms. However, there is still a need for empirical validation of these phases (Creamer et al., 1992).

5.5.2 Crisis Model According to Caplan

The crisis model (Caplan, 1964) describes typical reaction patterns to stressful and potentially destabilising events. Although it was not specifically designed for adjustment

disorder, it provides a basis for making etiological assumptions. According to crisis theory, adjustment disorder can be understood as a problem that is currently unsolvable by a person and is a critical life event as a trigger situation for adjustment disorder. This puts the person in a state of instability and, as a first step, he or she attempts to use already known coping and defence mechanisms. If this leads to a solution to the problem, no new behaviour patterns are developed and no change takes place. However, if the known strategies are not sufficient, the coping repertoire has to be expanded, which, if successful, is accompanied by personal growth and maturation of the person. If, however, no flexible behaviour patterns are developed, the coping attempts fail and the person develops psychopathological symptoms, such as the symptoms of adjustment disorder. The course of the stress response thus depends on the flexibility of the person's existing defence mechanisms. This model also requires empirical validation.

5.5.3 Vulnerability-Stress-Model of Adjustment Disorder

An explanatory model of adjustment disruption in the sense of a vulnerability stress model was presented by Forstmeier (2013) (▣ Fig. 5.1).

The extent of the stress experienced after a critical life event is determined by the nature, duration and severity of the event. Whether or not an adjustment disorder develops, however, depends in particular on the individual vulnerability factors which also determine the coping attempts. According to Forstmeier (2013), particularly relevant vulnerability factors for adjustment disorder are cognitive inclinations such as the tendencies for intrusions, avoidance, depression, anxiety and aggression. Furthermore, comorbid or previous

mental disorders, previous experience with stress events or poor physical health increase the risk of adjustment disorder (e.g. Anastasia et al., 2016). Age, gender and marital status of a person (Hund et al., 2016; Yaseen, 2017), but also personality traits (extraversion, neuroticism, psychoticism) are associated with the risk of adjustment disorder (Forstmeier, 2013). Lack of adaptability (e.g. self-regulation, self-efficacy, sense of coherence, or religious resources) and little social support are still seen as central vulnerability factors that contribute to determining whether a person develops an adjustment disorder or not (Ozbay et al., 2007; Perkonig, 1993). Consequently, adjustment disorder is caused by a combination of stressors and vulnerabilities. From a therapeutic perspective, such a vulnerability-stress model can be used to derive an individual explanatory model that can provide the basis for specific interventions.

A more recent study used the social-interpersonal model of trauma sequelae (► Chap. 2) to identify corresponding etiological factors of adjustment disorder (Lorenz, Perkonig, & Maercker, 2018b). This framework model emphasizes the importance of intrapersonal socio-affective and interpersonal processes for the response to adverse events. Loneliness and dysfunctional disclosure and low self-efficacy have been identified as risk factors for adjustment disorder.

5.5.4 Biological Factors

Little research has been done specifically on the psychobiology of adjustment disorder. The biological approach (Selye, 1956), understands stress as a nonspecific response of the body to environmental challenges and emphasizes the importance of the hypothalamic-pituitary-adrenal cortex axis (HPA) in the human stress response. Pathological symp-

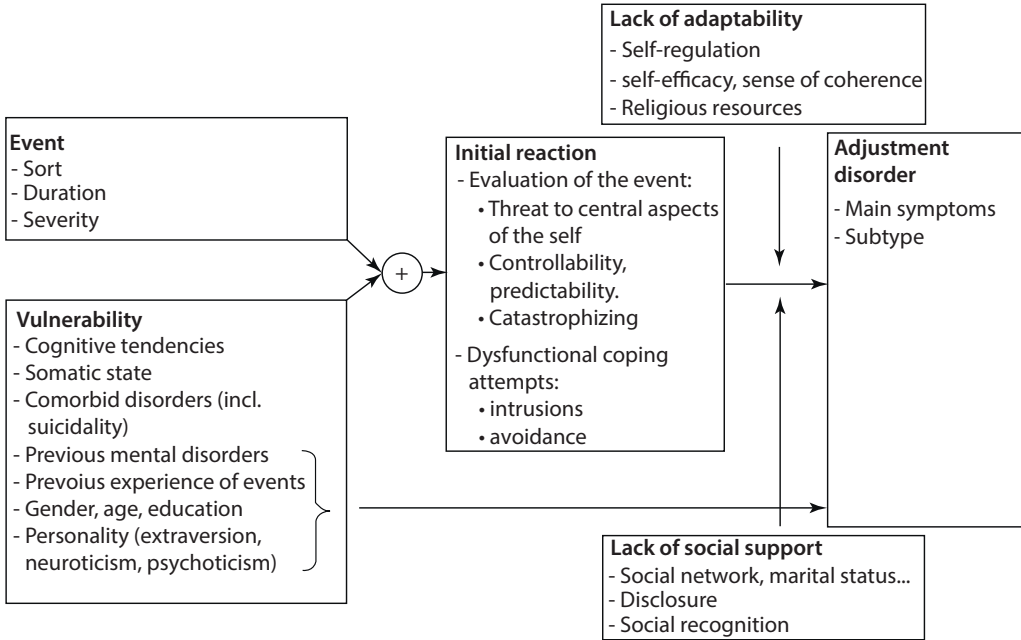


Fig. 5.1 Vulnerability-Stress model of adjustment disorder. (From Forstmeier, 2013)

toms develop when an imbalance between arousal and inhibitory processes is accompanied by changes in the HPA mechanisms. This approach seems promising since HPA alterations have also been revealed in other disorders such as posttraumatic stress disorder or depression (Jean & Groman, 2005; Morris et al., 2012; Yehuda, 2009).

At present, there are a few findings on stress markers among patients with adjustment disorder. For example, it was shown that there was a negative correlation between the morning plasma cortisol level and various psychometric parameters in bullying victims with adjustment disorder (Rocco et al., 2007). Another study compared victims of bullying and healthy persons and found elevated serum levels of carbonylated and nitrolysed proteins, which are considered biological markers of oxidative stress (Di Rosa et al., 2009). Tripodianakis et al. (2000) found lower MAO enzyme activity and higher plasma cortisol levels in persons with adjustment disorder who had attempted suicide compared to a healthy control group.

On the other hand, another study found that only in depressed persons, but not in those with adjustment disorder, there was a significantly negative correlation between suicide intentions and cortisol levels after the dexamethasone test. In this respect, persons with adjustment disorder were more similar to a healthy control group in this study (Lindqvist et al., 2008). Consequently, further studies on the biological basis of adjustment disorder are urgently indicated.

5.6 Detection of Adjustment Disorder

5.6.1 Clinical Interview

The structured diagnostics of adjustment disorder using clinical interviews is still difficult since adjustment disorder is not included at all or only insufficiently evaluated in the common diagnostic interviews such as the Composite International Diagnostic Interview (CIDI; German Wittchen et al.,

1995). For example, in the Structured Clinical Interview (SKID; Wittchen et al., 1997), one of the most established interviews, adjustment disorder is only assessed if no other mental disorder is present. The Munich Composite Diagnostic International Interview (M-CIDI/DIAX; Wittchen & Pfister, 1997) does not currently include adjustment disorder, but an additional section has been developed specifically for cancer patients (Hund et al., 2014). Furthermore, a section has been developed to measure the adjustment disorder according to ICD-11 (Perkonig et al., 2020). However, the only interview that has been developed explicitly for the assessment of adjustment disorder is the Diagnostic Interview for Adjustment Disorder (DIAD; Cornelius et al., 2014), a 29-question interview to identify critical life events and the psychological symptoms that develop as a result. The DIAD has shown first satisfactory results regarding the validity but records them according to DSM-IV (Cornelius et al., 2014).

5.6.2 Questionnaire

At present, there are two questionnaires specifically designed to measure adjustment disorder: the Adjustment Disorder - New Module (ADNM) and the International Adjustment Disorder Questionnaire (IADQ), which assess the disorder using the ICD-11 criteria. The ADNM measures preoccupation and failure to adapt symptoms as well as various accessory symptoms based on 20 items (ADNM-20; Glaesmer et al., 2015). Furthermore, there is a short version with 8 items (Kazlauskas et al., 2018) and a screening version with 4 items (Ben-ezra et al., 2018), which measure only the core symptom areas of preoccupations and failure to adapt and also have good validity. The IADQ assesses preoccupation and failure to adapt with 6 items and includes three items focused on evaluating functional impairment (Shevlin et al., 2020).

Individuals at high risk of adjustment disorder can be identified using a validated ADNM-20 cut-off score (Lorenz et al., 2016). The different versions of the ADNM-20 are available in English at ► <https://www.psychology.uzh.ch/en/areas/hea/psypath/Research-Dissemination/self-report.html>

5.7 Epidemiology, Comorbidity and Course

5.7.1 Epidemiology

Adjustment disorder has been recorded in a few epidemiological studies, and due to inadequate recording in structured interviews, prevalence rates may be underestimated. Furthermore, it is likely that in future studies the different concepts of adjustment disorder in ICD-11 and DSM-5 will result in somewhat different prevalence rates.

5.7.1.1 Total Population

In the total population, a prevalence of adjustment disorder of 1% was found in five European countries (England, Ireland, Spain, Finland, Norway) using the ICD-10 concept (Ayuso-Mateos et al., 2001). Using the ICD-11 concept, a prevalence of 1.4% was found in a recent representative sample of the German population, or 0.9% if functional impairment was required (Maercker et al., 2012). The survey of a representative group of older people in Switzerland (65–96 years) resulted in a slightly higher prevalence of 2.3%, which is probably related to the higher number of critical life events in older age (Maercker et al., 2008). Finally, in a high-risk sample of people living in a former conflict area, the prevalence of adjustment disorder was found to be 6–40% (Dobricki et al., 2010).

5.7.1.2 Medical Facilities

Adjustment problems occur relatively frequently in liaison-consultation psychiatry. In the total population of somatic patients, adjustment disorder was found to occur at a

frequency of 1–2.9% (DSM-IV; Fernández et al., 2012; Semaan et al., 2001), and 9.4% among those patients with additional psychological complaints (Semaan et al., 2001). Furthermore, a meta-analysis summarised the results of 70 studies from oncological and haematological treatment and found high prevalence rates of 19.4%. Among those in palliative treatment, the prevalence was 15.4% (Mitchell et al., 2011). Finally, in the medical emergency setting, a clinical diagnosis of adjustment disorder was made in 31.8% of the patients who displayed self-harming behaviour (Taggart et al., 2006). No figures are yet available on the prevalence of adjustment disorder according to ICD-11 in the liaison setting.

5.7.1.3 Psychiatric Institutions

Adjustment disorders are also among the most common diagnoses in the psychiatric setting. In the outpatient therapy setting the prevalence was 36% in a clinical interview, while diagnosis by SCID resulted in a significantly lower rate of 11% (Shear et al., 2000). It can be assumed that the difference was caused by the fact that in the SCID the adjustment disorder is treated as an exclusion diagnosis. A recent Asian study found a similar result with a prevalence of 11.5% when using the SCID interview in the psychotherapeutic outpatient setting (Yaseen, 2017).

5.7.2 Co-Morbidity

To date, the co-morbidity rates of adjustment disorder have rarely been investigated. However, it has been shown that adjustment disorder often occurs together with substance abuse (Greenberg et al., 1995; Kryzhanovskaya & Canterbury, 2001). Co-occurrence with personality disorders is also common and has been found to range between 15% (Strain et al., 1998) and 56% (Doherty et al., 2014). Besides, patients with adjustment disorder show an up to

12-fold increased risk of suicide compared to persons without adjustment disorder (Gradus et al., 2010).

Using the ICD-11 concept and allowing for all co-morbidities, it was shown that 46% of a group of older people with adjustment disorder were eligible for a co-morbid psychiatric diagnosis (Maercker et al., 2008). According to ICD-11, the diagnosis of adjustment disorder can be applied together with other mental disorders, but only if their symptoms cannot be fully explained by the other disorder and have a separate identifiable time course. Future research should investigate effective co-morbidity rates in clinical practice.

5.7.3 Course and Forecast

By definition, an adjustment disorder develops within 3 months after a stressful event and recedes within 6 months if the stressor does not persist. That adjustment disorder is a transient disorder is reflected in a high rate of spontaneous remissions (e.g. Baumeister & Kufner, 2009). However, one of the few longitudinal studies on the course of adjustment disorder suggests that about one-third of the patients experience a chronic progression (O'Donnell et al., 2016). Also, this study showed that patients with adjustment disorder relatively often develop another, more severe mental disorder (O'Donnell et al., 2016). Another study investigated the natural course of subclinical and clinical ICD-11 adjustment disorder symptoms after job loss (Lorenz, Perkonig, & Maercker, 2018c). It identified three different patterns of progression between the third and ninth month: Almost half of the study participants showed low symptom severity, a third reported moderate symptom severity and 15% experienced a pronounced symptom severity corresponding to a diagnosis of adjustment disorder that had increased within the investigated time frame. After a further 6 months, how-

ever, only 3 percent still had an adjustment disorder diagnosis (Lorenz, Maercker, and Bachem, 2020). Beyond these observation periods, transitions from adjustment disorder to other mental disorders (especially anxiety and depressive disorders) as well as increased suicidal tendencies are found, which underline the clinical significance of this disorder (Casey et al., 2015; Gradus et al., 2010).

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Neurobiology

C. Schmahl

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It is obvious that the now very broad field of neurobiology of PTSD cannot be covered in the brevity required. Instead, the current state of research on important aspects of research in the field of stress, learning and emotions will be presented by means of some important examples.

First, morphological brain changes and the possible influence of stress on these changes will be presented. Closely related to this is the function of the hypothalamic-pituitary-adrenal cortex axis, which will be discussed in ▶ Sect. 6.2. This is followed by the presentation of neuroanatomical and neurochemical correlates of central psychopathological aspects of PTSD, namely dissociation and emotion regulation. In the subsequent section, the significance of learning and especially extinction processes for PTSD psychopathology and its treatment will be presented. Finally, animal models for PTSD are briefly discussed, which can be expected to significantly expand the possibilities in the field of experimental research in the future.

6.1 Brain Changes

The following sections often focus on a specific brain region, such as the hippocampus in the case of morphological brain changes or the amygdala in the case of emotion regulation. In ■ Fig. 6.1, the most important brain regions that play a role in PTSD are depicted.

In ▶ Chap. 3, the association between traumatic life events and memory changes has been discussed (▶ Sect. 3.1). PTSD is associated with a wide range of memory disturbances (e.g. Bremner, 2003). Patients with PTSD show deficits in declarative memory, a disturbance of implicit memory (increased conditionability) and perseveration errors, possibly associated with frontal dysfunction (Elzinga & Bremner, 2002). The brain regions associated with these memory

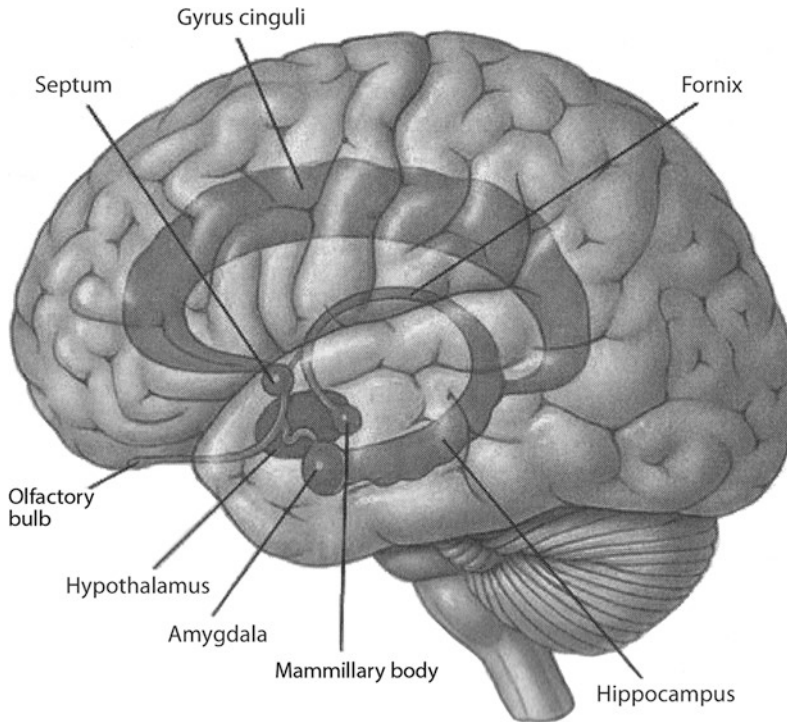
deficits are also particularly sensitive to stress, with the hypothalamic-pituitary-adrenal cortex axis playing a particularly important role here (▶ Sect. 6.2). In addition to the (medial) prefrontal cortex, these brain regions include in particular the hippocampus and the amygdala.

The reduction of the hippocampal volume is one of the most important neurobiological findings associated with PTSD. A reduction in hippocampal volume has been found using magnetic resonance (MR) volumetry in both war veterans (Bremner et al., 1995; Gilbertson et al., 2002; Gurvits et al., 1996) and patients with PTSD after sexual abuse (Bremner et al., 2003b; Stein et al., 1997). In meta-analyses, hippocampal volumes in PTSD patients as well as in traumatized people without PTSD were smaller on both sides of the brain as compared to non-traumatized people. The difference between PTSD patients and traumatized people without PTSD was significant only for the right hippocampus (Woon et al., 2010; Calem et al., 2017); women and men do not differ in hippocampal reduction (Woon & Hedges, 2011). The database on amygdala volume is significantly weaker than for the hippocampus; meta-analyses, which only included studies in adults, found no significant differences between PTSD patients, traumatized and non-traumatized controls for both hemispheres (Woon & Hedges, 2009; Calem et al., 2017).

The interesting question raised by these findings concerns the cause of the described (hippocampal) volume reduction. Two main explanations describe this reduction either as

- Genetically determined or
- Following traumatization.

The study by Gilbertson et al. (2002) found that healthy identical twin brothers of Vietnam veterans with PTSD also had reduced hippocampus size; this could suggest a genetic determination of hippocampal



■ **Fig. 6.1** Most important brain regions affected by post-traumatic stress disorder. (From Schmahl & Stiglmayr, 2009; with the kind permission of Kohlhammer-Verlag)

reduction. This study was conducted by means of so-called manual volumetry, that is, the brain regions were marked on the individual MR images and reconstructed in three dimensions. The same data set from this twin study was later analyzed again using an automated procedure (voxel-based morphometry), in which the contrast between gray and white brain matter is used to calculate volumetric differences. With this method, again a hippocampal reduction was observed, but, like a reduction in the anterior cingulate cortex (ACC), this was restricted to veterans with PTSD and did not affect their twin brothers (Kasai et al., 2008).

There is evidence for certain sensitive periods and specificity of the type of traumatic experience in the development of these volume changes. For example, the hip-

pocampal volume was most sensitive for sexual abuse at the age of 3–5 years, while the volume of the prefrontal cortex was most reduced when the abuse occurred at the age of 14–16 years (Andersen et al., 2008). The sensitivity of the amygdala was most pronounced for abuse at the age of 10–11 years (Pechtel et al., 2014). Abuse and neglect appear to have differential influences on brain structure and function (Sheridan & McLaughlin, 2014). In summary, it remains open whether the hippocampal reduction is a risk factor, a consequence of trauma or a marker of the disease. Overall, the findings indicate a clear influence of traumatization on the volume. There are first indications of sensitive periods for the influence of early traumatic stress and differential effects of abuse and neglect.

6.2 Hypothalamus-Pituitary-Adrenal Axis

In many stress-related mental disorders such as depression or PTSD, changes in the hypothalamic-pituitary-adrenal (HPA) axis are discussed as a correlate or consequence of the disease.

Corticotropin-releasing hormone (CRH) plays an important role in the stress response. In animal experiments, chronic stress leads to an increase in CRH (Arborelius et al., 1999) and the administration of CRH, in turn, leads to behaviors associated with fear or anxiety, for example, a decline in exploratory behavior, increased startle reflex and reduced cleaning behavior. Since the hippocampus plays an important role in inhibiting CRH release from the hypothalamus, a hippocampal reduction may indirectly contribute to overactivity of the HPA axis. Two studies have actually been able to detect increased CRH concentrations in the CSF of patients with PTSD (Baker et al., 1999; Bremner et al., 1997).

Since HPA axis-mediated damage to hippocampal neurons can occur either directly via glucocorticoids or indirectly via a glucocorticoid-induced increase in sensitivity to cytotoxic glutamate (Bremner, 2002), the investigation of cortisol levels, in particular, plays an important role in understanding morphological brain changes. Acute stress leads to the release of cortisol, and in patients with PTSD increased cortisol response to both non-specific (Bremner et al., 2003a) and trauma-induced stress (Elzinga et al., 2003) has been demonstrated.

Some studies (e.g. Yehuda et al., 1991, 1996) initially found lowered cortisol levels. In the meantime, a large number of individual studies on HPA axis function in traumatized individuals and patients with PTSD are available. However, meta-analyses show a mixed picture: Meewisse et al. (2007) and Klaassens et al. (2012) could not confirm the suspected basal hypocortisolism in urine,

saliva or plasma. A further meta-analysis (Morris et al., 2012), in which in contrast to the other two studies children and adolescents were also included, found decreased cortisol levels in PTSD patients compared to both traumatized individuals without psychiatric illness and non-traumatized individuals. Also, an effect of the temporal distance to trauma was found: the longer ago the trauma was, the lower the cortisol levels. This supports the long-held assumption of an initial post-traumatic hypercortisolism, followed by a “blunting” of the HPA axis, that is, a slowly developing hypocortisolism (Hellhammer & Wade, 1993; Bremner, 2002). Overall, the data on hypocortisolism, therefore, remain unclear; in particular, it is still unclear whether it is related to trauma or PTSD.

Another connection between the HPA axis and PTSD psychopathology is the influence of glucocorticoids on memory functions. Stress or treatment with glucocorticoids improves memory consolidation and worsens the recall of memory content; this could be shown in animal experiments. De Quervain et al. (1998) were able to show that rats find it harder to find a grid in water after an electric shock; this effect could be inhibited by an inhibitor of cortisol synthesis (metapyrone) and imitated in non-stressed animals by the administration of cortisone. Aisa et al. (2007) could prove that the glucocorticoid antagonist mifepristone completely eliminated the memory deficits in rats caused by a daily 3-h separation from the mother in the first 3 weeks of life. In humans, a single dose of cortisone reduced the number of words remembered when given 1 h before (De Quervain et al., 2000). A one-week application of 20 mg hydrocortisone led to a significant decrease in the accuracy of memory recognition (McAllister-Williams & Rugg, 2002).

Since PTSD is characterized by automatic trauma-related memory processes that

are difficult for patients to control, it is being debated whether reduced cortisol secretion could be responsible for disinhibiting the recall of trauma memories (De Quervain, 2006). Conversely, an external administration of glucocorticoids could then reduce the recall of traumatic memories and thus possibly lead to a reduction of the intrusive experience. In a pilot study (Aerni et al., 2004), indications for the correctness of this assumption were found. Three patients with chronic PTSD received hydrocortisone at a low dose of 10 mg/day over 1 month in a double-blind, placebo-controlled cross-over design. In all 3 patients, hydrocortisone resulted in a significant reduction of daily trauma memories. However, a larger study on 30 PTSD patients, given in different dosages and at different times of the day, could not confirm these intrusions-reducing effect (Ludäscher et al., 2015).

On a neuroanatomical level, the medial temporal lobe (MTL) plays an important role in the retrieval of memory content (Cabeza & Nyberg, 2000). In patients with arachnophobia, the MTL was activated by a film about spiders; this activation was no longer present after successful cognitive-behavioral therapy (Paquette et al., 2003). In healthy subjects, the acute administration of hydrocortisone led to a reduction of blood flow in the MTL during memory recall (De Quervain et al., 2003).

Experimentally elevated cortisol levels could thus lead to a reduction in the recall of memory contents, whereby this effect is probably mediated by the MTL. However, one study (Wingenfeld et al., 2012) showed the opposite effect of an improvement in memory retrieval after the administration of 10 mg hydrocortisone. In summary, the influence of the HPA axis on memory function in PTSD patients requires further research before conclusions can be drawn about the therapeutic benefit of glucocorticoids.

6.3 Dissociation

In the context of stress-related cognitive changes, we have so far only discussed an increased recall of trauma memories, i.e. intrusions. However, another psychopathological pattern that is closely related to trauma is found in PTSD, namely dissociation (► Chap. 2).

In a case report, Lanius et al. (2003) describes these two processing modes. A married couple (he 48, she 55 years) were involved in a pile-up where they were wedged in a car and saw a child burn to death. The husband developed flashbacks and nightmares as well as strong arousal symptoms, his wife reported states of “freezing”, numbness and other dissociative symptoms. When provoking the symptoms by listening to an individual trauma script, the husband reported vivid intrusions, also thinking about a possible escape (breaking the windshield); in the meantime, he showed an increase in heart rate. The woman, on the other hand, reported a feeling of numbness, with no measurable change in heart rate. In functional magnetic resonance imaging (fMRI), the husband showed a significantly greater spread of activated areas. The remission of symptoms during treatment was significantly faster in the husband (with prominent intrusive and arousal symptoms) than in the wife (with prominent dissociative symptoms).

Larger studies indicate that in this context, the medial prefrontal cortex and the ACC, in particular, plays a differential role in the processing of trauma-associated symptoms. While an intrusive experience, combined with a fear reaction, is characterized by an overactivity of the amygdala and a reduced activity of the medial prefrontal cortex (► Sect. 6.4.1), patients with dissociative reaction during trauma memories show increased activity of the medial prefrontal cortex and the insula (Frewen &

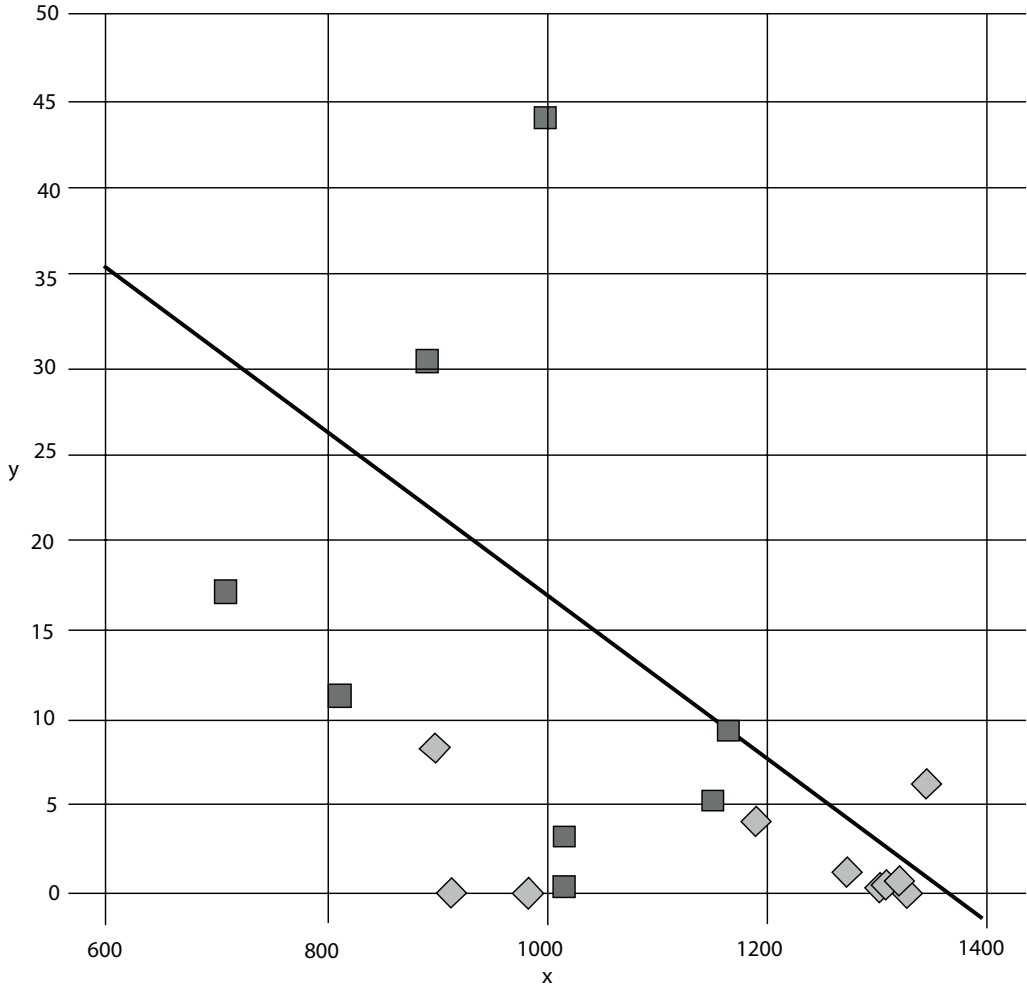
Lanius, 2006; Lanius et al., 2002, 2005; Ludäscher et al., 2010). Further studies (Krause-Utz et al., 2012, 2018) investigated the influence of dissociation on emotional-cognitive processing in patients with borderline personality disorder (BPD) and interpersonal trauma. The participants were asked to memorize 3 letters and were confronted with neutral and negative images during this time. The degree of dissociation had no influence on reaction times, but on the signal in the amygdala, the insula and the ACC: In these emotion processing regions, higher dissociation values were correlated with reduced activity. Patients with intrusive experience also showed an increase in heart rate during the confrontation with trauma memories, while patients with dissociative symptoms showed no change or a slight reduction in heart rate (Lanius et al., 2001, 2002). Overall, from a neurobiological point of view these findings support the existence of a dissociative PTSD subtype (Lanius et al., 2010; Wolf et al., 2012).

Neurobiologically, it can be assumed that the already mentioned systems involved in the stress reaction, such as the HPA axis, also have important functions in the mediation of dissociative symptoms. The connection between the HPA axis and dissociation has not yet been investigated in detail. The opioid system also appears to be involved in dissociative processes. K-opioid receptor agonists can induce depersonalisation, derealisation and changes in perception (e.g. Walsh et al., 2001). Furthermore, opioid antagonists such as naltrexone and naloxone reduce dissociative symptoms in BPD (Bohus et al., 1999; Philipsen et al., 2004; Schmahl et al., 2012) and chronic depersonalisation (Nuller et al., 2001). In patients with PTSD, Pitman et al. (1990) were able to demonstrate a blockade of stress-induced analgesia with naloxone.

Another neurotransmitter with importance for dissociation, which has already

been mentioned in connection with stress-induced hippocampal toxicity, is glutamate. Ketamine, which has an antagonistic effect on a glutamate receptor subtype, the NMDA receptor, induces depersonalisation, derealisation, perceptual changes and memory disorders (Krystal et al., 1994; Newcomer et al., 1998; Oye et al., 1992). Increased transmission at other glutamate receptor subtypes, when NMDA receptors are blocked, can be assumed to be a correlate of dissociative symptoms; this also explains the effect of lamotrigine on dissociative symptoms (Sierra et al., 2001), in that it blocks glutamate excretion and thus reduces the activation of glutamate receptors. The anti-epileptic drug phenytoin modulates glutamatergic function and blocks the effects of stress on the hippocampus in animal experiments (Watanabe et al., 1992). In a pilot study, phenytoin caused a decrease in PTSD symptoms (Bremner et al., 2004) and an increase in hippocampal volume by 5% (Bremner et al., 2005a). Dissociative symptoms are correlated with a reduction in hippocampal size in women with early abuse and PTSD (Bremner et al., 2003b; Stein et al., 1997; ■ Fig. 6.2).

Dissociative states are often associated with reduced pain sensitivity. Reduced pain sensitivity has been demonstrated in patients with PTSD both under resting conditions (Geuze et al., 2007) and after a confrontation with trauma-associated stimuli (Pitman et al., 1990). After induction of dissociation using the “script-driven-imagery” technique, not only increased subjective dissociation values but also reduced pain perception after listening to the script were found (Ludäscher et al., 2010). In an fMRI study, reduced activity in those brain regions that are involved in emotional and cognitive pain processing was found as a neural correlate of reduced pain sensitivity. These regions include the amygdala and the ventrolateral prefrontal cortex (Geuze et al., 2007). In



■ **Fig. 6.2** Negative correlation between the left hippocampal volume (x-axis, in mm³) and dissociation values. y-axis: “Clinician-Administered Dissociative

States Scale” scores. *Squares*: patients with abuse and PTSD, *diamonds*: patients with abuse without PTSD ($R^2 = 0.30$; $t = -2.16$, $df = 1$, $p < 0.05$)

another study, increased activity in the insula and dorsolateral prefrontal cortex during pain stimulation and a decrease in subjective pain sensitivity with repeated pain stimulation was found in PTSD patients (Strigo et al., 2010). In contrast to the experimental findings of reduced pain sensitivity, however, increased subjective pain perception is found in patients with PTSD (Asmundson et al., 2002).

6.4 Disturbed Emotion Regulation: Fear, Disgust and Shame

Due to the disturbance of emotion perception and processing in PTSD, a substantial part of functional imaging studies deals with neural emotion processing in these patients. Studies with standardized emo-

tional stimuli represent the most common experimental paradigms of functional imaging studies in PTSD, besides scenarios for the induction of trauma memories.

6.4.1 Study Results on Anxiety

Rauch et al. (2000) used masked emotional facial expressions and found an increased amygdala response to anxious faces compared to happy faces in patients with PTSD. Presumably, hyperactivity of the amygdala in PTSD is not only a reaction to traumatic memories but also negative stimuli in general and thus independent of “top-down” processes of the medial frontal cortex.

Armony and colleagues also used emotional facial expressions in their fMRI study, both unconsciously (masked) and consciously perceived (Armony et al., 2005). The authors found a significant positive correlation between the severity of PTSD and amygdala activity in masked anxious compared to masked happy faces and a significant negative correlation for the comparison of consciously perceived anxious compared to consciously perceived happy faces.

The study by Shin et al. (2005) used emotional facial expressions to analyze the neural activation patterns in PTSD, but with a presentation duration that only allowed conscious information processing. The authors found hyperactivity of the amygdala and a decrease in the activity of the medial prefrontal cortex in patients with PTSD in response to anxious compared to happy faces. Also, significant negative correlations were found between activity in the medial prefrontal cortex and both amygdala activity and symptom severity.

Phan and colleagues compared the neural response of persons with trauma exposure and PTSD, persons with trauma exposure without PTSD and healthy control subjects to standardized emotional-aversive,

neutral and empty images (Phan et al., 2006). All 3 groups showed an activation of the dorsomedial prefrontal cortex to aversive and neutral images. Only the groups without PTSD activated the left amygdala in response to aversive stimuli, a contradiction to the hyperactivity of the amygdala found in the above-mentioned studies in patients with PTSD. Healthy controls also showed activation of the ventral medial prefrontal cortex in contrast to the two groups with trauma exposure.

In summary, despite the not always consistent direction of neuronal activation changes, the available findings suggest a dysfunction of the medial prefrontal cortex and the amygdala in PTSD and a disturbed association between these two regions in the processing of aversive emotional stimuli (Etkin & Wager, 2007). In an experimental therapeutic approach, amygdala activity could be reduced using real-time fMRI neurofeedback (Nicholson et al., 2017).

6.4.2 Study Results on Disgust and Shame

It is known from clinical observation that other emotions such as disgust or shame also play an important role in PTSD. Disgust occurs in a high proportion of patients with PTSD as a result of sexual violence, as disgust in relation to themselves, but also with certain foods, their smell, taste or texture, which may remind patients of the traumatic situations. In traumatized individuals, feelings of disgust directed at other people were a predictor of PTSD symptoms, while disgust directed at oneself predicted the strength of obsessive-compulsive symptoms (Badour et al., 2012). Women with PTSD showed a stronger subjective intensity of disgust when listening to trauma scripts than traumatized women without PTSD and also than traumatized men (Olatunji et al., 2009).

In functional imaging studies, specific activation patterns of disgust were compared with those of a neutral condition and usually also with another negative emotion such as fear or anger in healthy persons. Phillips et al. (1997) investigated neural activation correlates of disgust using fMRI and presented their subjects with images of neutral, fearful or disgusted facial expressions of varying intensity. In contrast to fear, which was associated with amygdala activity, disgust was characterized by specific activation of the insula region. The importance of the insula region in the processing of disgust could be proven by further investigations (Phillips et al., 2004; Wicker et al., 2003; Williams et al., 2005). In a neuropsychological study using the “Implicit Association Test”, patients with PTSD showed a stronger association of their own person with the emotion of disgust than with the emotion of fear (Rüsch et al., 2011). This is important in that PTSD was previously classified as an anxiety disorder, but the role of other emotions such as disgust and shame has not been considered to the same extent (► Chap. 2). In Dutch soldiers, for example, it has been shown that the peritraumatic experience of disgust, in addition to the experience of anxiety, contributed to the severity of PTSD symptoms 6 months later (Engelhard et al., 2011).

As far as the emotion of shame is concerned, only a few studies have been conducted so far: In a study also using the Implicit Association Test, patients with BPD and comorbid PTSD showed a stronger association of their own person with anxiety than with shame (Rüsch et al., 2007). In another study, however, the severity of PTSD symptoms was related to the processing speed of shame-associated words – the more severe the symptoms, the faster the words were processed (Sippel & Marshall, 2011).

Overall, it can be stated that a one-sided focus on the emotion of fear does not fully

cover the development and maintenance of PTSD (McLean & Foa, 2017). More recently, in addition to anger and guilt, the role of the aversive emotions disgust and shame has been emphasized.

6.5 Conditioning and Extinction of Fear

If one assumes that a large part of PTSD psychopathology is conditioned, a precise understanding of learning processes and their neurobiological basis seems essential, especially for the improvement of psychotherapeutic possibilities. The currently best-studied model of neural learning represents classical conditioning and the associated mechanisms of unlearning, that is, extinction.

The neural basis of classical conditioning processes has been intensively studied in animals and humans. A distinction can be made between 2 phases:

- Acquisition, that is, the learning of stimulus-response patterns and
- Extinction, that is, the deletion of stimulus-response patterns.

During acquisition, a new, initially neutral stimulus, for example, a sound or light signal, is selected as a conditioned stimulus (CS). If this stimulus is coupled with an aversive unconditioned stimulus (US), for example, a pain stimulus, the CS becomes a trigger for a conditioned response (CR), which can be expressed, for example, as an anxiety response. Neuroanatomically, two different systems can be distinguished here:

- An implicit system underlying emotional learning, based mainly on connections between the amygdala and the medial prefrontal cortex, and
- an explicit system underlying declarative memory, which can be assigned to the hippocampus and the lateral prefrontal cortex (Brewin et al., 1996; Phelps & LeDoux, 2005, p. 2.6)

The amygdala and its projections are particularly responsible for the acquisition and expression of conditioned responses.

On a clinical-phenomenological level, numerous learned stimulus-response patterns can be explained with this model, for example, the fear or disgust reactions in victims of traumatic violence. Numerous psychotherapeutic processes now aim at weakening these automatic stimulus-response patterns. On an experimental psychological level, these are processes of extinction.

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The neural basis for extinction processes has not yet been proven quite so clearly. However, it is assumed that the amygdala also plays a central role here, in addition to medial prefrontal and orbitofrontal regions (Barad et al., 2006; Herry & Mons, 2004). The extinction of learned (anxiety) reactions consists of the repeated presentation of the CS without the US. Extinction, that is, the decrease in the expected response to the CS, is now either the deletion of the learned response or additional inhibitory learning.

Conditioning and extinction processes in patients with PTSD have so far only been investigated in a few studies using functional imaging. Women with PTSD after early sexual abuse and healthy control subjects saw a blue square in a PET examination (Bremner et al., 2005b), first alone (habituation), then in combination with a pain stimulus (acquisition) and finally alone again (extinction). Compared to the control subjects, the patients showed an increased blood flow in the amygdala during acquisition and a reduced blood flow in the medial prefrontal cortex during extinction. The increased blood flow in the amygdala correlated with an increase in PTSD symptoms; furthermore, a negative correlation was found between increased anxiety scores and reduced medial prefrontal blood flow. All in all, these findings indicate an increased conditionability and a disturbed extinction of learned stimulus-response patterns. Further

fMRI studies (Milad et al., 2009; Rougemont-Bücking et al., 2011) tested so-called context conditioning, in which the conditioned stimuli are presented in different image contexts. Compared to a traumatized control group, increased amygdala activity was again found in the PTSD group during the extinction phase with simultaneous deactivation of the ventromedial prefrontal cortex; in the control group, the pattern was reversed. Context-related learning seems to be deficient in PTSD patients: the next day's test showed no difference in skin conductance between the context in which conditioning took place and the "safe" context; the PTSD patients showed hyperactivity in the dorsal ACC, which could be related to the lack of learning of the safe context. In a study in which pain stimuli were announced but not given, i.e. in a threat condition, PTSD patients did not show the usual decrease in ACC activation over time as in healthy subjects (Tüscher et al., 2011).

An important development in recent years, besides the understanding of the neural basis of extinction processes, concerns the neurochemical basis of conditioning and extinction. The glutamate system also plays a decisive role here; NMDA receptors seem to be of great importance not only in acquisition but also in extinction (Davis et al., 2006). A novel and possibly important mechanism for the future of modern psychotherapy is the pharmacological enhancement of extinction or reconsolidation processes, i.e. a pharmacological improvement of the central mediator variables. The NMDA-agonist cycloserine has been used for this purpose. In rats, the administration of cycloserine led to an increase in the extinction of the fear-conditioned startle response (Walker et al., 2002). In a similar study of human mental disease, Ressler et al. (2004) used cycloserine as a cognitive enhancer in patients with fear of heights. Before each session, the control group got the placebo, the experimental group cyclo-

serine. Both directly after treatment and after 3 months, the fear reduction was greater in the experimental group. This strategy was also successfully used in the treatment of patients with social phobia (Hofmann et al., 2006; Guastella et al., 2008), arachnophobia (Guastella et al., 2007) and obsessive-compulsive disorder (Kushner et al., 2007; Wilhelm et al., 2008). In this combination therapy, it seems to be particularly important to establish the exact timing between drug intake – approximately 1–2 h before the start of the exposure session – and psychotherapy (Rothbaum, 2008). A more recent meta-analysis, however, found only a small overall augmentation effect of cycloserine in exposure therapy (Mataix-Cols et al., 2017).

There are by now five randomized controlled trials on the combination of cycloserine and exposure in patients with PTSD. A Cochrane review (Ori et al., 2015) found no evidence for an improvement of exposure therapy by cycloserine in PTSD. Cycloserine in PTSD may lead to a reconsolidation of trauma memories rather than extinction. Another possible explanation for the poor performance of cycloserine in PTSD is possible desensitisation after repeated administration of cycloserine. Other approaches relate to the reduction of memory consolidation with propranolol (Schiller & Phelps, 2011), although the data on PTSD are not yet conclusive enough.

6.6 Animal Models for PTSD

The development of animal models for mental diseases represents an important step towards understanding pathomechanisms and improving treatment options for these diseases. Animal models, for example, offer excellent opportunities for genetic or pharmacological manipulation, which can then be transferred to therapeutic research

in humans. The term “translational research” has been established for this field of research, which develops animal models in analogy to human diseases and translates molecular biological or pharmacological findings from these models into the therapy of human diseases.

The development of animal models for PTSD poses a particular challenge since on the one hand the psychopathology and on the other hand (unlike other mental diseases) also traumatic event must be modeled. As an analogy to traumatic events in humans, for example, the following animal models have been used:

- Separation from the mother (Lippmann et al., 2007),
- holding the animal underwater (Richter-Levin, 1998) or
- confrontation with a prey animal (Adamec & Shallow, 1993; Cohen et al., 2000).

Despite their sometimes high ethological validity, the above-mentioned stressor models have the disadvantage that their intensity can only be varied by repeated performance, which means that habituation processes cannot be ruled out. Siegmund and Wotjak (2007) therefore used short, painful electrical stimuli of variable intensity in the development of a specific animal model for PTSD. Although such current stimuli certainly pose an existential threat to the animal, the question arises whether the subjective response to stress, which in humans is an important criterion of PTSD, can be modelled in the animal. Furthermore, such an electrical stimulus most likely represents a model for a type I trauma; the modelling of type II traumas is certainly even more complex.

In animal models, learning and memory processes, in particular, can be modelled more easily. Also, the above-mentioned (► Sect. 6.1) possible influences of type and timing of traumatization can be experimentally investigated here. On the psychopatho-

logical level, in PTSD, non-associative memory processes (e.g. in the context of recall and avoidance of trauma-associated stimuli), as well as associative memory processes (e.g. in connection with a general hyperarousal, irritability or emotional numbness), play a role (Siegmund & Wotjak, 2006). The animal model of Siegmund and Wotjak attempts to depict these two processes, that is, conditioning and sensitization processes. To record the conditioning processes, the animals were placed back into the chamber in which they had received the electric shock at certain intervals. To measure sensitization, unpleasantly loud sounds were presented in a neutral chamber. Both processes were measured using the “freezing” reaction. In these experiments it could be shown that after the electrical stimulus, both an increase in the conditioned anxiety reaction (freezing) and an increasing sensitization occurred, depending on the dose. In the animal model described above, a reduction of the hippocampal volume was also found 2 months after the stressor (Golub et al., 2011).

6.7 Integration and Outlook

Research on the neurobiology of PTSD has made rapid progress in recent years, which not only increases basic knowledge but can also provide important impulses for improving therapeutic options. The overview presents some central aspects of research in this field.

Central Aspects of Research on the Neurobiology of PTSD

- In the area of brain morphological changes, a reduction in the size of the hippocampus can now be regarded as established. However, the cause of this reduction in volume is still unclear; current meta-analyses indi-

cate a clear influence of traumatization.

- The HPA axis plays an important role in connection with these neural damages and disturbed memory for traumatic events.
- Research on the neuroanatomical and neurochemical basis of dissociation has made progress, as has the study of emotion regulation, not only related to the emotion fear.
- In terms of translational research, conditioning and sensitization processes, in particular, play an important role. These processes can be studied in parallel in animals and humans to then transfer molecular biological or pharmacological findings from these models to therapy in humans.

Translational research will certainly become more important in the coming years. Besides, the recording of gene-environment interactions, which is already more widespread in other mental disorders, will play an important role. This is especially important since PTSD can be regarded as a prime example for the investigation of the interaction of genetic factors and stress in the development of psychopathology. Another promising research area is the interplay of psycho- and pharmacotherapy, for example, in the pharmacological influencing of extinction or reconsolidation processes.

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Childhood Violence and Its Consequences

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Violence in childhood is often seen as a tragic isolated incident, yet it is a common worldwide phenomenon and thus a societal problem. In many cultures, violence is seen as an acceptable way to resolve conflicts. Furthermore, causes such as economic and social injustice and low educational levels play a role. Viewed globally, there are also few guidelines at the political and state level on how violence in childhood should be prevented, how perpetrators should be dealt with and how victims can be adequately helped. Another major problem is the insufficient documentation and data availability on the nature and extent of childhood violence and its consequences (UNICEF, 2014, 2017; WHO, 2013).

7

7.1 Forms of Violence in Childhood

Children can experience different types of violence and maltreatment. The UN Committee on the Rights of the Child (2011) distinguishes four major groups: physical violence, sexual violence, emotional violence and neglect. Violence can be perpetrated by the immediate family circle, such as parents, siblings, grandparents, or caregivers such as teachers, coaches, etc., or even by strangers.

Child maltreatment is defined as “non-accidental, violent psychological and/or physical harm or neglect of the child by parents/guardians or third parties that harms, injures, or hinders its development or kills the child” (Blum-Maurice et al., 2000, p. 2, German original translated into English).

For the definition of specific subtypes, reference is made to Leeb et al. (2008). The four main categories of childhood violence are defined as follows:

- **Physical violence:** Includes all forms of violence against children and young people by adults and minors. It also includes all forms of physical punishment and physical harassment. A special form is the so-called “Munchhausen by Proxy Syndrome“, in which parents intentionally cause illnesses or symptoms in their children, for example, through poisoning, which then entails extensive medical examinations (Moggi, 2009).
- **Sexual violence:** This form of violence includes any sexual act performed on or in front of a child, either against the child’s will or to which the child is not able to knowingly consent or which he or she is unable to resist or refuse satisfactorily because of his or her physical, emotional, mental or linguistic inferiority.
- **Emotional violence:** This includes rejection, fear, terrorisation and isolation of the child. On the part of the caregivers, it begins with (permanent, everyday) insults, mockery, humiliation, withdrawal of love, and ranges from imprisonment, isolation from peers to various massive threats, including death threats. It also includes all forms of psychological bullying by other adults or minors.
- **Neglect:** Schone et al. (1997, p. 21, German original translated into English) define neglect as “the continuous or repeated failure of those responsible (parents or other caregivers authorised by them) to do what is necessary to ensure the physical and psychological care of the child. This omission may be active or passive (unconscious), due to insufficient insight or knowledge”.

7.2 Epidemiology of Childhood Violence

Exposure to childhood violence can already begin in the prenatal phase, when maternal risk behaviour during pregnancy occurs, for example, the consumption of alcohol and drugs. In infancy, the perpetrators are mainly from the family circle. The more independent the child becomes, the greater the risk of being abused by extra-familial offenders, such as teachers, classmates, friends or complete strangers (see UNICEF, 2014, p. 12). Data on the prevalence of violence vary greatly from study to study. According to Prevoo et al. (2017), the reasons for this are manifold and can be found at the following levels:

- person level (economic development level of the country, interview of a child vs. an adult, type of sample);
- sampling level (sample composition, response rate, sample size);
- survey level (validated vs. non-validated instrument, the definition of violence, type of survey, number of questions).

A major problem with prevalence rates is also the high number of unreported cases, which makes it difficult to adequately reflect reality (Deutscher Kinderverein, 2017). The WHO (2013) describes the following prevalence rates for the European area: sexual abuse is experienced by 13.4% of girls and 5.7% of boys. Furthermore, 22.9% of boys and girls are victims of physical abuse and 29.1% of emotional abuse. There are fewer European studies on neglect. The worldwide prevalence rates for physical and emotional neglect are 16.3% and 18.4% respectively (ibid.). A German representative survey by Iffland et al. (2013) reports that 12% of respondents aged 14–90 years reported physical abuse, 6.2% sexual abuse, 10.2% emotional abuse, 13.9% emotional neglect and 48.4% physical neglect.

However, it seems important to distinguish between or compare different subpopulations. For example, a representative Swiss survey investigated the influence of a migrant background on young people aged 13–20 (Schick et al., 2016). In the overall population, 22.3% of the respondents reported having experienced physical violence by the caregiver, 2.8% sexual abuse by a known adult, 26.5% emotional abuse and 6.4% neglect. Adolescents with a migrant background had higher prevalence rates, which was partly explained by a higher level of abuse-related risk factors such as socio-economic status and environmental factors (ibid.). Another study, the most recent German representative study with 2510 respondents aged 14–94 years by Witt et al. (2017), specifies the results in terms of gender and severity of maltreatment. Women more often reported moderate and severe sexual and emotional abuse than men. The greatest age effect was seen in physical neglect, with the highest prevalence among respondents over 70 years of age. ■ Table 7.1 shows the frequency of child abuse in Germany.

A survey of women with impairments/disabilities in Germany revealed a significantly higher incidence of violent experiences in childhood and adolescence, which shows the particular vulnerability of and danger to this group (Schröttle et al., 2012). Jones et al. (2012) also make it clear in their global meta-analysis that children and adolescents with impairments/disabilities were victims of violence more often than their peers.

7.2.1 Physical Violence

Worldwide, 22.6% (95% confidence interval: 19.6–26.1%) of adolescent and adult respondents report physical abuse in their self-reports (Stoltenborgh, Bakermans-

Table 7.1 Prevalence rates of child abuse in Germany (Witt et al., 2017)

	N	None to minimal	Low to moderate	Moderate to severe	Severe to extreme
		N (%)	N (%)	N (%)	N (%)
Physical abuse					
Total	2497	2185 (87,1)	145 (5,8)	83 (3,3)	84 (3,3)
Female	1330	1165 (87,6)	79 (5,9)	41 (3,1)	45 (3,4)
Male	1167	1020 (87,4)	66 (5,7)	42 (3,6)	39 (3,3)
Sexual abuse					
Total	2496	2148 (85,6)	158 (6,3)	133 (5,3)	57 (2,3)
Female	1329	1090 (82,0)	89 (6,7)	101 (7,6)	49 (3,7)
Male	1167	1058 (90,7)	69 (5,9)	32 (2,7)	8 (0,7)
Emotional abuse					
Total	2492	2027 (80,8)	302 (12,0)	98 (3,9)	65 (2,6)
Female	1324	1053 (79,5)	156 (11,8)	64 (4,8)	51 (3,9)
Male	1168	974 (83,4)	146 (12,5)	34 (2,9)	14 (1,2)
Emotional neglect					
Total	2496	1486 (59,2)	678 (27,0)	155 (6,2)	177 (7,1)
Female	1329	809 (60,9)	334 (25,1)	78 (5,9)	108 (8,1)
Male	1167	677 (58,0)	344 (29,5)	77 (6,6)	69 (5,9)
Physical neglect					
Total	2496	1452 (57,8)	482 (19,2)	336 (13,4)	226 (9,0)
Female	1329	786 (59,1)	251 (18,9)	170 (12,8)	122 (9,2)
Male	1167	666 (57,1)	231 (19,8)	166 (14,2)	104 (8,9)

Kranenburg, & van Ijzendoorn, 2013). Neither gender differences nor geographical differences were found in this meta-analysis of global epidemiological studies. The variance in prevalence rates can be explained on the one hand by two sample characteristics, namely the type of sample and who was interviewed, children or adults, and on the other hand by methodological moderators such as the period of abuse, number of questions, years of publication and the definition of physical abuse.

One problem with the definition of physical violence is that the corporal punishment of children has long been the subject of con-

trovery. In Germany, an amendment was made in this respect in the Civil Code § 1631 paragraph 2 in the year 2000:

- Children have a right to a non-violent upbringing.
- Physical punishment, emotional violence and other degrading measures are not permitted.

This means that the corporal punishment of children is no longer permitted in Germany and therefore now clearly falls under the generic term physical abuse. Nevertheless, corporal punishment is still part of education in many German families. Forsa (2011)

Table 7.2 Frequency of physical punishment in the last 12 months in a representative survey in Germany

Frequencies	Slap on the backside	Slap in the face	Spanking	Spanked with a stick or similar
Never	60%	90%	95%	100%
1 to 2 times	28%	9%	3%	–
Every few months	8%	1%	1%	–
Every few weeks	4%	–	–	–
Every few days	1%	–	–	–

Adapted according to Forsa (2011)

conducted a representative survey among parents with at least one child up to 14 years of age. The study refers to the frequency of corporal punishment in the last 12 months. Overall, 40% of parents affirmed “slap on the backside”, 10% “slap in the face” and 4% “spanking”. Nevertheless, there is a decrease compared to the study of 2006/2007, in which 46% indicated “slap on the backside”, 11% “slap in the face” and 6% “spanking”. **Table 7.2** shows how often physical punishment was used.

UNICEF describes worldwide figures on corporal punishment in a report from 2014:

- 3 out of 10 adults believe that corporal punishment is necessary to raise a child properly.
- 6 out of 10 children aged 2–14 years are regularly physically punished by their caregivers.
- Almost half of all girls aged 15–19 think that a husband sometimes has the right to beat his wife.

Furthermore, UNICEF (2017) reports that even one-year-old infants are affected by corporal punishment worldwide. It becomes clear that 6 out of 10 children aged 12–23 months experience violent methods of upbringing, half of them physical punishment, half verbal violence. In the 2 to

4-year-olds, every third child experiences a violent upbringing, every sixth child experiences corporal punishment.

However, children and young people are not only chastised by their parents, but also by teachers. Every second child aged 6–17 years lives in a country where corporal punishment at school is not completely prohibited (UNICEF, 2017).

- » All forms of violence against children, however light, are unacceptable. ... Frequency, the severity of harm and intent to harm are not prerequisites for the definitions of violence. States parties may refer to such factors in intervention strategies in order to allow proportional responses in the best interests of the child, but definitions must in no way erode the child’s absolute right to human dignity and physical and psychological integrity by describing some forms of violence as legally and/or socially acceptable. (UN Committee on the Rights of the Child, 2011, p. 8)

Children and young people also experience physical violence in other contexts and by very different types of perpetrators. The spectrum ranges from one-off physical attacks by peers or unfamiliar adults to gang violence, school shootings, terrorist attacks,

war and flight experiences (► Chap. 25). Different roles can also come together. Some children experience physical violence, have to witness domestic violence and become perpetrators themselves (UNICEF, 2014). A special group of perpetrators in childhood are child soldiers (for a comprehensive description see Schauer & Elbert, 2010).

7.2.2 Sexual Violence

A global meta-analysis by Stoltenborgh et al. (2011) reports that on average 12.7% (95% confidence interval: 10.7–15.0%) of adolescents and adults stated in their self-reports that they were victims of sexual abuse. There were differences in gender (female > male) and geographical location. The lowest rates were found in Asia, the highest rates among female respondents in Australia and male respondents in Africa (for gender and geographical differences see also Pereda et al., 2009). The prevalence rates for sexual violence also vary considerably between studies. Barth et al. (2013) report figures of 8–31% for girls and 3–17% for boys. They attribute these fluctuations to methodological differences. In this respect, they point out that, in particular, stating the frequencies differentiated according to specific forms of sexual violence would contribute to more adequate results. The Criminological Research Institute of Lower Saxony (Stadler et al., 2012) questioned a representative sample of 9175 adults (16–40 years) about sexual abuse experiences in childhood up to and including 16 years of age with a person at least 5 years older. The overall rate of sexual abuse with physical contact was 7.4% for female respondents and 1.5% for male respondents. The rates for exhibitionism also differed with 5.9% for female respondents and 1.5% for male respondents.

Enders (2011) criticizes the definition of abuse experiences with a person at least 5 years older, as it fails to capture many

abuse and maltreatment experiences by peers. This is impressively demonstrated in a representative Swiss survey (Optimus Study) with almost 6800 young people. It also found a gender difference, as 40.2% of female adolescents and 17.2% of male adolescents reported sexual abuse. In this study, sexual violence was broadly defined and included events without physical contact (exhibitionism, sexting, verbal sexual violence, etc.). More than half of the girls affected by sexual violence in general and more than 70% of the boys stated that they had been harassed or abused by adolescent perpetrators of the same age (Mohler-Kuo et al., 2014). Sexual harassment via the Internet was the most frequently reported (cyber victimisation). It became clear that even sexual violence without contact (the most common category of abuse), also called hands-off, can have a significant negative impact on the mental health and health-related quality of life of children and adolescents (Landolt et al., 2016). The study by Allroggen et al. (2017), which deals with sexual violence among children and adolescents in assisted living facilities and boarding schools, also describes that predominantly young people of the same age were the perpetrators. In up to 11% of cases, employees of the institutions were the perpetrators.

7.2.3 Emotional Violence

There is significantly less research on emotional violence compared to the other types of maltreatment. Reasons for this include the fact that emotional abuse has long been seen as part of the other types of maltreatment and that it is often a matter of long-term dysfunctional interactions rather than clearly identifiable events (Glaser, 2002). It is also very difficult to operationalise emotional abuse concisely. A global meta-analysis by Stoltenborgh et al. (2012) reports that using self-report 36.3% (95% confidence

interval 28.1–45.4%) of adolescents and adults are affected by emotional abuse in childhood. Neither gender, geographical location nor economic development level of the country had any influence on the reported prevalence rates. The aforementioned 2011 German Forsa survey shows that 93% of parents raised their voices in the last 12 months, 85% imposed bans, 47% ordered time off, 43% hit the table, 38% grabbed or held their child strongly, 26% stopped talking to the child or ignored it and 19% shouted down their child (Forsa, 2011).

Case Study: Emotional Abuse

A 10-year-old boy lost his father to a heart attack. The mother blames him for the father's death. She often stresses that if the child didn't exist, the father would still be alive. Even before this, the mother met the boy predominantly hostile and dismissive. In addition to pejorative feedback on any statements and on the child's behaviour, there is also unreasonable punishment (e.g. house arrest for weeks and television bans).

In addition to intra-familial emotional abuse, children and adolescents also experience emotional violence by extra-familial perpetrators such as coaches and teachers, strangers, for example through racist comments, and especially in the context of bullying, also by peers. Despite the increased use of electronic media, bullying and violence continues to occur more frequently directly in the school context than online (Bergmann & Baier, 2018). Nevertheless, psychological and sexual violence also occurs online (ibid.). Melzer et al. (2012) describe a positive trend: From 2002 to 2010 the proportion of perpetrators and perpetrator-victims

of bullying and violence decreased substantially in schools in Germany. Why this is important becomes clear based on a study by Lereya et al. (2015) with almost 5500 children and young people. They report that bullying has negative long-term effects on mental health (especially anxiety, depression and self-harm).

7.2.4 Neglect

▶ Although neglect is considered one of the most common types of childhood maltreatment and its consequences are comparable to physical and sexual violence, it has received much less scientific and public attention.

Stoltenborgh, Bakermans-Kranenburg, van Ijzendoorn, and Alink (2013) report in their worldwide meta-analysis that using self-report 16.3% of adolescents and adults reported physical neglect (95% confidence interval 12.1–21.5%) and 18.4% (95% confidence interval 13.0–25.4%) emotional neglect in childhood. There were no gender differences.

Münder et al. (2000) called on specialists from youth welfare offices in Germany to name the risk situation that in the respective case decisively contributed to the involvement of the family court. In half of the cases, neglect was cited as the central risk category, followed by emotional abuse, which was only cited as the central risk category in 12.6%. Especially the youngest children were affected by neglect as a central category of risk (35.2% younger than 3 years, 20.1% between 3 and 6 years). With increasing age, the proportion decreased more and more, so that it only accounted for 3.8% in the 15 to 18-year-olds (Münder et al., 2000 in Mutke, 2001).

7.2.5 Children as Witnesses (of Intimate Partner Violence)

Children and young people can also be indirectly affected by violence as witnesses. In an extra-familial setting or with strangers, this can be a stressful experience. Children are particularly affected, however, when the violence happens in their immediate environment, for example, as violence between mother and father or their respective partners. Worldwide, every fourth child under the age of 5 lives with a mother who is a victim of intimate partner violence (UNICEF, 2017). Finkelhor et al. (2013) describe that in the U.S. in 2011 22.4% (lifetime prevalence 39.2%) of 4503 children and adolescents aged between 1 month and 17 years had experienced some form of violence as witnesses in the previous year. Of these, 8.2% had witnessed family-related violence in the previous year (lifetime prevalence 20.8%). 6.1% had witnessed violence between parents or partners (lifetime prevalence of 17.3%). Even witnessing violence alone, particularly in the immediate environment, has far-reaching effects on the child or adolescent (McTavish et al., 2016).

In Germany, Müller and Schröttle (2004) surveyed a representative sample of women aged 16–85 years in regard to experiences of intimate partner violence. Every fourth woman who had lived in a partnership reported that she had experienced physical (23%) or - in some cases additionally - sexual assaults (7%) by a relationship partner. In most cases, the children had witnessed the violence of their parents or even got into a physical confrontation (Table 7.3).

7.2.6 Overlap of Different Forms of Violence in Childhood

Children often experience a variety of different violent experiences, which is called poly-victimisation (Finkelhor et al., 2007a).

Table 7.3 Participation of children in intimate partner violence according to the statements of women affected by violence. (Adapted from Müller & Schröttle, 2004; multiple answers possible; case basis: all couple relationships reporting intimate partner violence with children in the household, N = 485)

Children...	[%]
... listened to the situation	57,1
... saw the situation	50,0
... got into the fight	20,6
... tried to defend or protect me	25,0
... tried to defend my partner	2,0
... were physically attacked themselves	9,8
... did not notice anything	23,0
Unclear whether the children were aware of the situation	11,1
Not specified	0,4

For example, sexual violence rarely occurs alone, but often in combination with physical violence (UNICEF, 2014). Experiencing several types of violence is in turn associated with a higher degree of psychiatric and health-related consequences (Arata et al., 2005; Hughes et al., 2017). Nevertheless, this multiple experience of violence is often given too little consideration in research. This is reflected, for example, in insufficient methodological considerations and statistical evaluations (see Higgins & McCabe, 2001).

The different forms of violence can be experienced simultaneously or consecutively. Jonson-Reid et al. (2003) prospectively examined for different forms of maltreatment (sexual abuse, physical abuse, neglect, emotional abuse, other forms of maltreatment) how often and in what form re-victimisation occurred in a period of 54 months after the maltreatment first became known. The frequency of re-victimisation for the above-mentioned forms

of maltreatment was 10.7–18.7% over this period (34.7%–50.2% re-victimisation was found for those reports of maltreatment that were not considered verified).

Case Study: The Simultaneous Occurrence of Abuse and Neglect

The police are called in because residents have brought a three-year-old child into their home who was out on his own. He is only lightly clothed, even though there is snow and it is freezing cold. The child has marks from blows with a belt on torso and legs. It claims to have left the house because there hasn't been anything to eat at home for days.

This appears to be a combination of physical abuse and neglect; neglect in terms of inadequate care (food, clothing) and protection of the child (being outside alone).

However, experiencing intra-family violence also increases the probability of experiencing extra-familial violence (Cook et al., 2003). For example, chronic childhood violence can lead to a higher risk behaviour with regard to sexual contacts, delinquent contact, addictive substances etc. in adolescence, which in turn can encourage violence in adolescence, such as physical confrontations and sexual violence (ibid.). Finkelhor et al. (2007b) also describe that, regardless of the form of violence experienced, this increased the risk of experiencing violence again within the next year (re-victimisation). Especially children who reported various forms of violence were at high risk of continuing to experience violence one year later. Lereya et al. (2015) also report a longitudinal connection with experiences of bullying: Children who had experienced maltreatment showed a higher risk of being bullied later.

- It has been shown that children who have been abused are later at high risk of being abused again and of experiencing other additional forms of violence, respectively.

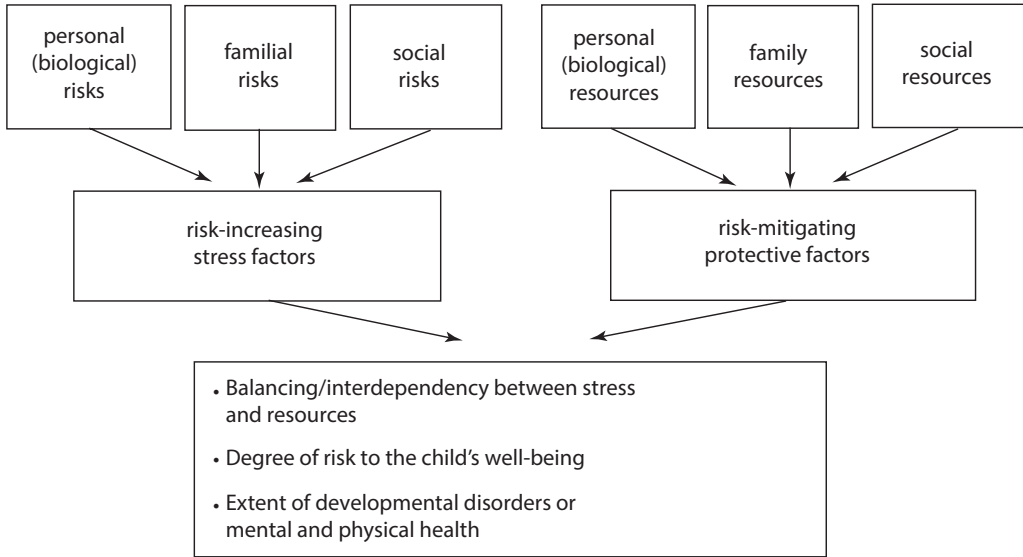
7.2.7 Causes of Child Maltreatment

There are various theories on the causes of child maltreatment. It is a complex bio-psycho-social causal structure (see Bender & Lösel, 2005).

Bio-Psycho-Social Stress as Causes of Child Maltreatment

- **Individual level** (e.g. characteristics of the abuser's biography and personality, such as a troubled childhood, mental disorders, drug or alcohol abuse, physical disabilities, low intellectual ability in combination with lack of skills in dealing with stress and conflict resolution, lack of knowledge about child development)
- **Family level** (including partner conflicts, disrupted parent-child relationships, cramped housing conditions)
- **Social/municipal level** (e.g. no social support network of the family, high crime rate in the community, deprived area)
- **Socio-cultural level** (e.g. high poverty rate, tolerance of aggressive/violent conflict resolution; power and relationship gaps between the sexes)

One cause of child abuse, which is always controversially discussed, is the so-called cycle of abuse, which refers to the fact that parents who have experienced child abuse themselves abuse their own children later.



■ Fig. 7.1 Bio-psycho-social model of risk and protective factors

Particularly when discussing such causes, it seems essential to point out that simple causal conclusions cannot be drawn, but that in addition to possible risk factors, protective factors may also be present. Specific combinations of factors in the overall context can ultimately increase the probability of maltreatment (risk factors) or even reduce it (protective factors, resources; ■ Fig. 7.1). In the end, this is not only true for child maltreatment, but also for any risks to the well-being of the child and for extremely complex condition structures that can have a negative or positive effect on the child's development in abusive as well as non-abusive families.

7.3 Consequences of Violence in Childhood

The consequences of childhood violence can vary greatly from one individual to another, but often have lifelong effects (► Chaps. 6 and 22). In many cases, the symptoms are much broader than the diag-

nostic criteria of current classification systems for trauma sequelae.

7.3.1 General Consequences of Violence in Childhood

Regardless of what form of child maltreatment has been experienced, according to Moggi (2009, p. 871), the following consequences can occur:

■ Emotional Consequences

Posttraumatic stress disorder, anxieties, phobias, depression, low self-esteem, suicidal tendencies, feelings of guilt and shame, anger, hostility, self-harming behaviour (e.g. self-harm) and disorders of affect regulation.

■ Cognitive Consequences

Attention and concentration disorders, dysfunctional cognitions (e.g. negative attribution patterns, negative schemata), language, learning and school difficulties.

■ Somatic and Psychosomatic Consequences

Headaches, breathing difficulties, eating and sleeping disorders as well as enuresis and encopresis.

■ Abnormalities in Social Behaviour

When separated from abusive parents, abused children often show no feelings, while they manifest excessive trust in strangers. Abnormalities include withdrawal behaviour, absence from school, hyperactivity, running away from home, aggressive behaviour such as intentional destruction of property, physical attacks (possibly with weapons) and other delinquent behaviour. The aggressive behaviour can also be directed against the parents. Beckmann et al. (2017) describe that physical and verbal violence by parents in childhood increases the probability that adolescents themselves become physically and verbally aggressive towards their parents.

■ Psychological Disorders

Children and young people who have experienced violence often meet the criteria of mental disorders. They often exhibit comorbid disorders. In addition to established diagnoses, there is also a need to develop new terminology/diagnostic criteria (“complex posttraumatic stress disorder”; ► Chap. 3).

A multicentre study from Germany with 322 children and adolescents aged 4–17 years who had experienced abuse and neglect investigated the diagnoses of mental disorders according to ICD-10 (Ganser et al., 2016). Almost one-third of the children and adolescents met the criteria of a mental disorder. Comorbid disorders occurred in almost 43% of the cases. ■ Table 7.4 illustrates the frequencies of mental disorders.

■ Neuroanatomical and Functional Changes

In addition, neurobiological and brain-structural changes are evident in various

■ **Table 7.4** Frequencies of mental disorders according to ICD-10 in children and adolescents after abuse and neglect (N = 322; Ganser et al., 2016)

Mental disorder according to ICD-10	[%]
Posttraumatic stress disorder	25,2
Conduct disorders	21,4
Attention and hyperactivity disorders	16,2
Elimination disorders	14,0
Affective disorders	10,6
Anxiety disorders	9,6
Adjustment disorders, stress reactions	4,0
Tic disorders	2,5
Other	5,6

areas such as the hippocampus, amygdala, prefrontal cortex and corpus callosum (Teicher & Samson, 2013, 2016: an overview in Landolt, 2012). Epigenetic mechanisms are also discussed (Cicchetti et al., 2016). In addition, age at the time of the maltreatment experiences and chronicity seem to have an influence on neurocognitive performance (Cowell et al., 2015). Teicher and Samson (2016) summarise the current state of research as follows:

- Chronic child maltreatment can lead to structural and functional changes in the brain.
- The type of maltreatment leads to different effects.
- Age at exposure to maltreatment has an influence.
- The temporal connection between experiencing violence and changes in the brain is unclear (sensitive phases for specific types of maltreatment and brain structures?).
- There are gender differences.
- Changes seem to be due to neuroplastic adaptive reactions.

- It is not clear whether the neurobiological consequences are reversible.
- The causal mechanisms by which violence in childhood leads to changes in the central nervous system are not yet sufficiently understood.

■ **Death Through Violence**

In extreme cases, physical violence also includes the death of a child or adolescent. According to WHO data from 2012 (UNICEF, 2014), almost a fifth of all murder victims worldwide were under 20 years of age, more than half of them between 15 and 19 years of age.

7 For 2016, more than 1447 deaths due to child maltreatment were assumed in the USA, with younger children especially affected, especially those under 1 year of age (U.S. Department of Health & Human Services, 2018). They represented by far the largest group, accounting for 44% of all deceased children. Of the deceased children, 74.6% had experienced neglect and 44.2% physical abuse (either exclusively or in combination with another form of maltreatment; *ibid.*) In Europe, too, children under 4 years of age are particularly affected (WHO, 2013). In total, at least 850 children under the age of 15 die annually from child maltreatment in Europe. Low- to middle-income countries are particularly affected, where 71% of deaths are registered (*ibid.*). In Germany, 133 children died after maltreatment in 2016; in further 78 children, an attempted killing took place. Of these, 100 of the children killed were younger than 6 years of age (Deutscher Kinderverein, 2017). Banaschak et al. (2015) attempted to establish valid prevalence rates of infant death in children from birth to the age of 3 years after abuse and neglect in Germany. Due to the incomplete data situation and the presumably high number of unreported cases, they were ultimately unable to make any representative statements.

7.3.2 Consequences of Specific Forms of Childhood Violence

It is often difficult to study the consequences of specific forms of maltreatment since in many cases not only one form of maltreatment has been committed and therefore the consequences cannot be seen in isolation. According to Moggi (2005 in Moggi, 2009, p. 870 f.) only some typical consequences or symptoms can be identified:

■ **Physical Abuse**

Injuries and organ damage such as bruises, dents and haematomas, skeletal, soft tissue, eye, brain and mouth injuries as well as burns and scalds, which can lead to death.

■ **Neglect and Psychological Abuse in Preschool**

Developmental delays (e.g. growth and speech disorders, psychomotor developmental delays) and psychosomatic symptoms (e.g. wetting, skin diseases) as well as abnormalities in attachment behaviour.

■ **Sexual Abuse of Children**

Injuries in genital, anal and oral areas, pregnancies during adolescence, sexually transmitted diseases and sexual behaviour that does not correspond to age (e.g. excessive curiosity about sexuality, early sexual relations, open masturbation or exhibitionism, sexualised behaviour in social contact).

7.4 Treatment Options

With regard to the diagnosis and treatment of children/adolescents who have experienced violence with a focus on the symptoms of posttraumatic stress disorder, we refer to the contribution by Steil and Rosner in this book (► Chap. 22). With regard to different methods of trauma therapy in childhood and adolescence, there is a handbook by Landolt

and Hensel (2012), reviews by Silverman et al. (2008) and Dorsey et al. (2017) and the comprehensive work on evidence-based treatment by Landolt et al. (2017).

Under the Magnifying Glass

The more pronounced and earlier multiple to chronic and overlapping (severe) forms of child maltreatment are present in a child/adolescent and other risk factors additionally impair the bio-psychosocial development, the more complex and profound disorders of cognitive, emotional, social and neurobiological development must be expected. The consequences of chronic childhood violence can be life-long.

Despite an often difficult initial situation, it has been shown that even children and adolescents with complex trauma sequelae can benefit from manualised trauma therapies such as trauma-focused cognitive behavioural therapy (Tf-CBT) (Sachser et al., 2017). Narrative exposure therapy (NET; Schauer et al., 2011; adapted for children KIDNET; Schauer et al., 2017), which was developed specifically for adults and children exposed to multiple trauma in the context of war and armed conflict, have also shown good and stable results. Nevertheless, a more complex and longer-lasting therapy must often be assumed. Such a treatment must take into account and treat comorbid disorders, integrate different support systems, etc.

Impaired areas, as described in detail in this chapter, can relate to very different areas such as attachment, body, affect regulation, dissociation, behavioural control, cognition and self-concept. This can mean that, in addition to the classic trauma-focused elements, further skills have to be learned and developed. This is the reason why a complex set of symptoms often needs a longer ther-

apy period. A continuous and reliable therapeutic relationship is of central importance in this context. A systemic view seems indispensable. In the case of multiple, chronically burdened children/adolescents, it is essential to involve their primary caregivers intensively in the treatment, especially in the initial period. They need assistance/psychoeducation regarding the causes of the problem behaviours of their children and the appropriate ways of reacting to them (e.g. less reaction to the specifically disturbing behaviour but rather a response to the associated feelings of the child).

Above all, an important point for successful support is the good networking/coordination of assistance, often including cooperating with youth welfare services. Kindler et al. (2006) provides a comprehensive description of the problems, tasks and possibilities of assistance.

The Complex Trauma Task Force of the National Child Traumatic Stress Network (Cook et al., 2003) describes 4 central goals for the therapy of complex traumatised children and adolescents:

- Increase external security (at home, at school and in the community);
- Develop internal security and competences (emotion regulation and interpersonal competences);
- Change development paths in positive, health-promoting directions (functional processing of the experience of violence with a more adaptive view of the present and future);
- Promote healthy primary attachment relationships and the use of other social support options (building social networks).

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Diagnostics and Differential Diagnostics

J. Schellong, M. Schützwohl, P. Lorenz, and S. Trautmann

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8.1 Initial Situation

The diagnostic classification of reported and observed symptoms is the basis for the application of disorder-specific therapeutic procedures. This results in concrete instructions for action, which have proven to be effective in empirical tests. In the case of trauma sequelae, however, the diagnosis seems comparatively challenging. While the presence of trauma-related disorders is still overlooked in many cases (Ehlers et al., 2009; Wittchen et al., 2012), PTSD, in particular, is diagnosed in a partially inflationary manner in both the scientific and clinical context (Dudeck & Freyberger, 2011; McHugh & Treisman, 2007). In both cases, there is a risk that the affected persons will not be treated properly.

Possible reasons for overlooking trauma-related disorders have been widely discussed. However, one of the main reasons is probably that people who suffer from the consequences of their traumatic experiences and seek support often, in their first contact, describe symptoms that are not outright obvious signs of a post-traumatic disorder. They may, for example, report anxiety and anhedonia and generally complain about nervousness, but do not mention the trauma. Often, they see no connection between their complaints and the traumatic experiences – which sometimes happened long ago. Also, memory distortions and avoidance behaviour as typical symptoms of trauma sequelae (► Chaps. 2, 3, and 4), may prevent them from fully reporting information relevant to the diagnosis.

Conversely, reasons, why a disturbance pattern after a known traumatic event is all too often classified in terms of PTSD, are widely discussed. Traumatic events play a role in the development and maintenance of many mental disorders, including borderline personality disorder, affective disorders and anxiety disorders (Asselmann et al., 2018; Breslau, 2009). At the same time, due to the non-specificity of the symptom cri-

teria, PTSD is one of the categories of disorders that are particularly often diagnosed as false positive in classificatory diagnostics, especially when a so-called top-down approach is used (McHugh & Treisman, 2007). Depression and adjustment disorders as well as borderline personality disorder and other disorders exhibit similar symptoms to PTSD. In addition, the trauma criterion is defined very unclearly in the classification lists and the disorder is therefore diagnosed after very frequent and generally not very stressful events where a classification as adjustment disorder is often more appropriate (► Chap. 5).

Comprehensive changes have been made for the new edition of the International Statistical Classification of Diseases and Related Health Problems (ICD-11). Diagnostic tools for ICD-11 (WHO, 2018) are still under development.

The “International Guidelines for Diagnostic Assessment” (IGDA Workgroup, WPA, 2003) published by the World Psychiatric Association outline professional diagnostic and differential diagnostic procedures as a comprehensive process that includes not only a detailed patient interview but also the review of various sources of information and the application of supplementary survey procedures. A naturalistic study on the treatment practice of PTSD could show that for the majority of psychotherapists in private practice the following aspects are already established components of the diagnostic process:

- Exploration of traumatic events,
- Clarification of the diagnostic symptom criteria of PTSD,
- Recording and differentiation of comorbid or other trauma-associated disorders and relevant previous mental illnesses,
- Information exchange with pre-treatment and co-treatment.

The use of diagnostic instruments, on the other hand, seems to be much less common in outpatient practice. Trauma-specific questionnaires are used by only one in four

practitioners in private practice and trauma-specific interviews by only 3% (Haase & Schützwohl, 2011).

In this chapter, a comprehensive diagnostic procedure is presented first for the diagnoses of PTSD and complex PTSD, followed by ► Sect. 8.4 on prolonged grief disorder and adjustment disorder. The structure of each section corresponds largely to the recommendations of a commission of experts (Keane et al., 2000):

- The conduct of structured or standardised interviews, originally developed to ensure reliable diagnoses in research, is also indispensable in clinical practice (► Sect. 8.2.1).
- The frequency and intensity of symptoms should be recorded, as well as the duration of the symptom burden and the resulting psychological impairments from the patient's perspective. The use of reliable and valid self-assessment procedures is particularly suitable for this purpose (► Sect. 8.3).
- After a potentially traumatic event, a wide range of stress reactions can occur (► Sect. 8.4); against this background, questions of differential diagnosis must also be discussed both in clinical practice and in the context of expert opinions (► Sect. 8.5).
- In addition to classificatory diagnostics, the acquisition of further information is necessary for therapy planning. Of particular relevance is the recording of maintenance factors (► Sect. 8.6.1) and secondary functional impairments (e.g. in the social and occupational areas; ► Sect. 8.6.2).
- The recording of resources and competencies complements the diagnostics in the context of therapy planning (► Sect. 8.6.3).
- Finally, for quality assurance purposes, it is useful to provide diagnostic support for the implementation of therapeutic measures (► Sect. 8.6.4).

8.2 Structured/Standardised Interview Diagnostics

Structured interviews are used to systematically record diagnostic criteria using preformulated questions; if there are problems of understanding or doubts, questions can be reformulated, explained, or supplemented. In addition to the information provided by the patients, the assessment can include all available information. In contrast, standardised interviews do not leave the interviewer any freedom in the assessment, that is, questions are generally read word by word and only the patients' answers are coded.

The following is only an overview of the most important procedures:

8.2.1 Interviews for Mental Disorders

8.2.1.1 Structured Clinical Interview for DSM-IV (SCID)

Until the German version of SCID-5 (English version First et al., 2015) will be completed, the "Structured Clinical Interview for DSM-IV" (SKID-IV; Wittchen et al., 1997) will be used, which is currently certainly one of the most frequently used interviews. It is utilized to record and diagnose selected mental disorders as defined in DSM-IV. The PTSD section allows the recording of trauma-related disorders. The SCID does not offer the possibility of recording diagnostic criteria for acute stress disorder (ASD). The following section describes the basic procedure, which does barely differ between SCID-IV and SCID-5.

The interviewer usually only conducts the PTSD section if there is an indication of the presence of PTSD from the information available.

The assessment begins by asking the interviewer whether the patient has ever experienced a traumatic event.

The following questions are then used to assess the existence of a traumatic experience as defined by the DSM (A criterion) and to determine the worst traumatic event, including age at the time of experience. Questions are then asked about other DSM criteria. The section ends with questions about the course and severity of the disorder.

The interviewer assesses the presence of the symptoms with

- “?” = “Information is insufficient”
- “1” = “not available”,
- “2” = “subliminal presence” or
- “3” = “present”.

Jump rules after completion of all questions on a specific diagnostic criterion make it possible to terminate the PTSD section as soon as a criterion is judged as not to be fulfilled. In the SCID, the interviewer must code the criterion and not necessarily the patient’s answer. This requires the interviewer to make a clinical judgment.

The administration time for the SCID is given as approximately 100 minutes for inpatients and approximately 75 minutes for outpatients. For the PTSD section, which has proven to be a reliable and valid module for the diagnosis of PTSD in numerous empirical tests, approximately 20 minutes should be planned for traumatized patients. However, it only provides a trichotome symptom rating (non-existent – subliminally present – present) and a trichotome rating for the severity of PTSD classified as present (mild – moderate – severe).

8.2.1.2 Diagnostic Interview for Mental Disorders (DIPS)

The “Diagnostic Interview for Mental Disorders” (DIPS; Schneider & Margraf, 2011) is the German version of the Anxiety Disorders Interview Schedule (ADIS, Di Nardo et al., 1983). It combines the objective of categorical diagnostics with the collection of therapy-relevant information. The DIPS was adapted to DSM-5 (DIPS Open Access: Margraf, Cwik, Pflug, & Schneider,

2017). For copyright reasons, the new DIPS Open Access integrates the DSM-5 criteria in a paraphrased short form in the protocol sheet. The answers are recorded on a separate protocol sheet. The diagnoses determined according to DSM-IV-TR or DSM-5 can easily be converted into ICD-10 diagnoses (Dilling & Freyberger, 2013; WHO, 1993).

The PTSD section begins with a detailed assessment of the potential trauma, screening questions about the current symptoms and the duration of symptoms of existing post-traumatic stress reactions. In addition to the dichotomous recording of the characteristic core symptoms of PTSD, a combined rating of frequency and severity must be given for each symptom, that is, the latter cannot be assessed independently of each other. The section ends with the assessment of the impairment experienced as well as detailed questions on the temporal classification of the symptomatology and the lifetime prevalence.

- In addition to the detection of PTSD, DIPS and DIPS Open Access allow the diagnosis of a currently existing acute stress disorder (ASD), whereby, here too, symptom assessments are to be made on the described frequency/severity scale.

The assessment rule in the diagnostic algorithm stipulates for both PTSD and ASD that a symptom is diagnostically relevant when it occurs continuously (for longer than 1 month for PTSD; Falkai et al., 2015). Unfortunately, there is no information on the usefulness of this rule in different populations, nor is there much information on the test-statistical quality criteria of the two sections. The interrater reliability of the PTSD section of DIPS turned out to be at least good to very good (Suppiger et al., 2008). For the PTSD section of the DIPS research version (F-DIPS; Margraf et al., 1996), from which the DIPS for DSM-IV emerged, the retest reliability proved to be

satisfactory. For DIPS Open Access, studies are currently being conducted to test the psychometric quality criteria (Margraf, Cwik, Suppiger, & Schneider, 2017).

8.2.1.3 DIA-X Interview/Composite International Diagnostic Interview (CIDI)

The Diagnostic Expert System Interview (**DIA-X-Interview**; Wittchen & Pfister, 1997) is a modular and flexible diagnostic assessment system that enables diagnosis according to ICD-10 and DSM-IV. A version revised according to the criteria of DSM-5 is currently available in German as a research tool (Composite International Diagnostic Interview, **CIDI**) (Beesdo-Baum et al., unpublished). Depending on the research question, DIA-X can be used in a lifetime version or a less time-consuming cross-sectional version (12 months). Although the interview was initially available in both a paper-pencil and a PC version; Use of the latter is strongly recommended since the interview evaluation necessarily requires the DIA-X diagnosis program and the data collected by means of the paper-pencil version would have to be entered there (Wittchen & Pfister, 1997). It is a standardized interview that allows the recording of the diagnostic criteria of PTSD, but not those of ASD.

The interview part on PTSD begins with an inquiry into one or more potentially traumatic life events. For this purpose, the interviewer can use the list N1 – comparable to the listing ▶ Sect. 8.2.1.1 “Structured clinical interview” for DSM-IV – from the supplementary booklet. If unclear, it must then be clarified in each case whether the A-criterion is completely fulfilled and whether the event was associated with fear, helplessness, or terror.

If the patient has experienced a traumatic event, the interviewer uses the fully pre-formulated and generally verbatim questions to determine whether the characteristics of PTSD were present after the traumatic event (lifetime version) or in the last 12 months (cross-sectional version) before the time

and duration of the symptoms are clarified in more detail. Finally, in order to obtain information on the degree of severity, the coping behaviour and the impairment of everyday activities are determined.

- ▶ The DIA-X interview requires extensive training when using both the PC version and the paper-pencil version, but in the opinion of the authors, it can also be conducted in the absence of clinical experience – although the interpretation of the DIA-X diagnoses determined must be reserved for clinically experienced diagnosticians (Wittchen & Pfister, 1997).

The duration of the procedure is given as 75 minutes for the lifetime version and 55 minutes for the cross-sectional version; the duration of the PTSD section is given as 15–20 minutes for traumatized patients. In epidemiological and clinical studies, reliability and validity have proven to be very high almost throughout. However, the DIA-X interview only provides dichotomous information about the presence of PTSD symptoms and the presence of PTSD. The intensity of stress reactions cannot be expressed in continuous data.

8.2.1.4 Mini-International Neuropsychiatric Interview (M.I.N.I.)

The “Mini International Neuropsychiatric Interview” (**M.I.N.I.** 6.0.0; Sheehan et al., 1998, Sheehan et al., 2010; German version of M.I.N.I. 5.0.0 [Sheehan et al., 2005] by Ackenheil et al., 1999) is a diagnostic interview frequently used in epidemiological and pharmacological research to assess mental disorders according to DSM-IV and ICD-10. With an estimated implementation time of 15 minutes, it is a very time-efficient procedure. The section on PTSD begins with 2 introductory questions that clarify the A-criterion and the B-criterion of PTSD; this is followed by 6 questions on the C-criterion and 5 questions on the D-criterion. Finally, the F-criterion is clarified. The interview is

terminated as soon as a diagnostic criterion is not met. Duration, frequency, or severity are not assessed in detail.

8.2.2 Disturbance Specific Interviews

8.2.2.1 Clinician-Administered PTSD Scale (CAPS)

In contrast to the general psychiatric interview procedures presented so far, the “Clinician-Administered PTSD Scale“(CAPS; Blake et al., 1990; German Schnyder & Moergeli, 2002, CAPS-5; Weathers, Blake, Schnurr, Kaloupek, et al., 2013; Müller-Engelmann et al., 2018) serves exclusively for PTSD diagnosis. It not only offers the possibility to collect diagnostically relevant information but with its 30 questions it also allows for the collection of interesting additional information. In research, but also in expert practice, it is one of the most frequently used procedures for PTSD diagnosis; its application in scientific studies is expressly recommended by a commission of experts (Charney et al., 1998).

With the CAPS, the interviewer first collects information about the traumatic event in order to be able to assess whether the trauma criterion of PTSD according to DSM-5 is fulfilled based on defined criteria. Using pre-formulated questions on the symptoms, the interviewer then assesses the frequency and intensity of the 20 diagnostically relevant characteristics of PTSD after DSM-5 (see criteria B, C, D and E) that occurred in the last month. In order to obtain as accurate a rating as possible of the frequency and intensity on the separate 5-point Likert scales, the anchors of both scales – the scale of severity assessment is defined specifically on the behavioural level in each case – can be read out to the patient. In further sections data are collected on:

- the onset of symptoms and their duration (criterion F),
- the effects of symptom burden (criterion G),

- Information on the overall assessment of the overall intensity of the symptoms and the validity of the assessments,
- questions about depersonalisation and/or derealisation to assess whether dissociative symptoms are present (a dissociative subtype of PTSD according to DSM-5).

The interviewer then checks whether the DSM-5 criteria for PTSD are currently met or were met at an earlier stage. The evaluation rule applies that a symptom is reliably present in the diagnostically relevant form if the frequency is assessed as at least ‘1’ and the severity at least ‘2’.

- The CAPS requires interviewers who are clinically experienced and familiar with the DSM concept of PTSD. Under these conditions, the reliability and validity of the original version (Weathers et al., 2001) and a German version (Schnyder & Moergeli, 2002) have been established.

However, when using the valid assessment rule, the percentage of persons with PTSD tends to be overestimated, which is why alternative rules have been proposed by various authors. Weathers et al. (1999) have empirically investigated the psychometric characteristics of 9 different assessment rules and discussed their practical relevance.

Some authors criticize the duration of CAPS application, which takes a relatively long time, 60 minutes for a complete interview and approximately 30 minutes for the acquisition of diagnostically relevant information alone (Foa & Tolin, 2000).

8.2.2.2 Structured Interview for Disorders of Extreme Stress (SIDES)

The “Structured Interview for Disorders of Extreme Stress“(SIDES; Pelcovitz et al., 1997; German version Teegen et al., 1998) is a structured interview for the assessment of symptoms that are part of the symptom

complex of complex PTSD or enduring personality change after the catastrophic experience (EPCACE), or developmental trauma disorder (DTD). The use of SIDES is therefore particularly recommended for patients who have been victims of type II trauma (► Chap. 3, ► Sect. 8.3.1.7).

The interview consists of 48 questions that are assigned to 27 symptoms and can be assigned to the 7 symptom complexes that Herman (1993) names in her definition of complex PTSD (► Chap. 3). This means that in the SIDES, between 1 and 9 questions must be asked for each symptom in order to determine the presence of a specific problem. The questions are to be answered on a 3-step scale (behaviour or emotion: mildly – moderately – severely problematic). For each symptom, criteria are defined in the SIDES under which conditions it is considered “present”.

In the meantime, SIDES has proven in several empirical studies to be a reliable and valid method for recording the above-mentioned symptoms (Teegen & Vogt, 2002).

8.2.3 Evaluation of the Structured or Standardised Interviews

For reliable diagnostics and disorder classification, it is essential to conduct a structured or standardized interview.

In clinical practice, standardisation is usually very well accepted by patients (Hoyer et al., 2006). The use of these procedures can therefore be recommended. However, it should be noted that although standardisation maximises the objectivity and reliability of the classification, it does not take into account certain sources of error such as incorrect understanding of the question or tendencies in the answers, so that the validity of the diagnoses may be considerably reduced.

Structured procedures, if carried out according to their purpose, are far less subject to the risk of response tendencies (Perkins & Tebes, 1984). This is of particular advantage, for example, when, in the context of an expert opinion activity, it is necessary to identify artificially feigned or simulated PTSD.

The decision, which of the procedures presented here should be used in the context of one’s own scientific or clinical activities, depends largely on the practicability of the procedures and the objective of the diagnostic survey.

However, the interview methods presented do not contribute sufficiently to the collection of therapy-relevant information. As a rule, the procedures only record the occurrence of the symptoms required for diagnostic classification, whereby the statements about their presence are usually only categorically documented. Topics that are essential for therapy planning are not addressed at all.

► The burden on patients resulting from the exploration of traumatic events is generally limited (Jaffe et al., 2015). It is recommended that interviews are carried out by psychotherapeutically trained personnel, also in order to be able to employ stress-reducing techniques if necessary (Gast et al., 2004).

8.3 Self-Reports

Self-report instruments are particularly suitable for recording the frequency and intensity of symptoms and the resulting psychological impairments from the patient’s perspective. The number of procedures designed specifically for the diagnosis of post-traumatic mental disorders is now enormous. The most important procedures for recording the symptoms of PTSD are available as German translations.

8.3.1 Symptom Questionnaire

8.3.1.1 Impact-of-Event Scale-Revised

Weiss and Marmar (1996) expanded the IES and presented the “Impact of Event Scale-Revised” (IES-R; German Maercker & Schützwohl, 1998), a procedure that additionally takes into account items for the assessment of hyperarousal (■ Fig. 8.1).

In the published German version, the frequency of stress reactions is recorded and calculated on 4-level Likert scales according to the originally published mode and the mode of the IES. However, the authors of the original American version later proposed to record not the frequency but the extent of the stress resulting from the symptoms, to code the responses on a 5-level scale and to offset them with the values 0, 1, 2, 3

Please remember the event. In the following, please indicate how you felt about this event in the past seven days by ticking the distress of each of the following reactions

Subscale intrusions

1. Any reminder brought back feelings about it.
3. Other things kept making me think about it.
6. I thought about it when i didn't mean to.
9. Pictures about it popped into my mind.
14. 1. I found myself acting or feeling like I was back at that time.
16. I had waves of strong feelings about it.
20. I had dreams about it.

Subscale avoidance

5. I avoided letting myself get upset when I thought about it or was reminded of it.
7. I felt as if it hadn't happened or wasn't real.
8. I stayed away from reminders of it.
11. I tried not to think about it.
12. I was aware that I still had a lot of feelings about it, but I didn't deal with them.
13. My feelings about it were kind of numb.
17. I tried to remove it from my memory.
22. I tried not to talk about it.

Subscale overexcitement

2. I had trouble staying asleep.
4. I felt irritable and angry.
10. I was jumpy and easily startled.
15. I had trouble falling asleep.
18. I had trouble concentrating.
19. Reminders of it caused me to have physical reactions, such as sweating, trouble breathing, nausea, or a pounding heart.
21. I felt watchful and on guard.

■ Fig. 8.1 Instruction and items of the “Impact of Event Scale-Revised” (IES-R). (Mod. according to Weiss & Marmar, 1997)

and 4 (Weiss & Marmar, 1997). This procedure is also currently being used in practice.

The reliability and validity of the original version of the IES-R and the German adaptation are established (Adkins et al., 2008; Maercker & Schützwohl, 1998; Weiss & Marmar, 1997). Since the 22 items of the IES-R do not correspond to the 17 DSM-IV symptoms, despite the extension of the IES by the subscale “hyperarousal“, it is not intended and not possible to reliably classify patients on an individual diagnostic basis – not even with the diagnostic formula published by Maercker and Schützwohl (1998). However, it could be shown that the IES-R is also capable of detecting PTSD according to ICD-11 (Hyland et al., 2017).

The “Impact of Event Scale” is available for people with intellectual disabilities (**IES-ID**: Impact of Event Scale-Revised for People with Intellectual Disabilities, Hall et al., 2014; Rittmannsberger et al., 2016). It consists of 22 questions derived from the IES-R and adapted to the target group.

8.3.1.2 PTSD Symptom Scale – Self Report

The “PTSD Symptom Scale – Self Report” (**PSS-SR**; Foa et al., 1993; Winter et al., 1992) consists of 17 items that directly correspond to the symptoms of DSM. The symptom frequency is documented on a 4-level scale, based on the last month.

The severity of the disorder is determined by the sum of the 17 responses. It is also possible to calculate the sum value from the 5 intrusion symptoms, the 7 avoidance symptoms and the 5 hyperarousal symptoms. For diagnostic classification according to DSM, responses with a score of at least 1 are evaluated as diagnostically relevant. The PSS-SR is therefore a procedure that provides information both in dichotomous and continuous form. It has also proven to be a reliable and valid instrument in the German version (Stieglitz et al., 2001; Wohlfahrt et al., 2003).

Steil and Ehlers (1992) modified the PSS-SR and presented a questionnaire to record not only the frequency of symptoms but also the symptom burden (■ Fig. 8.2). For this purpose, the frequency of a symptom and the extent to which the affected persons suffered from this symptom is determined on two 4-level Likert scales, which are to be assessed independently of each other. The reliability of this modified version of the PSS-SR has been established (Steil & Ehlers, 1992).

8.3.1.3 Posttraumatic Diagnostic Scale

With the “Posttraumatic Diagnostic Scale” (**PDS**), Foa and colleagues (Foa, 1995, Foa et al., 1997; Eng, Ehlers et al., 1996) developed a self-report instrument that first specifies the type of traumatic experience in 4 questionnaire sections and then, in assessing the PTSD symptoms, refers to the traumatic experience that is described as the “worst”, which can be classified in terms of time and situation. In addition, the reaction of those affected by the event and the existence of impairments in social and occupational functional areas caused by the disorder are also recorded.

The patients’ assessments of how often they were affected by the symptoms in the last month (17 questions) are made on a 4-level scale, the scale description and scoring of which largely corresponds to the original version of the PSS-SR. The severity of post-traumatic stress is determined with the PDS by summing up the item responses; a score of 10 indicates the presence of moderate PTSD, a score of 35 indicates the presence of severe PTSD (Foa, 1995).

Studies with the original version could confirm the reliability and validity of the PDS as exceptionally high (Foa et al., 1997; Powers et al., 2012) which is likewise for DSM-5 Version (Foa et al., 2016). Studies on the quality criteria of the German-language translation of the PDS also qualify it as a reliable and valid instrument for the assessment of PTSD (Griesel et al., 2006).

Below you will find a number of experiences that people sometimes have after traumatic experiences. Please answer the following questions according to what has happened during the past 2 weeks using the 0-3 scale below.

Here means

0 = not at all

1 = once per week or less/a little

2 = 2 to 4 times per week/somewhat

3 = 5 or more times per week/very much

Have you had recurrent or intrusive distressing thoughts or recollections about the trauma?

yes no

If yes: How often did you experience this?

If yes: How much did it affect you?

never

5 times per
week or more
often

not at all

very strong

0

1

2

3

0

1

2

3

Fig. 8.2 Instructions and example items from the “PTSD Symptom Scale – Self Report” (PSS-SR). (Mod. according to the German version by Steil & Ehlers, 1992)

PCL-5

Below is a list of problems that people sometimes have in response to very stressful experience. Please read each problem carefully, remembering your worst experience, and then circle one of the numbers to the right to indicate how much you have been bothered by this problem in this last month.

<i>In the last month, how much were you bothered by:</i>	not at all	a little bit	moderately	quite a bit	extremely
3. Suddenly feelings or acting as if the stressful experience were actually happening again (as if you were actually back there reliving it)?	0	1	2	3	4

Fig. 8.3 Instructions and example item from the “Posttraumatic Stress Disorder Checklist” (PCL-5) for DSM-5. (Mod. according to Krüger-Gottschalk et al., 2017)

8.3.1.4 PTSD Checklist for DSM-5

The PTSD Checklist for DSM-5 (PCL-5) records the symptoms of PTSD in 20 items in the form of a self-assessment. It was developed in 2013 (Fig. 8.3) by Weathers and colleagues (Weathers, Litz, Keane, et al.,

2013) based on the predecessor variants for DSM-IV (Weathers et al., 1994). A validated German version is available (Krüger-Gottschalk et al., 2017). The items refer retrospectively to the past month; symptom severity is coded in 5 steps.

The evaluation routine defines an item as fulfilled if it was rated 2 or higher. If one item from symptom cluster B (questions 1–5), one item from cluster C (questions 6–7), two items from D (questions 8–14), and two items from cluster E (questions 15–20) are fulfilled respectively, there is clear evidence of PTSD.

The US American authors evaluated a cumulative score (range 0 to 80) of 33 or more as suspected PTSD. This was replicated in the German validation study (Krüger-Gottschalk et al., 2017).

8.3.1.5 Essen Trauma Inventory

The “Essener Trauma-Inventar” (ETI; Tagay et al., 2007) is another differentiated German-language self-report instrument that is available in both questionnaire and interview form and consists of 58 items. In addition to the exploration of a large number of potentially traumatic events in the first section, both the presence of a diagnosis of PTSD and ASD are recorded in the following, in close orientation to the DSM-IV criteria. Beyond this categorical diagnosis, the ETI allows the measurement of the expression of the 4 symptom areas of intrusion, avoidance, hyperarousal and dissociation, and allows the severity of the symptoms to be determined by means of a cumulative score; for this reason, the authors emphasize the suitability of the instrument for longitudinal diagnostics. Cut-off values are provided to identify clinically abnormal values. The psychometric quality criteria of the ETI have so far proven to be good to very good (Hauffa et al., 2010; Tagay et al., 2007).

8.3.1.6 Short Questionnaire

In the meantime, screening methods for the diagnosis of PTSD have also been published and used in German versions. These include:

- **SPAN** (“Startle, Physiological arousal, Anger, Numbness”; Davidson, 2002; Meltzer-Brody et al., 1999; 4 Items),

- **SPRINT** (“Short Post-Traumatic Stress Disorder Rating Interview”; Connor & Davidson, 2001; 8 items),
- **SSS** (“Short Screening Scale for DSM-IV Posttraumatic Stress Disorder”; Breslau et al., 1999; Siegrist & Maercker, 2010; 7 items),
- **PC-PTSD-5** (Primary Care PTSD for DSM-5; Prins et al., 2015; German, still under validation; 5 items).

8.3.1.7 Self-Report Instruments for Complex PTSD

- **SIDES** (► Sect. 8.2.2.2; Pelcovitz et al., 1997) is also available as a questionnaire version “Self-Report Inventory for Disorders of Extreme Stress” (**SIDES-SR**; Luxenberg et al., 2001; Spinazzola et al., 2001). The inventory consists of 45 items and is well suited for recording the severity of symptoms for each of the 6 symptom clusters as well as for monitoring the course of the disorder (Luxenberg et al., 2001). It is also available in two modified German language versions:
 - **DESNOS** (“Disorder of Extreme Stress Not Otherwise Specified”; Hofmann et al., 1999) in the version published in the Cologne Documentation System for Psychotherapy and Trauma Treatment comprises 48 items (Fischer, 2000; Kunzke & Güls, 2003) and the **complaint list cPTSD** (Teegen et al., 2001) with 72 items. The questionnaire for the planned division into posttraumatic stress disorder and complex trauma sequelae (Karatzias et al., 2017; Shevlin et al., 2018) is currently only available in English.
- The “Revised Trauma Symptom Inventory” (**TSI-2**; Briere, 2011) is a questionnaire for recording complex post-traumatic stress disorder. It has 12 clinical scales (three more than in TSI-1; Briere, 1995), some with subscales, plus 2 validity scales (atypical response behaviour, response level) and 8 “critical items” to record psy-

chopathological abnormalities that potentially require rapid intervention. The internal consistency of most scales is acceptable to very good (.73 to .95; Krammer et al., 2017).

- The “Screening zur komplexen Posttraumatischen Belastungsstörung” (**SkPTBS**; Dorr & Bengel, 2017) differentiates (and for scoring purposes weights differently) its items on the A-criterion between those relevant for complex PTSD and classical PTSD. The tool then proceeds to assess further information on the event including risk and protective factors, as well as following associated symptoms in 14 items on a 7-pt.-scale. The authors provide a PC assisted scoring. The scale showed good internal consistency (.91), its items aligned fairly one-dimensionally showing the scale’s homogeneity (Dorr et al., 2016). Various cut-offs exist for different combinations of sensitivity and specificity values (Dorr et al., 2018).
- The International Trauma Questionnaire (**ITQ**; Cloitre et al., 2018) is a valid and reliable Measure of ICD-11 PTSD and Complex PTSD. It is freely available in the public domain to all interested parties. It focuses on the core features of PTSD and CPTSD employing diagnostic rules. It consists of an introduction section for the A-criterion followed by 6 + 3 items on PTSD and additional 6 + 3 items on DSO (disturbances in self-organisation) on a five-point Likert-scale. The combination of the items defines complex PTSD. The ITQ was developed to be consistent with the organizing principles of the ICD-11, as set forth by the World Health Organization and is available in several languages (The International Trauma Consortium, 2020).

8.3.2 Instruments Assessing Traumatic Events

In addition to the symptoms of PTSD, the presence of an A-criterion, that is, a tra-

umatic event is required for the diagnosis to be made. This can be systematically supported by trauma lists.

8.3.2.1 Trauma Lists

- The “Life Events Checklist for DSM-5” (**LEC-5**; Weathers, Blake, Schnurr, et al., 2013) can be used together with the PCL-5 (see above). The LEC-5 is a list of 17 potentially traumatising events, for each of which information can be provided on the extent of personal involvement (e.g. whether it happened personally, witnessing, etc.). This can also be expanded to include further questions to better qualify the A-criterion.
- The “Trauma History Questionnaire” (**THQ**), available in the English original (Green, 1996) and German (Maercker, 2002), lists in 24 items potentially traumatic scenarios and allows affected persons to assess whether such an experience occurred (yes/no) and, if so, how often it occurred, approximately at what age, and, if applicable, asks for a more detailed description of the event.
- There are trauma lists included in PTSD interviews and questionnaires such as DIAXX, PDS or ETI and more.

8.3.2.2 Traumatic Events in the Course of Life

- The self-report instrument “Childhood Trauma Questionnaire” (**CTQ**; Bernstein & Fink, 1998) is available in German (Wingenfeld et al., 2010) and is suitable for retrospectively recording five forms of abuse and neglect in childhood and adolescence. In the long-form, it consists of 70 + 3 items (the additional ones record the tendency to trivialize), in the short form of 25 + 3 events, whose frequency of occurrence is given as a 5-level Likert scale. Sum scores can be formed over the entire test and subscales.
- The questionnaire “Stressful Childhood Experiences” (**KERF**; modified German

version [Isele et al., 2014] of **MACE** [Teicher & Parigger, 2011, 2015]: “Maltreatment and Abuse Chronology of Exposure”) serves to comprehensively identify stressful childhood experiences, consisting of 75 items on 10 subscales (e.g. physical violence by parents, emotional violence by peers). A special feature of KERF is that for each item, in addition to the dichotomous decision (yes/no), the occurrence of the experience for each of the first 18 years of life is assessed (multiple answers possible).

- Shorter versions exist, such as the KERF-40 and KERF-20, as well as the KERF child interview (pedKERF-45-I), which can be obtained from the authors (Isele et al., 2014).
- The **ACE-D** (“Adverse Childhood Experiences”), the German-language version (Wingenfeld et al., 2011) of the ACE (Felitti et al., 1998), uses 10 dichotomous items to record forms of early trauma and other stressful experiences before the 18th birthday.
- The “Childhood Trauma Screener” (CTS; Grabe et al., 2012) allows the retrospective recording of traumatic events in childhood and adolescence. When it was developed, the aim was to conduct a time-economic survey, which is why those 5 items of the CTQ (Wingenfeld et al., 2010) were identified that best covered its 5 dimensions on abuse and neglect.

8.3.2.3 Experience of Violence

- The screening “Partner Violence” (PVS) (Nyberg et al., 2008) is a translation, modification and validation of the English-language PVS, Partner Violence Screen (Feldhaus et al., 1997), which had 3 items. In the German version, this was extended to 5 questions. It is thus well able to identify cases of domestic violence at an early stage.
- The screening instrument “Index of Spouse Abuse” (ISA) (Hudson & McIn-

tosh, 1981) exists in German as “Index Gewalt in der Ehe” (Nyberg et al., 2008) and has 30 items, each of which records the extent of a possible experience of violence in the relationship with the partner on a 5-point Likert scale. Structurally the questionnaire consists of two constructs, “non-physical violence” and “physical violence”, which can be recorded.

8.3.3 Evaluation of Self-Report Instruments

The self-assessment procedures are generally easy to handle, the data can be collected quickly and evaluated conveniently, so they do not require much effort from the diagnostician. Moreover, the procedures specially designed for recording post-traumatic stress reactions have without exception qualified as at least satisfactory in test statistics, so that the decision for a particular procedure depends on one’s own diagnostic concerns.

The self-evaluation procedures provide information on the severity of post-traumatic stress reactions throughout so that they complement the use of structured interviews both in the context of scientific studies and in clinical practice – here also specifically with regard to measuring the success of therapeutic treatment (► Sect. 8.6.4.2).

- The self-report instruments are all suitable for recording the severity of post-traumatic stress reactions, but only a few procedures can separately record the frequency and intensity of symptoms.

A disadvantage of the instruments developed specifically to detect PTSD is that they are subject to the risk of response tendencies; they should therefore only be used in the context of multi-method diagnostic procedures.

The exploration of traumatic experiences, as well as the psychological stress

symptoms experienced as a result, can be experienced as stressful in the short term itself. However, systematic research on the consequences of trauma-related surveys and the associated burden on respondents shows that, as a rule, no negative effects on those affected are to be expected in the long term (Legerski & Bunnell, 2010). Instead, from the perspective of the participants, the positive effects of participating in studies in which they provided information about traumatic experiences and the consequences usually outweigh the negative effects (Jaffe et al., 2015).

8.4 Other Stress-Related Disorders and Trauma Sequelae

Since the inclusion of PTSD in the classification systems, posttraumatic stress disorder had been classified in the group of anxiety disorders. In DSM-5 as well as in the future ICD-11, stress-related disorders form a new group. This differentiation is also reflected in the diagnostic recording.

8.4.1 Acute Stress Reaction/Acute Stress Disorder

The diagnostic criteria of the acute stress response (in DSM-5: acute stress disorder) differ from PTSD mainly in the time criteria of symptom development and duration. Stress reactions begin earlier after the event and are of very limited duration, especially in the design of the ICD-10. There are procedures for the specific recording of the symptoms of ASD according to DSM-IV. An adaptation of the instruments according to the criteria of DSM-5 has not yet been carried out.

- The “Acute Stress Disorder Scale” (ASDS; Bryant et al., 2000) has two initial questions (request for a description

the traumatic event and whether it frightened the person affected), followed by 19 items on symptoms in 5 levels. An evaluation of a German-language variant (Helfricht et al., 2009) is available.

- The German version of the PAS (“Post-traumatic Adjustment Screen”, O’Donnell et al., 2008; German: Kröger et al., 2011), uses 10 items on a 5-point Likert scale to ask for aspects that happened before, during or after a traumatic experience. These include typical reactions, but also accompanying circumstances.

8.4.2 Enduring Personality Change after Catastrophic Experiences

The category of “Enduring personality change after catastrophic experience” is only defined in the ICD-10 (WHO, 1994) and is a precursor diagnosis of complex PTSD. The disorder can be diagnosed when the personality change, which can manifest itself symptomatically, for example, in a persistent hostile attitude “towards the world”, social withdrawal or a persistent feeling of hopelessness, has existed for at least 2 years and is restricting functionality in a person. In its conceptualisation, it is similar to the concepts of developmental trauma disorder or complex PTSD.

8.4.3 Adjustment Disorder

An adjustment disorder is diagnosed when a stress response occurs, the diagnostic criteria of PTSD are not met or the stress response occurs after an event that cannot be described as traumatic (e.g., termination, separation, or unemployment). In the research literature, manifestations of the former are often referred to as partial or subsyndromal PTSD. A separate empirical

study has confirmed the usefulness of this category formation – when using the stricter DSM-IV criteria of PTSD (Schützwohl & Maercker, 1999).

The ICD-11 also defined adjustment disorders more clearly by emphasizing the key symptoms of preoccupation and maladaptation (Maercker et al., 2007, 2013). The following diagnostic tools are available for this purpose (► Chap. 5).

- **Screening:** The short form of the “Adjustment Disorder – New Module” (ADNM-6) with 6 items, an adjustment disorder screening scale, captures central elements of the adjustment disorder in 3 symptom clusters (preoccupation, maladjustment and avoidance). It is available in German (Boer et al., 2014).
- **Self-disclosure:** The “Adjustment Disorder – New Module” (ADNM-20; Einsle et al., 2010) consists of two parts. In the first part, a list of 16 incriminating (as well as free space for additional) events is to be processed and it is to be indicated whether and in which time period a respective event was experienced within the last 2 years. Afterwards, a list of symptoms consisting of 20 items is presented. On a 4-point scale, it is to be indicated how often the respective statement applies and additionally, since when the respective reaction has occurred, by choosing one of the three-time specifications.

8.4.4 Prolonged Grief Disorder (PGD)

DSM-5 and ICD-11 include in their chapters on stress-related disorders the persistent, complicated, or prolonged grief response as a separate disorder pattern under certain conditions (e.g., Boelen, Lenferink, & Smid, 2019). It refers to a disorder resulting from the death of a partner, parent, child or other close relatives, which manifests itself in a persistent and profound grief reaction,

for example, in a pronounced longing for or perpetual mental preoccupation with the deceased in connection with lingering emotional pain (e.g. grief, feelings of guilt, anger, denial). The extent of the impairment exceeds the respective social or cultural norms of a mourning reaction (► Chap. 4).

- The new diagnosis is often recorded internationally via the “Inventory of Complicated Grief” (ICG; Prigerson et al., 1995). Based on this, the German-language version (ICG-D; Brandstätter et al., 2015) was created in a validation study. The Anglo-American original consists of 19 questions to be answered on a 5-step scale; as a cut-off, a sum score of 25 is proposed for all items (Prigerson et al., 1995).
- The “Prolonged Grief-13” (PG-13; Prigerson & Maciejewski, 2008) has 13 items in the English language original. In a psychometric validation study of the criteria of complicated grief (Prigerson et al., 2009), the symptoms covered by PG-13 were identified. The German version PG-13 + 9 (Vogel et al., 2016) is a translation and extension. It is recommended as an interview, but can also be administered as a questionnaire.
- The “Traumatic Grief Inventory” (TGI-SR; Boelen & Smid, 2017) is composed of 18 items, provides an adequate tool for assessing the severity of traumatic grief and tries to integrate the concepts of Persistent Complex Bereavement Disorder (DSM-5) and Prolonged Grief Disorder (ICD-11). Its examination showed high internal consistency, adequate concurrent validity scores. Cut-off scores for the respective provisional diagnoses are provided (Boelen, Djelantik, et al., 2019; Boelen & Smid, 2017).

8.5 Differential Diagnostics

In clinical practice, but also the context of expert reports, PTSD must be distinguished from other disorders by differential diagno-

sis. On the one hand, this results from the finding that patients suffering from the consequences of traumatic event exposure often do not report their experience in the first contact and, besides, often describe complaints that are not obvious as characteristics of PTSD. On the other hand – and this applies particularly against the background of the criticism of the top-down approach in classificatory diagnostics mentioned in the beginning – it results from epidemiological findings that the experience of one or more potential traumatic events does not always lead to PTSD. Rather, it is also possible that no symptoms at all occur or that the traumatic experiences are reflected in the development of other disorders (Perkonig et al., 2000). In terms of differential diagnosis, PTSD must therefore be distinguished not only from ASD, an enduring personality change after the catastrophic experience, or a complex PTSD but also from numerous other disorders.

The high comorbidity between PTSD and other mental disorders should also be considered (Jacobi et al., 2014; Perkonig et al., 2000).

It should be noted that the diagnostic criteria in ICD-10 and DSM-IV or DSM-5 differ in part very significantly so that the formulation of different diagnoses can result depending on the classification system used (Kuester et al., 2017; Schellong et al., 2019).

8.5.1 Anxiety Disorders

After traumatic events, various anxiety disorders (e.g. panic disorder, agoraphobia, social phobia) can also occur. PTSD patients also frequently report anxiety reactions (sometimes accompanied by physical symptoms such as shortness of breath, palpitations, or hot flushes) and avoidance behaviour, symptoms which are also characteristics of anxiety disorders. The presence of post-traumatic stress reactions can be distinguished from other anxiety disorders

by the fact that the symptoms are clearly related to the trauma. In this context, it is particularly helpful for a differential diagnosis to determine the patient's central fear (see Trautmann, 2018 for an overview of typical fears).

8.5.2 Obsessive-Compulsive Disorders

In the context of an obsessive-compulsive disorder (OCD), recurrent intrusive thoughts may occur, but they meet the criteria of an obsessive-compulsive disorder and are usually not related to a traumatic event. In addition, OCD does not cause other symptoms of PTSD or an acute stress response.

8.5.3 Depressive Disorders

In clinical practice, patients often initially complain that they feel depressed and hopeless and are no longer interested in activities that used to be important to them. This can be a sign of a depressive disorder or an expression of emotional numbness after a traumatic experience. A significant overlap of symptoms between PTSD and depressive disorders is often discussed (Flory & Yehuda, 2015). However, central criteria of PTSD, for example, symptoms of re-experiencing, are usually missing in a depressive disorder. Often, traumatised patients fulfil both the criteria of PTSD and depressive disorder. In this case, the diagnoses are to be made independently of each other.

8.5.4 Emotionally Unstable Personality Disorder, Borderline Type

The criteria of complex PTSD, but also the primary and frequently observed sec-

ondary dysfunctions of PTSD, overlap significantly with the criteria of a borderline personality disorder, for example, impulse control disturbance, anger reactions, suicidal tendencies, or instability in affect (Driessen et al., 2002). In addition, it is a generally known finding that persons with borderline personality disorder were often traumatised in their early childhood. Nevertheless, it should be noted that traumatisation is not causally related to borderline personality disorder. Therefore – if the criteria of both disorders are fulfilled – this should also be documented in terms of co-morbidity.

8

8.5.5 Dissociative Disorders

Dissociative symptoms can be part of post-traumatic symptomatology or can exist separately and complicate the symptomatology. They are characterised by a disruption of the normal integration of consciousness, memory, identity, emotions, perception, body image, control of motor functions, and behaviour. If the full-blown picture of PTSD is also present, the diagnosis of PTSD with dissociative symptoms should be considered (Falkai et al., 2015). The following instruments are available for the assessment of dissociative symptoms:

- Structured clinical interviews:
 - “Structured clinical interview according to DSM” (**SKID-D**; Steinberg, 1994; Gast et al., 2000);
 - “Structured interview for the diagnosis of dissociative disorders” (**SIDDS**; Ross et al., 1989; Overkamp, 2005);
- Self-report instruments:
 - “Questionnaire on dissociative symptoms” (**FDS**; Freyberger et al., 1999; Spitzer et al., 2014) or its original English counterpart “Dissociative Experiences Scale” (**DES**; Bernstein & Putnam, 1986)
 - “Cambridge Depersonalisation Scale” (**CDS**; Sierra & Berrios, 2000).

8.5.6 Intermittent Explosive Disorder (IED)

Intermittent explosive disorder (IED) is characterized by verbal or physical aggressive behavioural outbursts. The outbursts are not in proportion to previous psychosocial stress or provocation and are not planned (Falkai et al., 2015). In DSM-5 the IED is listed as a separate diagnosis. In the ICD-10, this trauma-associated symptomatology could most suitably be subsumed under F63.8 “Other habit and impulse disorders” or, if distrust and social withdrawal are the main focus, under F62.0 “Enduring personality change after catastrophic experience”. Irritability and outbursts of anger can also occur in the context of hyperarousal in PTSD, but central PTSD criteria such as re-experience and avoidance are missing in IED.

8.5.7 Intentional Production or Feigning of Symptoms or Disabilities

The distinction between artificially feigned stress reactions, usually with unclear motivation, and the presence of “real” post-traumatic stress reactions is difficult and requires a diagnostic procedure on several levels. A differential diagnostic criterion is that patients with this pattern of behaviour exhibit the symptoms of other personality disorders. The use of personality diagnostic procedures – such as **SKID-II** (Wittchen et al., 1997) or the “Personality Style and Disorder Inventory” (Kuhl & Kazén, 1997) – is therefore recommended when there is a suspicion of artificial feigning.

8.5.8 Simulation

The possibility of simulation should be considered if a (e.g. financial or forensic) benefit

can be expected from the presence of post-traumatic stress reactions. Behaviours that indicate simulation are, for example, uncooperative or evasive behaviour in response to requests for a detailed description of the symptoms as well as the idealisation of the pre-traumatic health and social situation. Simulation in the form of presenting non-existent complaints is very rare; it tends to exaggerate actual symptoms (Birck, 2002), especially in certain interview contexts, for example, in the work context (Goodwin et al., 2013).

8.5.9 Organic Diseases (E.G. Brain Injuries)

Complaints similar to PTSD symptoms can also occur with organic diseases. If patients who have been proven to have been exposed to a potentially traumatising event are suspected of having such symptoms – for example, against the background of known somatic illnesses or other for example, neuropsychological disorders – the appropriate specialist medical examinations should be considered.

8.5.10 Somatoform Disorders/ Somatic Stress Disorders

Somatoform disorders are physical complaints that cannot be traced back to organic disease or cannot be traced back sufficiently. Connections between chronic pain and PTSD have been shown (e.g. Fishbain et al., 2017). Somatoform disorders are often more pronounced in patients with existing trauma than in patients without traumatic experiences and the burden of such symptoms increases as the post-traumatic symptoms increase (Kuwert et al., 2015).

8.6 Collection of Additional Therapy-Relevant Information

For therapy planning, in addition to classificatory diagnostics before the start of therapy, the acquisition of further information is necessary. In the context of PTSD treatment, this concerns above all the recording of factors that maintain or determine the course of therapy, possible comorbid disorders, and secondary functional impairments. In addition, the assessment of pre-traumatic health, as well as available resources and skills, deserves attention.

Information on these topics can be collected in the anamnestic interview. The following explanations focus on the presentation of recording procedures that can be used beyond that.

8.6.1 Recording of Factors that Maintain or Determine the Course of Therapy

8.6.1.1 Questionnaire on Thoughts After Traumatic Events and Questionnaire on the Processing of Traumatic Experiences

PTSD often remits in the first year after trauma exposure and only takes a chronic course in some patients. Presumably, interpretations, beliefs, and attitudes that increase the extent of the burden during re-experience and thus trigger and reinforce escape and avoidance tendencies, so that habituation cannot take place, contribute to maintenance (Ehlers & Steil, 1995). In order to record a wide range of such cognitions, the “Posttraumatic Cognitions Inventory“(PTCI, by Foa et al., 1999; German Ehlers & Boos, 1999) and the

“Questionnaire on dealing with traumatic experiences” (Ehlers, 1999) are suitable as a supplement to open exploratory questions.

The PTCI records the expression of 3 types of trauma-specific and partially dysfunctional cognitions using 33 items:

- Negative thoughts about yourself,
- Negative thoughts about the world,
- Self-reproaches/accusations.

According to Boos (2005), PTCI is suitable for both the recording and the follow-up of trauma-related interpretations.

The questionnaire for dealing with traumatic experiences consists of 3 sections with a total of 59 items:

- Strategies for dealing with intrusive re-experience,
- Avoidance behaviour,
- So-called safety behaviour.

8.6.1.2 Questionnaires on Guilt, Shame, and Anger

In the course of treatment, cognitions and emotions such as guilt, shame, and anger play an important role (but also dissociative symptoms; ► Sect. 8.5.5), so it is important to record them. ■ Table 8.1 provides a brief overview of the most important survey methods that can be used for this purpose. The reliability and validity of all these methods have proven to be at least satisfactory.

8.6.2 Assessment of Secondary Functional Impairments

The diagnostic classification of mental disorders often does not fully describe the secondary functional impairments that are often present in patients. However, since they can be of considerable importance in the context of therapy planning, they should be clarified in the diagnostic process.

- Patients with PTSD are often affected by unemployment and partnership crises, often lack emotional support and social integration.

Methods such as the “Groningen Social Disability Schedules” (GSDS-II; Wiersma et al., 1988) or the MINI-ICF-APP (Linden et al., 2009) are suitable for differentiated recording. According to the DSM, most difficulties and problems are to be encoded with a so-called V-coding, according to ICD-10 with a category from Chapter XXI of ICD-10 (Z-coding).

8.6.3 Assessment of Resources and Competences

In addition to problems and disorders, the resources and competencies of the patient should also be recorded during the diagnostic process. The therapist can thus take advantage of the patient’s behaviour, interests, and abilities, and highlighting resources and competencies can strengthen the patient’s self-esteem. Due to their peri- and post-traumatic experiences, patients with post-traumatic stress reactions often have new competencies and resources, for example, improved coping strategies or general personality maturation.

- The “stress processing questionnaire” (SVF; Erdmann & Janke, 2008) can be used to record situation-independent, long-term coping modes.
- The “Stress-Related Growth Scale” (SRGS; Park et al., 1996) and the
- “Post-Traumatic Growth Inventory” (PTGI; Tedeschi & Calhoun, 1996; Maercker & Langner, 2001).
- The “Questionnaire for recording resources and self-management skills” (FERUS; Jack, 2007) records resources

Table 8.1 Overview of questionnaire procedures for recording guilt, shame, and anger

Procedure	Content	Evaluation
Guilt		
“Trauma-Related Guilt Inventory” (TRGI; Kubany et al., 1996)	32 statements on cognitive and emotional aspects of guilt that relate to a specific potentially traumatising event (Item e.g.: “ <i>I did something I shouldn’t have done.</i> ”)	6 scales (global guilt, distress, guilt cognitions, hindsight-bias/responsibility, wrongdoing and ack of justification)
Questionnaire on interpersonal feelings of guilt (FIS; O’Connor et al., 1997; German Albani et al., 2002)	German version: 21 items for the recording of interpersonal feelings of guilt/cognitions (Item e.g. “ <i>when I get something, I often have the feeling I don’t deserve it.</i> ”)	3 scales (feeling of guilt for survival, feeling of separation, feeling of guilt from responsibility) and a total score
Shame		
“Internalized Shame Scale (ISS; Cook, 1987, 1994, 2001; Wolfradt & Scharrer, 1996)	German version: 35 items on different aspects of shame (Item e.g. “ <i>I believe others may notice my inadequacy.</i> ”)	Total score for trait shame (= state of consciousness of inadequacies of the own person)
“Experimental Shame Scale” (ESS; Turner & Waugh, 2001; Rüsich et al., 2007)	German version: 11 items on shame reactions, which refer to physical, emotional, and social aspects of shame (Item e.g. “ <i>among people I have the feeling: Nobody sees me.</i> ” (1) – “ <i>people look at me.</i> ” (7))	Total score
“Test of Self Conscious Affect 3” (TOSCA 3; Tangney et al., 2000; Rüsich et al., 2007)	German version: 11 scenarios close to everyday life, in which own misconduct is described (Item e.g. “ <i>at work they postpone the planning of an important task to the last minute and everything goes wrong</i> ”).	Evaluates 4 possible reactions (scales: Shame, guilt, externalisation, emotional unaffectedness) per item; 4 scale values
Trouble		
State-trait annoyance expression inventory (STAXI, STAXI 2; Spielberger, 1988, 1999; German Schwenkmezger et al., 1992)	German version: 44 items record situation-related and disposition-related annoyance as well as disposition-related aspects of annoyance processing “ <i>I boil internally when I’m under pressure.</i> ”	5 scales (person-specific anger level, the intensity of subjective anger, reaction to the outside world, anger suppression and anger control)

and self-management skills using 66 items. The scales include change motivation, coping, and self-efficacy.

- The “Questionnaire on Current Resource Realization” (**RES**; Tröskén & Grawe, 2002) contains items on 9 scales, including, for example, well-being, coping with everyday stress, personal strengths and abilities. The number of items per scale varies from 11–21.
- The “resilience questionnaire” (**RS-13**; Leppert et al., 2008) is the short form of the RS-25, which was developed in the Anglo-American area (Wagnild & Young, 1993) and validated for the German-speaking area (Schumacher et al., 2005). The RS-13 has two subscales for measuring resilience (competence and acceptance).
- The German-language inventory **Brief-COPE** (Knoll et al., 2005) is based on the English-language version (Carver, 1997) and uses 14 dimensions with two items each to record different coping strategies in dealing with problems.

8.6.4 Diagnostics Accompanying Therapy

It makes sense to supplement the implementation of therapeutic measures by gathering information on their course (process and treatment evaluation) and effect (outcome evaluation). An overview of measuring change can be found in Stieglitz and Hiller (2015).

8.6.4.1 Process and Treatment Evaluation

The process and treatment evaluation serves to record the process quality of diagnostic and therapeutic measures. According to Schulte (1996), process quality can be recorded economically by the therapist making a rating of patient behaviour after each session and evaluating it on scales of –3 to

+3 regarding therapy demand, cooperation, self-opening, and trial and error. Grawe and Braun (1994) suggest using hour sheets to record process quality, on which the patient and therapist independently assess the quality of each individual therapy session. Since the success of therapy is closely related to patient satisfaction (*ibid.*), continuous recording of patient evaluations allows early recognition of difficulties.

- The collection of further information is essential for individual therapy planning. Questionnaires can also prove useful in this context. The recording of process quality and the effect of therapy should complete the diagnostic measures in the course of therapy.

8.6.4.2 Evaluation of Treatment Outcome

The assessment of therapy effects serves to estimate the achieved therapy success or to identify the lack of thereof. Pre-post measurements with the self-report procedures developed to record post-traumatic stress reactions are a suitable way of doing this. In addition, the “Treatment Outcome PTSD Scale” (**TOP-8**; Connor & Davidson, 1999) is a procedure specially developed for the evaluation of results. The use of TOP-8, also in scientific studies, is recommended by the expert commission already mentioned above (Charney et al., 1998).

For the evaluation of treatment outcomes, the assessment by the patient and the therapist also proved to be useful. With the **goal attainment scaling** (Roecken, 1984; Schulte, 1996), the achievement of concrete treatment goals defined in the context of therapy planning can be assessed.

It is also interesting to examine whether the changes achieved in the course of therapy are also reflected in measures of life satisfaction and the general level of function. For this purpose, a number of survey methods are available which have already proven

themselves in numerous applications. The “Manchester Short Assessment of Quality of Life” (MANSA; Priebe et al., 1999) or the short version of the “World Health Organization Quality of Life” (WHOQOL-BREF; Angermeyer et al., 2000) can be used to assess the quality of life. The German version of the “Health of the Nations Outcome Scales” (HoNOS-D; Andreas et al., 2010) and the “Disability Assessment Schedule” of the WHO (WHODAS 2.0; Üstün et al., 2010) have proven to be useful for the assessment of the general level of functioning.

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Expert Evidence

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9.1 Background

The diagnosis of “post-traumatic stress disorder” (PTSD) has perhaps influenced and is influenced by the courts more than any other mental disorder. The diagnosis of PTSD and various diagnostic precursors (e.g. “traumatic neurosis”) make it clear that an external event can causally cause a mental disorder. The reliability and validity of this diagnosis has been and continues to be called into question, especially when unjustified claims have led to compensation and alleged misuse of the diagnosis has become apparent. This diagnosis and the associated legal issues are increasingly occupying the courts. An often expressed expectation of the victims is to receive recognition in the proceedings for suffering and injustice suffered.

Often, the plaintiffs are appointed a psychiatric or psychological expert to assess this subsequent disorder and the consequences associated with it. Careful examination and (differential) diagnosis, including a precise **trauma anamnesis**, are therefore absolutely necessary.

Traumatic events are frequent: For example (type I trauma), more than 8 million accidents/year in Germany can have both physical and psychological consequences (Angenendt, 2014). However, not only type I traumas such as accidents are the subject of the assessment. Type II traumas such as abuse in childhood and adolescence, which are often understood as complex PTSD, are also increasingly being assessed (► Chap. 3). Psychological trauma is playing an increasingly important role in socio-medical reports, as well as a reason for retirement. A considerable proportion of asylum seekers are considered traumatised. However, only a smaller proportion of those affected develop long-term mental disorders after traumatisation, of which PTSD is only one and for which several differential diagnoses are possible. The expert is not a party empathizer, not a

therapist, and must also critically examine whether aggravation or even simulation may play a role in the often assumed desire for a pension, for example. The assessor is committed to objectivity and neutrality. He must integrate the following parameters in the expert opinion:

- the general knowledge of mental disorders,
- the current scientific state of the art,
- the psychopathological findings and biographical history of the individual to be examined,
- the legal framework.

This integrated knowledge has to be adapted to the individual case of each victim or survivor and critically weighed up. On the one hand, the task places high demands on the expertise of the reviewer, but on the other hand also on his or her ability to integrate existing expertise, the information provided by the respondent and direct findings from the exploration, regardless of personal attitudes and opinions, in order to do justice to the situation of the person to be evaluated.

In the social law assessment, mental illnesses are generally not subject to different standards than physical illnesses. Mental disorders are now recognised more frequently than in earlier times.

The German AWMF Guideline 051-029 (AWMF, 2019) can be helpful in the assessment of trauma sequelae, the first part of which deals in detail with the assessment of professional performance and the second part with the causality assessment of psychological damage consequences. It serves to improve quality, sets standards and is currently being revised.

Many things cannot be presented in a space-limited book contribution, or not in detail. Besides some basics, the focus is on the practical and action-relevant aspects. Therefore, this chapter can only give hints and decision support in the overview. It does

not replace the study of the national literature on typical trauma sequelae.

This article focuses primarily on the socio-medical assessment. Assessments of credibility and in criminal proceedings are not the subject here. In this respect, reference is made to further literature, for example, Stang and Sachsse (2014).

9.2 General Conditions

The expert assessment of the psychological (processes and/or) consequences of traumatisation serves primarily as a basis for benefit decisions by the funding agencies/provision administration or – in the event of a dispute – the courts. The expert must be aware that it is not he who decides on the recognition of the consequences of damage, but the institutions to be advised. For this reason, in addition to the medical-scientific findings and criteria, the legal framework, terms and definitions must also be taken into account and the expert opinions must – as far as possible – be drafted in a manner that is understandable to medical laypersons. In addition to classifying the complaints in a psychiatric classification system, the functional impairments and their effects on working life and private life must be assessed.

The reviewer is always confronted with his limits. He should use as many data sources as possible, gather information and collect the current psychological findings. However, he is not free of errors and is not immune to possible deception. He should therefore collect his findings as comprehensively as possible, describe them precisely and discuss them. According to the legal opinion, “processes in the mental and emotional area of a person should be assessed, ... as far as possible closed to a precise examination” (Loytved, 2005, p. 151). The experienced reviewer can contribute to the examination and assessment with his expertise, even without using technical objectiv-

ity, but on the basis of the prevailing scientific doctrine and current classifications of the ICD (WHO) and the US American DSM.

- ▶ The assessor may not be able to clarify all the client’s questions comprehensively or even take decisions from the client, even if he is urged to do so. In this case, he should make this clear.

9.2.1 Social Compensation Rules

A compensation scheme can not only do justice to the subjective, individual viewpoint but must also compare with many other damage consequences and put possible compensation in relation to each other.

National guidelines are subject to constant revision. Indicators of German guidelines contain (according to Rösner, 2008)

- Practical advice on the preparation of the expert opinion,
- Explanations of the relevant basic terms,
- All legal terms and special terms relevant to the assessment,
- Notes on the causality evaluation.

Under the Magnifying Glass

As a special feature of the German **Victims’ Compensation Act** (VCA, Opferentschädigungsgesetzes), the intentional, criminal assault must have led directly to physical or psychological injury. The causal link between the act and the psychological consequence is essential for recognition under the VCA. Furthermore, the primary damage must have caused a health disorder of a certain duration with sufficient probability (Loytved, 2005). The damage must have occurred on national soil (land, ship or aircraft). For a discussion of this problem, area see Stang and Sachsse (2014).

9.2.2 Basic Expert Terms

9.2.2.1 Chain of Cause and Effect

A contextual assessment in civil and social law presupposes a causal chain (a-d) determined by 4 elements (Spellbrink, 2013):

- (a) Is the situation insured? (e.g. the way to work).
- (b) What is a damaging event? (to be proven in full evidence); (liability establishing causality between the accident and the first damage).

The assessor has to deal with the liability substantiating causality (i.e. the connection between the first damage and the consequential damage):

- (c) What is the (primary) damage to health? (to be proven in full evidence, the so-called “primary damage”).
- (d) What is the (permanent) damage to health? (to be proven in full: “consequential damage” or “secondary damage”).

The administration or insurance company must clarify the causality of the liability. It must also be examined whether a damaging event has caused damage to health or whether pre-existing damage has been aggravated.

In social compensation law and statutory accident insurance, the causality that gives rise to liability and the causality that fills the liability must be proven with a predominant probability.

9.2.2.2 Full Proof

Krasney (2001) defines full proof as follows:

- » All facts must be fully proven, that is, the degree of probability must be so high that it equals certainty. If no clear evidence can be obtained for one of the facts, the expert must at least be able to come to the firm conclusion, based on the facts established, that this is the way it was and no other way.

On the other hand, it is sufficient that the causal connection between the established facts is probable, that is, that a critical assessment of the facts and all relevant medical and scientific findings shows that there is more to a causal connection than against it. (Krasney, 2001, p. 124)

9.2.2.3 Shift of Causality

According to Schönberger et al. (2017), when assessing disorders that persist over longer periods of time, it is also necessary to assess whether the cause of the symptoms has not changed compared to the original one. It is necessary to examine and weight the various factors that come into question (so-called competing factors) (theory of essential condition). If the causes related to the accident have ceased to exist or have been replaced in their quantitative significance by others, this is called “shift of the essential condition”. The consequences are a staggering or change in the level of impairment.

9.2.2.4 Prior Damage

Some test persons have already developed a previous mental illness (psychological predisposition) before the trauma. It is, therefore, necessary to assess whether trauma sequelae (e.g. after an accident) that have been detected and diagnosed is an exacerbation or an independent new mental disorder. The distinction between psycho-reactive disorders as consequences of imprisonment and torture as consequences of imprisonment and torture of damage-independent neurotic disorders is also important in the case of consequences of imprisonment and torture (Haenel, 2002). Stevens and Foerster (2002) describe the complex expert opinion problems of chronic consequences of child abuse in the assessment according to the German VCA and emphasise the connections between genetic disposition, the resulting increase in the risk of psychologi-

cal trauma sequelae and the weighting of a damaging event within the framework of the causality norms (Stang & Sachsse, 2014).

has been shown that the classification of an event as trauma in the sense of PTSD may well differ between experts.

9.2.3 Basic Psychotraumatological Terms

9.2.3.1 The Traumatic Event

Even after serious, traumatising events, many people do not develop manifest mental disorders. It is, therefore, necessary to explore the particular circumstances and contexts, the objective and, above all, the subjective ones that contributed to the development of PTSD.

To diagnose PTSD, it is first necessary to clarify whether the event meets the corresponding criteria. Different trauma definitions are used in the two currently valid international diagnostic systems DSM-5 and ICD-10 (► Chap. 2).

The ICD-10 lists as qualifying events natural or man-made disasters, an act of war, a serious accident or witness to the violent death of others or even victims of torture, terrorism, rape or other crimes.

The DSM-5 also lists physical assault, robbery, road raid or serious traffic accidents as examples. Physical abuse in childhood, threatened or actual sexual violence, kidnapping, hostage-taking, captivity as a prisoner of war are also cited as events. In addition, acute medical incidents that meet the criteria of a traumatic event are now also included (sudden catastrophic events such as waking up during an operation, anaphylactic shock, life-threatening bleeding). It is also stressed that traumatic experiences need not be limited to the listed experiences.

For the reviewer, the choice of one of the two definitions does not make things easier. It is advisable to take into account possible differences and deviations in the evaluation and to discuss them critically. In practice, it

Classification of Traumatic Events

- The event can
 - be a physical injury (e.g. circular saw amputation, blunt abdominal trauma, craniocerebral trauma) or
 - cause an exclusively psychological injury (e.g. experiencing a robbery as a cashier or a run over trauma as a train driver)
- The psychological consequences can develop
 - immediately or shortly after the event, or
 - with a time delay to the event (e.g. if the initial physical consequences of the accident are dealt with and their lasting consequences become apparent)
 - delayed after renewed extreme stress or (cumulative) trauma
- A distinction must be made between
 - a single event (e.g. trauma type I) or
 - several events (e.g. trauma type II) cause the symptoms and
 - the significance of each individual event or which is the essential event for the symptomatology to be assessed
- The weighting of the individual factors/conditions for the development and maintenance of mental symptoms should be assessed for the following determinants,
 - the event itself (e.g. PTSD A criterion fulfilled?)
 - the pre-morbid personality and its coping strategies (e.g. dependent personality? regressive behaviour?)
 - the social environment (e.g. dissatisfaction with the job, difficult financial situation?)

- subjective expectations (e.g. negative future prospects; are all consequences subjectively attributed to the event liable for compensation? demand for justice?) or
- subjective evaluations (e.g. the employer/company is at fault and should pay?)

The consequences of DSM-5 for the assessment of trauma sequelae are discussed by Denis et al. (2014) also for a social compensation law.

9.2.3.2 Initial Reaction to an Event

In assessing psychological reactions to accidents at work, courts often refer to the extensive work of Schönberger et al. (2017), which compiles, among other things, the literature of psychiatrists, court decisions and commentaries. The terms fright and shock are used repeatedly in descriptions of the experience and are often used synonymously. However, the terms must be distinguished and are quoted hereafter Schönberger et al:

» ... the *shock* (immediate psychic reaction), which behaves to fear like a surprise to expectation, is peculiar to the sudden intrusion into the psyche. It is triggered by surprisingly occurring, intense sensory stimuli, which are usually experienced as threatening (loud bangs, bright lightning, unexpected break in the continuity of the experience: for example, ‘you suddenly lose the ground under your feet or unexpectedly feel a hand on your shoulder’).

As a rule, the immediate reaction to the shock is a brief initial rigidity with motor inhibition, thought blockage and emotional paralysis. Time seems to stand still for a short time. The simultaneous stimulation of vegetative and central nervous functions leads with only a short delay to mostly very violent motor defen-

sive movements (i.e. voluntary, active muscle movements controlled by the cerebral cortex). These are states of arousal with often blind movement storms and panic-like escape, defence and attack reactions. They prolong the decay phase of the terror beyond the terror experience.

Horror is more extensive than terror and at the same time contains the characteristics of horror, despair and panic. It is still a general biological reaction; even in the case of more intense fright, there is a normal psychosomatic process with physical repercussions on mental influences, which is easily tolerated by healthy people. Severe fright alone is therefore not a health hazard, but a vital reaction within the norm, which varies greatly from person to person. It becomes noticeable in terms of accident law if it causes an illness. Case law has recognised fright in connection with overexertion as an accident at work. The *shocking effect takes* place in the area of the vegetative nervous system (physical-vegetative reaction) and represents the organic-material interrelation of the shock experience.

While consciousness is necessary for the reaction to take place, the real accidental shock (acute circulatory insufficiency) can also occur without consciousness. (Schönberger et al. (2009, p. 221; emphasis in original)

According to Schönberger et al. (2009), the term accident also includes purely mental health disorders as an immediate reaction to an external event. The sudden psychological stress could overtax the individual’s ability to process the experience and lead directly to a mental disorder, possibly with accompanying somatic findings, by way of a mere fright. The psychovegetative state of the insured person at the time of the event was also to be taken into account. The fright itself had to be proven and damage to health caused by it had to be sufficiently probable. However, even a stronger form of fright can be a normal psychosomatic process. For this

reason, the seriously damaging and accidentally relevant effect of violent fright was limited to very rare cases.

Under the Magnifying Glass

The assessor must clarify the legal basis and framework on which his assessments are based. The legal terms and assessment criteria vary depending on the legal framework.

- As a problem of principle, the reviewer repeatedly encounters discrepancies between the state of scientific knowledge, legal and formal regulations, and divergent definitions.
- The assessor is also repeatedly confronted with the fact that his view and assessment are not or only partially shared by others. Operationalised diagnostic criteria are also subject to different assessment and interpretation.
- The assessor must then argue for his evaluation/assessment in a correspondingly transparent and convincing manner.

- the private accident insurance
- Liability insurance
- of compensation under the Federal Indemnification Act.

The cause here is only the *sine qua non*, which is adequately connected with the success that has occurred. The connection is to be affirmed if a fact was suitable for bringing about success in general and not only under particularly peculiar, quite improbable circumstances that can be left out of consideration after the regular course of events” (Krasney, 2001, p. 124).

“Causes in the legal sense here are the conditions which, due to their special relationships, have contributed significantly to the success of the entry into force of the agreement. If several circumstances have contributed to the success, they are considered to be *concomitant causes* if they are approximately equivalent in their significance and scope for the occurrence of the success. If one of the circumstances is of paramount importance, this circumstance alone is the cause in the legal sense” (Krasney, 2001, p. 124; emphasis in bold and italics in the original).

In practice, despite the differences in the two causality standards, experts usually arrive at the same assessments of the same facts according to both theories.

9.3 Determination of Causality

The scientific concept of causality originates from classical mechanics, is bound to the experimental situation and thus reduces complexity (in vitro situation). It is rather not appropriate for the complex clinical-evaluation situation. This complexity must be related to the legal-normative concept of causality (Leonhardt, 2002).

9.3.1 Theories of Causality (Krasney, 2001)

“The **theory of adequacy** applies in civil law, especially

9.3.2 Steps of the Assessment Using the Example of the Statutory Accident Insurance

Using the example of statutory accident insurance, the following will explain the main steps of the assessment. The basis is a judgement of the German Federal Social Court second Senate of 9. 5. 2006 (B2U1/05R), from which is quoted in the following

- The insured person must have been performing an insured activity at the time of the accident.

- This performance has led to a temporary event that affects the body from outside – the accident event (accident causality).
- The accident event has caused serious damage to health or even the death of the insured person (causality giving rise to liability)
- This causal link must be established. A “sufficient probability” is sufficient. ... This exists if there is more for than against the causal connection and serious doubts are eliminated; the mere possibility is not sufficient” (Bundessozialgericht, 2006, Section 20).

(Addition: according to Schönberger et al. (2009) the questions arise: Was the stress situation stressful enough to cause an individual stress reaction? Schönberger et al. point out that what matters is not a certain severe extent of external stress influence, but – in accordance with the principles for determining causality – the subjective individual stress reaction as a result of the external burden).

- The occurrence of longer-lasting consequences of an accident due to serious damage to health is a prerequisite for the granting of an injury pension (causality to cover liability). A close temporal connection between exposure and collapse is required. It is not a prerequisite for the recognition of an accident at work, but for the granting of an injury pension.
- “These fundamentals of the theory of the essential condition apply to all health disorders claimed to be the consequences of an accident and thus also to mental disorders” ... “because even mental reactions can legally be substantially caused by an accident event. “... “Mental health disorders can occur after an accident at work in many different ways:” ... “they can also develop as a result of the treatment of the initial health damage” (German Federal Social Court 2006, Section 21; Spellbrink, 2013).

- In accordance with the German Social Security Code (SGB) VII, a prerequisite for the granting of an injury pension is that your earning capacity is reduced by at least 20% as a result of an insured event beyond the 26th week after the insured event.
- In social law, the theory of the essential condition applies (quotes from the ruling of the 2nd German Senate of the SPA of 9 May 2006, no. 14).
 - “According to the latter, only those causes are considered to be causal and legally relevant which, due to their special relationship to the success, have contributed significantly to its occurrence”. Every event is the cause of a success that cannot be thought away without the success being absent (Conditio sine qua non; scientific-philosophical theory of conditions). It is then necessary to examine which of the possible causes is the legally significant one.
 - In terms of social law, the only relevant factor is whether the (accident) event was essential to cause health damage.
 - It is not relevant whether the injured person himself or whoever is at fault for the accident since actions contrary to the prohibition do not exclude an insured event.
 - The occasional cause is to be distinguished from the essential cause (is “the disease system so strong or so easy to respond” ... “that the triggering of acute phenomena from it did not require special external influences of an irreplaceable nature, but that any other event occurring in everyday life would have triggered the phenomenon at the same time”) (ibid., Section 15).
 - The special relationship of an insured cause to success (damage to health) is the event itself, possibly competing causes, the chronological sequence of the event, conclusions from the behav-

jour of the injured person after the accident, the findings and diagnoses of the first physician providing treatment and the entire medical history.

- An assessment of causality must be based on the current state of scientific knowledge about the possibility of causal relationships between certain events (accident) and the development of certain diseases (PTSD, depression, etc.). This assessment must be related to the individual, a concrete case, a generalising consideration is not sufficient. There does not necessarily have to be statistical-epidemiological research for this. If no data are available, “a view that is not only occasionally held can also be followed” (ibid., Section 18).
- Each part of the chain of causes must be worked out and determined according to the above standards. The causal connection must be positively established. For the determination of the causal relationship, sufficient probability is sufficient. This is the case when there is more for than against the causal link and serious doubts are eliminated. The mere possibility is not sufficient.
- The basis of the assessment is the individual case related evaluation:
 - the actual insured,
 - with his accident event, the individual extent of his impairments (“but not as he evaluates it subjectively, but as it is objective”; ibid., Section 19). Desire-based ideas are not able to substantiate an essential causal connection and
 - with its pre-existing conditions and previous damage (e.g. “abnormal mental readiness” does not exclude the assumption of a psychological reaction as the result of an accident”; ibid. Section 37). A frequently used formulation in this context is that the insured person is protected in the way he or she starts work.

9.4 Particularities and Problems of the Assessment of Psychoreactive Disorders and Behaviour

On the one hand, the expert assessor is obliged to adopt a critical, objective and neutral position. On the other hand, he must enter into a relationship with the test person in order to be able to answer the questions put to him. The situation of the expert witness is therefore a very complex one, which influences many components, such as the relationship and interaction or the acquisition of information.

- An interested, non-deprecating and not overtly suspicious attitude of the reviewer can mitigate some interactional difficulties and improve the quality of the appraisal. Time, calm conditions of the investigation and patience play an important role here.

First of all, open questions are useful to let the descriptions develop from the perspective of the respondent and to get the communicable spontaneously reported information. In the case of traumatised persons, however, one must also ask directly and in detail to obtain important information. Avoidance behaviour, incomplete or missing memory content, such as amnesia of traumatic experiences and disorders, play just as much a role here as the often limited ability to concentrate.

- It is not appropriate to allow only open reporting and does not do justice to traumatized persons with psychological trauma sequelae. It must be inquired about in detail and systematically explored.

Haenel and Wenk-Ansohn (2005) give a detailed overview of the connections between psychopathology after traumatization, current research and expert opinion problems,

with a focus on expert opinions in-residence law proceedings.

■ **Distrust**

Anyone who has experienced massive interpersonal violence or neglect is often impaired not only in their everyday interaction but also in their particular expert situation. If it is not possible to reduce mistrust, the information will be less and less clear. Traumatised asylum seekers are sometimes not able to give a detailed presentation of their reasons for asylum for psychological reasons. Test persons who have already gone through several assessments can meet a new assessor with mistrust, especially if they experienced that they have not been quoted appropriately or even misunderstood in the past.

■ **Expectations and Disappointments**

Some test persons are disappointed by insurance companies, superiors, treatment providers and also by experts. They feel wrong or not understood, not seen in their neediness, devalued by remarks or non-verbal interaction with them. They expect unconditional justice, recognition and, if necessary, financial compensation. Often the desire for recognition of the subjective suffering outweighs that of material compensation.

■ **Re-Experience and Overexcitement**

During the assessment, the respondent should report on situations that are not only filled with deep feelings of fear, shame or guilt but also often evoke avoided memories that may be associated with severe psychological and physical discomfort. Thus it happens that it is preferable not to report about it, or only in a limited way, despite the awareness of the negative consequences for the expert opinion. The assessor should be aware that this form of avoidance behaviour can be part of a disorder (e.g. PTSD).

■ **Shame and Guilt**

Traumatic situations usually occur in a very short time and often leave no room

for reflected and considered decisions and actions. One's own behaviour and reactions can subsequently be the subject of critical questioning or accusation by the person affected. Profound feelings of shame and guilt can be associated with traumatic situations. Many things are therefore not addressed or avoided, so that the assessor may not experience essential aspects if the development of a trusting relationship in the situation being assessed is not sufficiently successful.

■ **Dissociation**

During the exploration, some test persons suddenly freeze, others seem to be absent, the conversation contact seems to be interrupted, eye contact is lost, and the answers can only be given with a delay or not at all. The duration of such reactions can be very short, but can also last several minutes. Sometimes dissociative states are very difficult to recognise as such and can be mistakenly interpreted as inattention. If a dissociative state occurs during an assessment, the respondent is usually confronted again with intense memories of trauma through exploration or other trigger stimuli. An orderly exploration is then initially no longer possible; rather, antidissociative techniques are to be used to interrupt the state. Dissociative symptoms are to be evaluated as groundbreaking indicators of an existing post-traumatic impairment or disorder.

■ **Pain**

After serious accidents and other traumas, the development of protracted pain syndromes resistant to therapy can occur. The assessment of pain is one of the particularly difficult chapters of medical assessment. A commission of experts has addressed this problem and developed guidelines for the assessment of chronic pain syndromes (AWMF, 2017). For further literature see Egle et al. (2014). On the connection between PTSD and pain see also Frommberger (2016).

■ Combination of Severe Physical and Psychological Trauma

If serious physical and psychological impairments occur, for example, after serious traffic accidents, rape, assault or other acts of violence, the consequences of physical injuries and their treatment are often the first priority. It is sometimes overlooked that the severity and in particular the course of the physical symptoms are also determined by the severity of the psychological symptoms and are interrelated. Those affected are often more willing and open to discussing physical impairments than depressing or shameful memories. Philipp (2018) refers to the high number of comorbid mental clinical presentations in the assessment in addition to trauma sequelae.

■ Cultural Background

In the case of test persons with a migration background, the different cultural ways of thinking and behaviour must be taken into account, for example, with regard to values, education, language problems, socio-economic conditions, role expectations and gender norms, the significance of the (extended) family/social group, expressions through symptoms. Hausotter (2002) therefore recommends in the psychiatric report a separate passage on transcultural and migration-specific considerations as well as a precise exploration of the circumstances of migration and its consequences. The subject's language skills must be checked if the exploration is not conducted in the mother tongue. If doubts remain about sufficient language skills, a professional interpreter must be consulted.

■ Aggravation and Simulation

Aggravation represents actions that are intended to underline the severity of the subjective symptoms and the possibly minor objective symptoms. The simulation, on the other hand, is a deliberate misstatement (► Sect. 8.5.8).

According to Foerster (2002), the thought of a simulation can arise when the feeling of the fake, the wrong, arises and dominates in the presentation of the symptoms. "These test persons can cause anger, rage, personal offence, or even amusement in the expert, always combined with a feeling of inappropriateness and a 'wrong' representation" (Foerster, 2002, p. 153).

Hints for a simulation can be given if, among other things

- there is a conspicuous discrepancy between subjective complaints and observable behaviour in the situation under investigation,
- the intensity of the complaint description contrasts with the vagueness of the complaints,
- information on the course of the disease cannot be specified,
- there are considerable discrepancies between the respondent's statements and information from the foreign anamnestic record,
- the extent of the described complaints is not in accordance with the use of therapeutic assistance.

While pure simulation rarely occurs, aggravation is observed more frequently (Hausotter, 2016). Birck (2004) describes the problems of aggravation and simulation in-residence law proceedings.

An additional psychometric examination may indicate inconsistencies, for example, if the information given in the different questionnaires or examination situations is not consistent (► Sect. 8.5.8). Psychometric attempts to detect aggravation or simulation are the "Structured Questionnaire of Simulated Symptoms" (SFSS) and also subtests in the "Eysencks Personality Inventory" (EPI), "Minnesota Multiphasic Personality Inventory" (MMPI) (Lehrl, 2001). Stevens and Merten (2007) estimate that in half of all cases with compensation claims complaints are exaggerated or expanded. This

view does not necessarily coincide with that of many trauma experts, who estimate this figure to be much lower. Merten (2004) calls for the use of special symptom validation tests to assess neuropsychological issues. This is critically discussed in the AWMF guideline for the assessment of chronic pain (2017).

Mayou (1995, pp. 796 f.; translation and additions in brackets by the author) stated after numerous investigations and studies on traffic accident injuries

- "... the evidence for deliberate exaggeration of the consequences of an accident, for simulation or disproportionate demands is remarkably low in a study of almost 200 subjects..."
- Only] "a small percentage of people invent the burdens and disabilities and others exaggerate willfully."
- "Terms such as exaggeration or simulation are rarely appropriate."
- "...a large number of people receive relatively little attention and are under-cared-for by doctors and too little noticed by the compensation system."

In addition, Mundt (2007) reflects on the functionality and complex processes of simulation and aggravation and gives hints for a deeper understanding of these phenomena. Philipp (2016) found in a sample of more than 110 expert reports that aggravation was a more common phenomenon, but the simulation was not found in any case.

■ Disease Gain from the Diagnosis PTSD

According to Meermann et al. (2008), due to its etiological component, the diagnosis of PTSD can also be "used" to mystify oneself in terms of a primary gain in disease (victim) identity or to instrumentalize it in terms of a secondary gain in disease in a financially profitable way.

◀ Example: Cervical Spine (Cervical) Acceleration Trauma

Stevens (2006) and Eisenmenger (2008) report critically on the history of the term cervical spinal distortion and the problems of this very controversial diagnosis. Causality, pathophysiology and diagnosis are highly controversial in most of the complaints. There is often a lack of validity, reliability and objectivity (Poock, 2001). "Almost without exception" the clinical, neurological and radiological evidence of injury fails (Schröter, 2008). He describes in detail the methodology of the assessment. Stevens does not regard the syndrome as a nosologically valid construct, expects a high prevalence of aggravation and classifies it most likely among the somatoform disorders. The guidelines of the Association of Scientific Medical Societies (AWMF Guidelines) on the acceleration trauma of the cervical spine provide a more differentiated picture that cannot be presented in detail here. ◀

■ Existing Conflicts and Personality Traits

Schönberger et al. (2009) assume that in the presence of existing conflicts, a traumatic event can represent a specific stimulus in the sense of a situation of temptation and failure. As a consequence, the pre-existing conflict is "shifted" to the trauma. The accident event meets a latently existing neurotic structure and is the final cause (= "trigger") for the manifestation of neurotic symptoms. Such an assessment in an individual case requires proof that existing symptoms and pre-traumatic structure correspond. It also requires positive evidence of pre-traumatic conflicts or personality traits. Hypothetical, assumed and unproven conflicts must not lead to a denial of manifest trauma sequelae in the assessment. The mere assumption of conflicts independent of events or pre-morbid personality traits is not sufficient.

For these possible competing factors, too, expert evidence in the sense of full proof would be required.

■ Change Through Therapy Successes

Wehking et al. (2004) report from a follow-up of accident patients of inpatient treatment. The most favourable therapy results were achieved in inpatient treatment before the end of the first year of the accident. They found evidence that mental disorders following accident events can be improved even in the chronicity stage by consistent, cause-related (inpatient) treatment measures. Pre-existing mental disorders were found in 60% of the patients in the sample investigated.

One US study found no significant difference in symptomatic response to inpatient therapy between veterans who expected higher compensation payments and those with stable compensation payments (Belsher et al., 2012).

Psychotherapy or the use of psychotropic drugs can bring about a lasting reduction in symptoms and improvement in performance. This sustained improvement then affects the level of impairment.

■ Time Expenditure and Remuneration

The time required for an in-depth expert opinion that takes into account the aspects and requirements mentioned here is often considerable. Unfortunately, the remuneration for high-quality work is not necessarily adequate despite adaptation. Some payers (institutions /clients) only pay very unsatisfactory remuneration.

9.5 Methodology of the Assessment

At the beginning of an assessment, it may be valuable to give informations to the person that

- test results can only be used well with optimal cooperation,
- the willingness to exert can also be tested,

- as no therapy is given here, a more passable worsening of the symptoms could occur afterwards,
- all information on the client has to be passed to the principal
- affective and physiological reactions can be observed during the assessment

There is the view of Fabra (2006) that the only valid criterion for PTSD in the exploration of trauma must be a PTSD-typical psychophysiological response. While, on the one hand, this requirement could differentiate at least the mild from the severe cases, there is a clinical consensus that even in the case of a proven severe disorder, the PTSD-typical psychophysiological response does not necessarily occur when, for example

- the subjects try to “keep their composure” and are rather embarrassed to allow and show feelings and physical reactions and/or
- the fear of affective inundation becomes too great and existentially threatening so that the effects must be fended off as self-protection (isolation of effects / affective blunting/numbing/dissociation),
- the persons concerned have repeatedly confronted themselves with the traumatic memories during trauma-focused psychotherapy.

The validity of Fabra’s above claim is therefore questionable, and to the best of our knowledge, there is no empirical evidence to support it. However, if such a psychophysiological reaction occurs during exploration, it is helpful in terms of a clear indication of the existence of PTSD.

9.5.1 Countertransference

If, on the one hand, it is the reactive psychological symptoms themselves that can stand in the way of an objective expert opinion, on the other hand, it can be the attitude of the expert towards the survivor and his or

her history that influences the objectivity of the expert opinion. Particularly in the case of trauma and torture victims, aspects of the relationship between the expert witness and the person to be examined can have a significant influence on the expert opinion, which should not be underestimated. For just as in the therapeutic relationship with torture victims, in his or her relationship with the person to be evaluated, the evaluator can quickly develop extreme counter-transference positions with either too great a distance and lack of empathy or too little distance, with the danger of overidentification and even personal, empathic entanglement (Haenel, 2000).

9.5.2 Survey of the Past History

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This includes the exploration of the

- General medical history including psychiatric and somatic illnesses,
- Special medical history (e.g. accident and treatment anamnesis) including the current symptoms, their course and duration, and
- Biographical anamnesis including possible pre-morbid conflicts that could be relevant for the development of symptoms

This is intended to give the assessor a picture of the subject's pre-morbid performance and personality. For the objective representation of the pre-existing conditions and the illness behaviour, the client can provide the expert with the service specifications of the health insurance company.

Because of the central importance of the effects of illness for social benefit recommendations, the “International Classification of Functioning, Disabilities and Health” (ICF) is of particular significance in socio-medical terms (Hagen, 2008). The ICF enables a systematic recording and description of health at the levels of bodily functions, body structures, activities and

participation, taking into account contextual factors related to the person and the environment.

9.5.3 Psychopathology and Classification

The psychopathological findings (AMDP, 2013; Scharfetter, 2017) include objective, observable phenomena (e.g. slowing down) as well as subjective or anamnestic symptoms (e.g. sleep disorders, nightmares). This includes symptoms that cannot be found out in the assessment situation. In principle, the assessor can be deceived here by a purposeful and practised presentation of the complaint.

Under the Magnifying Glass: Exploration of Trauma

The assessment of a psychological trauma sequelae disorder requires the exploration of the trauma. The psychological reactions to the trauma can be made visible in the expert's exploration and are a validity criterion for the diagnostic classification as well as for the severity of the impairment. Detailed exploration is therefore indispensable, even though psychopathological symptoms and avoidance behaviour may conflict with this. The respondent should be made aware beforehand that the exploration is not a therapy and that the symptoms may temporally worsen in some cases. Mere suspicion or conclusions about symptoms or behaviour are not sufficient to establish the damage to health with the legal criteria of so-called full proof.

In terms of classification, numerous other disorders can occur in addition to the PTSD image, which is the best-studied scientifically, both as a single disorder and as

a comorbid, simultaneous or subsequent disorder (► Chap. 2). Therefore, a differentiated psychopathological exploration is necessary, with the classification of symptoms into syndromes and disorder categories of a valid psychiatric classification system. The symptoms described by the proband are not simply to be taken over, but to be psychopathologically evaluated and classified. This is often not easy, since the course of the exploration depends, among other things, on the cooperation of the test person, his psychopathology and his intellectual and linguistic abilities.

After particularly severe trauma, complex chronic disorders can occur in addition to PTSD. The ICD-10 characterizes a disorder as a **persistent personality change after extreme stress** (F62.0). This diagnosis is limited to certain extreme stresses, such as concentration camp imprisonment, torture or hostage-taking. This diagnosis can be important for the assessment under the social compensation law. Further disturbance patterns can be dissociative disorders (F44). The **complex PTSD** is only included in a classification system with the ICD-11 and can be subsumed under F43.1 to date if the subjects meet the criteria for “classic” PTSD. In the DSM-5, an extension of the PTSD concept with the integration of, for example, feelings of guilt and shame as well as the value system, as is typical for “complex” PTSD, was undertaken.

The classification of symptoms into a disturbance pattern according to the specifications of a classification system is a first step, which, however, does not yet make any statements about the disturbance-related functional impairments present in individual cases and the resulting limitations of the acquisition-relevant performance capacity. The disorder-related impairments for working life can be described on 3 levels (Foerster et al., 2007):

- Psycho-emotional impairment,
- Social-communicative impairment,
- Physical and functional impairment.

These impairments must be explored and described in detail.

The starting points for classificatory diagnostics and evaluation:

- One of the usual diagnostic systems (ICD-10,-11, DSM-5),
- Reference books and standard works,
- AWMF Guidelines and supplementary
- Other publications (e.g. in journals).

A delayed onset of PTSD, defined in DSM-5 as at least 6 months after trauma, is often the subject of controversial discussion. The so-called bridging symptoms that are often called for in this context can, for example, present themselves as unspecific, subsyndromal depressive or anxiety symptoms, but also as subsyndromal or partial PTSD. Rarely, no bridging symptoms are found. The frequencies of this still very insufficiently investigated subtype vary considerably depending on the study. In two meta-analyses (Smid et al., 2009; Utzon-Frank et al., 2014) the rate of delayed PTSD in the various studies was stated to be 25% on average.

9.5.4 Psychometry/Test Diagnostics

Dreßing and Foerster (2014) point out that the increased use of standardized personality diagnostics is helpful. The reality of assessment, however, shows a different picture: only about 20% of socio-medical assessments by psychiatrists and neurologists in private practice include psychometric tests (Lehrl, 2001). There are some advantages:

- The comparison with a standard sample.
- Systematic recording of characteristics (e.g. symptoms). This supports the coherence of clinical diagnosis and diagnostic criteria of classification systems.
- Figures, verifiable, comparable and repeatable.
- Better documentation, also for follow-up examinations.

- Greater completeness of the data.
- Supports and substantiates the clinical statements.
- Relativizes and encourages self-criticism towards own findings and assumptions.

In studies on PTSD, **structured assessment tools** are considered the best way to diagnose PTSD (► Chap. 8). They represent the highest validity to date for the diagnosis of PTSD and other trauma-related disorders and are considered the “golden standard” in the diagnosis of these disorders. When using them, the investigator must evaluate the individual questions according to his clinical judgment in addition to the structured questions.

Since the traumatic event and the subsequent symptoms are explored in detail during the structured interview, psychophysiological reactions can be observed when the experiences are described. In this way, a structured interview like CAPS can support the above-mentioned demands made by Fabra (2006).

Self-assessment scales merely reflect the subjective reality and the respondent’s understanding of the respective questions (► Chap. 8). They are therefore images of complaints, but not yet objective findings, and are unsuitable for expert diagnosis alone. Since, for example, intrusions are often misunderstood, the self-evaluation instruments can only be used for screening during an assessment.

Patients with PTSD often complain about problems of memory, concentration and performance. The attention stress test d2 (Brickenkamp, 2002), in which the patient has to solve tasks over a longer period of time, is often used to objectify performance. These tests require the patient’s cooperation and possible tendentious behaviour must be taken into account. Krahl (2012) describes in his article on “psychological procedures in the context of assessments” a number of frequently used neuropsychological procedures for different functions. In order to identify tendentious response tendencies or

lack of cooperation, Merten (2004) calls for the use of symptom validation tests (SVT). However, the significance of these tests must be assessed very critically (Dreßing et al., 2009; Dreßing & Foerster, 2012).

For the diagnosis of personality disorders, the SCID-II self-assessment questionnaire can serve as a screening tool. If there is a positive indication of one or more personality disorders, the SCID-II structured clinical interview can be used to supplement or validate the self-assessment questionnaire. Personality disorder diagnoses merely based on test psychology show low reliability. Only the use of a structured interview ensures a sufficiently reliable diagnosis and is therefore considered state-of-the-art.

■ Arguments Against Psychometry/Test Diagnostics

Fabra (2006) deals with the serious problem of the objectivity of a PTSD diagnosis at the time of assessment in order to ultimately provide “full proof”. He believes that only the “psychological cross-sectional findings collected in a detailed expert opinion interview” are objective, in which “following a psychodynamic concept of understanding, the patterns of experience and behaviour that impair a person in his or her daily life can be directly depicted if the investigator proceeds in a suitable manner” (Fabra, 2006, p. 13). According to this, the sole questioning of the test person is unsuitable, and questionnaires and structured interviews would not solve the problem either, as they would only reflect the subjective view of the test person, without, however, providing objective evidence of the damage in the sense of full proof required by insurance law. For full proof, it is necessary to objectify findings that are independent of the conscious representation that is subject to the will.

However, structured interviews and psychopathological cross-sectional findings are not contradictory. There is also the question of how objective a “psychodynamic concept of understanding” is. It is very questionable

whether it can meet the requirements of full proof. The applicability of the concept to experts who are not trained in psychodynamic psychology and the time and cost pressure is also open.

Stevens and Merten (2007) are critical and rather dismissive of the value of psychometric evaluation in cases of psychological trauma sequelae. However, this view is highly controversial among trauma experts. In the absence of reliable objective parameters for the detection of PTSD, for example, clear psychophysiological examination methods, psychometric evaluation can support clinical diagnoses, provided that one does not make the mistake of relying uncritically on test diagnostic findings alone.

In a balanced way, Denis describes the benefits and problems of standardised diagnostics in the residence procedure (2004) and social compensation law and statutory accident insurance (Denis et al., 2014).

For further current discussion see AWMF (2019).

9.6 Assessment of Asylum Seekers and After Political Detention

The assessment of migrants according to the right of residence is discussed very controversially. Authorities do not recognise medical reports or expert opinions and assume that the experts want to protect affected persons from deportation. The knowledge of experts about traumatising often seems to be very limited or insufficient. However, experts have promoted the mistrust of the authorities by issuing statements that are too short and incomprehensible. Standards for the assessment of traumatised migrants and refugees have therefore been developed and institutionally coordinated. Medical associations organize curricula to establish a standard. In addition to special psychiatric-psychotraumatological knowledge, knowl-

edge of the situation in the respective (crisis) area from which the affected persons have fled is required. Politicians must answer the question of whether and under what conditions a right of residence for traumatised persons in Germany should be granted.

In residence procedures, the first issue is whether there are mental and/or physical health problems that support the asylum application. On the other hand, the question must be assessed whether the consequences of psychological trauma can be profoundly worsened and become life-threatening (e.g. suicidal tendencies) when returning to the country of origin. Life-threatening consequences can also mean deportation to a country in which the person concerned cannot expect to be safe and in which torture continues, even if this is questioned by interested institutions for political reasons. The question of successful psychotherapy and the subsequent expected deportation calls into question the basic conditions of psychotherapeutic work such as trust and openness. In such a constellation, the chances of success of therapy are to be regarded as low.

If trauma within the meaning of the A-criterion of PTSD (DSM definition) is claimed, it must also be proven. This is often difficult and controversial in asylum procedures. The court must provide evidence of the alleged trauma. According to Leonhard and Foerster (2003), the objective event aspect is not subject of the expert opinion. They argued that psychiatric-psychotherapeutic means could not be used to determine with certainty whether an event had occurred in the past and what its nature was. The diagnosis of PTSD can therefore only be made by the expert witness under the premise that the traumatic event is also proven or probable by the court (Ebert & Kindt, 2004). However, the expert can comment on whether the symptoms are typical of PTSD. Ebbinghaus et al. (2016) investigate the question of whether psychological torture fulfils the entry criterion of PTSD.

This also applies to any missing or false reminders that are claimed. Memory gaps for events not directly related to the trauma are not typical of PTSD. However, overly accurate memories and blurred or missing details can co-exist.

The reviewer should evaluate the asylum seeker's descriptions according to general criteria such as richness of detail, individuality, interweaving with objective circumstances, consistency, structural equality. The asylum seeker is expected to give such a description of his history of persecution according to these general criteria. The asylum seeker should also be able to answer questions about the space, place and time of detention, details of the period of detention or the actual torture, as well as further details about the previous and subsequent history (Ebert & Kindt, 2004).

However, some asylum seekers with PTSD are not able to do this due to disruptions (Birck, 2002; Haenel, 2004).

Psychopathologically, it is essential to explore the unwanted, intrusive and fearful recollections of the trauma that are necessary for a PTSD diagnosis. These intrusions or even flashbacks can occur especially at rest, not only under stress. Indicative stimuli that remind us of the traumatisation can trigger considerable psychophysiological symptoms. If intensive psychophysiological symptomatology occurs during the assessment, this should be evaluated and described as a clear indication of the presence of traumatisation. These memories are to be distinguished from the fear of being persecuted (here or in the home country) or from any ideas that might be imposed on them about what a (renewed) persecution might look like. The latter do not correspond to PTSD. The elaboration of the contents of the fears and their diagnostic classification are thus part of the expert evaluation.

The assessor must also make it clear to the court in a transparent manner if there is no certain evidence for him, but that it is circumstantial evidence and indications from

which he draws his conclusions. It must also be taken into account that, apart from PTSD, other explanations for the symptoms, that is, other mental illnesses, are possible, for example, depression, anxiety disorders or psychoses as well as organic brain syndromes. For the prognosis, it must be described that even after successful therapy there is an increased risk of recurrence. Only trigger stimuli and the environment of the previous trauma after deportation can trigger anxiety, independent of the current persistence of the full picture of PTSD.

- It is very difficult to assess the risk of suicide since an expert cannot know whether the threat of suicide in the event of deportation is merely a threat or a firm decision that will be put into practice. In any case, a suicide threat is a risk factor that must be taken seriously, especially if there is also a mental disorder that can seriously restrict free will (e.g. severe depression).

Since the scope of this contribution is limited, reference is made to the book by Haenel and Wenk-Ansohn (2005), which, in the case of residence law proceedings, comments on issues such as memory disorders, the use of interpreters, women-specific issues, transmission and countertransference, and further standards of assessment.

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Therapy

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Early Psychological Interventions

J. Bengel, K. Becker-Nehring, and J. Hillebrecht

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Experiencing an emergency, a serious accident, acute and life-threatening medical conditions, abuse, violence, threatening forms of stalking, kidnapping, or hostage-taking, a terrorist attack, a war event, torture, or a natural disaster is always associated with psychological stress and an adjustment reaction. This can also affect eyewitnesses, relatives, survivors, helpers, and emergency services. The reaction following such an event can manifest itself in an acute stress reaction (ICD), an acute stress disorder (DSM) and/or in the medium and long term in a chronic stress disorder or other mental disorder. Early psychological care services should help to alleviate or prevent the medium- and long-term psychological consequences of traumatic events (Hobfoll et al., 2007; North & Pfefferbaum, 2013; Peterson et al., 1991; Tol et al., 2013).

The terminology for these interventions is inconsistent. Terms such as early intervention, emergency psychological intervention, emergency psychotherapy, psychological aftercare, psychological follow-up, psychosocial emergency care, psychosocial support and psychological first aid are used. National and international research refers to early (psychological) intervention or (psychological) early intervention. As a rule, measures taken within a period of up to 3 months after the event are referred to as early interventions.

Early Psychological Intervention

The first psychological measures for the care and support of people after traumatic events are called early psychological intervention. The time criterion in diagnosing (acute) post-traumatic stress disorder is useful for differentiating it from medium and long-term measures: All measures that are taken within the first 3 months after the traumatic event are then early interventions.

The frequency of traumatic events and the prevalence of trauma sequelae, but also the acute psychosocial stress of those affected, justify preventive and early measures. However, it is still largely open for which persons or groups of persons, at what time, in what quality, form and intensity and by whom the intervention is to be carried out. For many of the existing concepts and proposed measures, there are no empirically based indication criteria and they have not been sufficiently evaluated with regard to their effectiveness (► Sect. 10.4; Australian Centre for Posttraumatic Mental Health, ACPMH, 2013; Agorastos et al., 2011; Dyregrov & Regel, 2012; Flatten et al., 2011; Hobfoll et al., 2007; National Institute of Clinical Excellence, NICE, 2005; International Federation of Red Cross and Red Crescent Societies, IFRC, 2016).

On the other hand, there is great pressure for action on the part of the responsible state institutions and aid organizations, especially in the event of disasters and major damage. Not only has the public and the media been sensitized to the issue of early and immediate care for victims, but the question of medical costs and the duty of care for specific groups of people, such as rescue and emergency services, has led to increasing importance of early psychological intervention.

A distinction can be made between a (primary) preventive perspective and a perspective of early intervention after a traumatic event. Under the assumption that the occurrence of critical events can only be influenced to a limited extent, preventive measures concentrate on the preparation of persons or occupational groups with a special risk or increased probability of experiencing traumatic events. For this reason, aspects of primary prevention are dealt with first (► Sect. 10.1). In addition to the traumatic stressor, risk and protective factors and early clinical symptoms are important for the post-traumatic course of

the event (► Sect. 10.2). This is followed by a discussion of the early psychological interventions used and investigated; the presentation is based on the current state of the research and international guidelines (► Sect. 10.3). Psychosocial emergency care serves as a generic term for all measures that are implemented immediately **after** critical events and documents that the individual measures are embedded in and justified by an overall concept of care; this applies to major emergencies in particular, but also to crisis intervention after traffic accidents and acts of violence (► Sect. 10.4).

10.1 Primary Prevention

Primary prevention includes measures to control exposure, in particular by structural requirements. Furthermore, prevention also includes measures for psychological preparation for possible traumatic events and programs to increase resilience (Beerlage, 2015; O'Brien, 1998; Skeffington et al., 2013; Sorenson, 2002).

10.1.1 Exposure Control and Structural Prevention

Measures that contribute to a lower risk of accidents in traffic and everyday life, as well as to protection against assaults and violent experiences, reduce the probability of traumatic events (universal prevention). Structural measures include improved traffic flow and vehicle safety, early warning systems for natural disasters, and programs to prevent violence, for example, sexual (Casey & Lindhorst, 2009) or school-related violence (Miller, 2008). Exposure control refers to groups of people who can be kept away from a potentially traumatizing situation (secondary traumatization); this primarily concerns spectators of accidents or major damage (Fiedler et al., 2004).

Informing the population in the sense of preventive psychoeducation about the consequences of traumatic events – for example, accidents, major injuries, but also the communication of serious disease diagnoses – can help to better understand and classify symptoms (► Sect. 10.3.4). Educating and preparing the population can be done by the media through information material. However, it should be noted that sensational reports in the media, for example, in the case of terrorist attacks, can also trigger negative psychological reactions (ACPMH, 2013).

All preventive measures that reduce the overall risk of mental disorders also help to reduce the probability of trauma sequelae and disruptive stress effects (including programs to increase resilience and strengthen protective factors, see Bengel & Lyssenko, 2012).

10.1.2 Preparation, Education, and Training

Psychological measures to prepare for the experience of stressful and traumatic situations are described in particular for occupational groups with increased risk, such as soldiers, police officers, firefighters, paramedics or train drivers (selective prevention). Preparatory measures include

- (cognitive) preparation for operations and stressful situations,
- simulation of dangerous and emergency situations,
- psychoeducation with and without skill training,
- automation of actions and processes,
- stress management and stress inoculation.

In many aid agencies, the fire brigade, the police, and the military, psychological modules are now part of the education and training curriculum (Cornum et al., 2011). In many organizations, post-deployment fol-

low-up is now standard practice both nationally and internationally (► Sect. 10.4). In addition, general and non-specific measures such as improving work and organizational structures, providing psychosocial contact persons, creating a good work atmosphere and increasing job satisfaction, as well as promoting a caring attitude towards one's own physical and mental health, especially through adequate nutrition, control of alcohol consumption and physical fitness, can also help in coping with traumatic experiences (Bengel & Heinrichs, 2004; North et al., 2002; Federal Office for Civil Protection and Disaster Relief (Bundesamt für Bevölkerungsschutz und Katastrophenhilfe, BBK), 2012). Selective prevention can also include the selection of personnel and the mission-specific selection of non-vulnerable persons. According to this, for example, emergency personnel or helpers with risk factors for mental disorders should not be assigned to potentially stressful missions.

One example of promoting resilience in primary preventive measures for specific target groups is the “Trauma Resilience Training” by Arnetz and colleagues (Arnetz et al., 2009). This program is an imagination and skills training of several weeks for police officers to deal with traumatic situations. Essential elements are

- learning of relaxation techniques,
- guided imaginations of traumatic events,
- acquisition of adaptive coping strategies in the confrontation with these events.

Wagner et al. (2001) present a comparable program for high-risk groups such as police forces, rescue workers, and firefighters. Probably, programs with higher intensity and duration are at an advantage.

A multi-level program for the prevention of operational consequences and especially PTSD has been developed by the US Army (“Comprehensive soldier fitness”, CFS; Bates et al., 2010; Casey & Lindhorst, 2009; Rees, 2011). The basic components provide for the promotion of resilience at the level of the

overall organization, the commanders of individual units, and individual soldiers, as well as for “family resilience” and the strengthening of social networks (Cacioppo et al., 2011; Cornum et al., 2011; Gottman et al., 2011). The program elements are comparable to those offered in other large organizations to increase resilience. Hourani et al. (2011) criticize that the effects of the program have not yet been investigated from an independent perspective; lower PTSD rates have also not yet been proven (Quick, 2011; Steenkamp et al., 2013); ethical aspects such as the obligation to participate and possible undesirable side effects have not yet been discussed much.

10.2 Protective and Risk Factors, and Risk Symptoms

The development of PTSD and probably other trauma sequelae is based on an interaction between the genotype, previous particularly stressful experiences, the nature and intensity of the traumatic experience, and the reaction of the person affected and their environment to the traumatic event. Although some protective and risk factors are being investigated and discussed, little is known overall about the way in which biological, environmental and psychological factors interact (Becker-Nehring et al., 2012; Brewin et al., 2000; Ozer et al., 2003; Trickey et al., 2012). Protective factors can most likely buffer increased vulnerability (► Sect. 10.2.1). Acute stress reactions and acute stress disorders have often been described as predictors of trauma sequelae and as an indication for early intervention, and are therefore discussed in a separate section (► Sect. 10.2.2).

10.2.1 Protective and Risk Factors

Protective and risk factors are usually divided into pre-traumatic, peri-traumatic and post-traumatic factors. Contrary to earlier assump-

tions, pre-traumatic and biographical aspects show less of a correlation with the later development of trauma sequelae than peri- and especially post-traumatic influences.

Mental disorders in the family are associated with an increased risk of trauma sequelae. This suggests **genetic vulnerability** (Boscarino et al., 2013; Klengel et al., 2013; Nievergelt et al., 2015; Pitman et al., 2012; Van Zuiden et al., 2012). Furthermore, genes associated with fear conditioning or memory formation are being examined (e.g. KIBRA; Wilker et al., 2013). For women, a higher risk of developing trauma sequelae is found in many, although not all, studies. There is evidence that gender differences in the neuroendocrine stress response (hypothalamic-pituitary-adrenal axis (HPA axis), sex hormones) are responsible for this. There are no consistent findings for age, which could be due to a curvilinear relationship and the influence of developmental phases with increased vulnerability (► Chap. 6).

Traumatic stress also affects psychobiology and genes. The influence of early trauma – experience-dependent neuroplasticity – on the entire psychobiological system has been documented (Heim et al., 2000; Yehuda et al., 2010). Experiences of violence and abuse in childhood can lead to physiological and biochemical changes (► Chap. 6). Biomarkers for increased vulnerability include dysfunction of the HPA axis, low GABA concentration (γ -aminobutyric acid) in the CNS and changes in certain cortical and limbic brain regions such as reduced hippocampal volume (Schmidt et al., 2015). Responsiveness to preventive and therapeutic measures depends on genetic and psychobiological features; psychobiological and genetic research suggests that in the future it will be able to explain at least part of the differential vulnerability.

Low socio-economic status and low intelligence are also risk factors. The predictive significance of personality traits, on

the other hand, has not yet been sufficiently investigated; due to methodological problems, the available studies do not allow clear conclusions to be drawn, except for depression as an indicator of general psychological stress (Maercker & Bengel, 2017).

As expected, regarding peri-traumatic risk factors, the type and severity of the event are significant, and the subjective perception of the threat is decisive (Becker-Nehring et al., 2012). In particular, man-made experiences of violence and the perceived threat to life are of higher risk. A strong emotional reaction such as fear, helplessness, horror, guilt, and shame during the traumatic event or immediately afterwards is considered a risk factor. The question of peri-traumatic dissociation as a protective or risk factor is still open due to conceptual and methodological questions. Van der Velden and Wittmann (2008) argue in their meta-analysis that dissociation is not an independent risk factor and that initial psychological problems are a better predictor of PTSD.

Post-traumatic factors cannot always be clearly separated from peri-traumatic factors. Acute stress disorder (ASD), but also depressive and anxiety symptoms as well as high general psychological stress are predictive of trauma sequelae (Bryant, 2011; ► Sect. 10.2.2). However, many sufferers develop a trauma sequelae disorder without having previously shown symptoms of ASD. Cognitive factors such as rumination, thought suppression, and avoidant coping appear to be risk factors for later mental disorders (Ehring et al., 2008; Kleim et al., 2007; Littleton et al., 2007). This is associated with a negative appraisal of the event and its consequences: self-reproach, low self-efficacy expectations, perceived responsibility, and depressive symptoms.

The reaction of the environment plays a central role in the processing of the traumatic experience: accusations, financial problems and claims for damages, difficulties

with offices and authorities. For example, the quality of a refugee camp, delays in processing asylum applications, difficulties in dealing with immigration authorities, illegal residence status, obstacles to employment, discrimination as well as loneliness and boredom (so-called post-migration stressors) are of importance to refugees (► Chap. 25). Safety and protection are central to all trauma victims in the post-traumatic phase.

Protective factors are less well studied (Bengel & Lyssenko, 2012). Social support is defined as a protective factor, in some studies its absence is considered a risk factor (► Sect. 10.3.2). Greater effects at a longer time interval from the traumatic event suggest that social support mainly protects against the maintaining of symptoms, less against the development of acute symptoms, or that the effects of social support cumulate over time. It is assumed that post-traumatic social support influences avoidance behavior and thus has an impact on emotion regulation; that is, social support gives people affected by traumatic events more capacity to expose and process trauma-related emotions (see Charuvastra & Cloitre, 2008). There is also evidence that a high level of peri-traumatic social support moderates the effect of the immediate emotional response (Neria et al., 2010). For personality traits such as optimism, sense of coherence and religiosity there is evidence of protective valence, but mainly from correlative rather than prospective studies (Maercker & Bengel, 2017).

The overview shows that some of the factors can be addressed by early intervention (e.g., social support), others, such as genetic disposition, cannot. Also, some factors can be diagnostically detected, others cannot, or cannot be addressed in the context of early care after the traumatic event. In the following, the acute stress reaction and acute stress

disorder are discussed, which were considered to be central indications for early intervention for a long time in many studies.

10.2.2 Acute Stress Reaction and Acute Stress Disorder

Colloquially used terms for the acute reaction to a special stress situation are mental shock or crisis. The ICD classification system avoids the term “disorder” and refers to it as “acute stress reaction” (ICD-10; ASR; F43.0 or in future in ICD-11 no longer as a diagnosis but as a “factor influencing health status”). The reaction begins within minutes, if not immediately after the event, and often subsides within hours or days. In most cases, the symptoms are only slightly present after 1–2 days. There is an immediate and clear temporal connection between an unusual stress exposure and the onset of symptoms. The ASR is characterized by a mixed and also changing picture of depressive symptoms, anxiety, desperation, anger, withdrawal, and hyperactivity. No symptom is predominant for a longer period of time, the symptoms recede rapidly and subside within a few hours at the most if removal from the stressful environment is possible (Bengel & Hubert, 2010; Kröger, 2013). The term reaction is intended to indicate that it is (initially still) a normal physiological or psychological reaction to the traumatic event. It is difficult to distinguish between a normal stress reaction (i.e., one that can be expected in most affected persons) and a stress reaction with pathological significance. The diagnostic unit “Acute Stress Disorder” (ASD) was included in the American classification system of mental disorders in 1994; this refers to a duration of 3 days to 1 month (Falkai et al., 2015).

Acute Stress Reaction and Acute Stress Disorder

- The classification system of the World Health Organization (ICD-10, in future ICD-11) speaks of an **acute stress reaction** that occurs within a few minutes and subsides within hours or days in a person who is not mentally manifestly disturbed.
- According to DSM-5, an **acute stress disorder** (308.3) is diagnosed when symptoms of stress disorder occur after a minimum of 3 days and a maximum of one month after a traumatic event.

For the diagnosis of ASD, besides the time criterion, the criterion of stress and the symptoms of re-experience, avoidance, anxiety (e.g., tachycardia, sweating, hot flushes) or increased arousal, drowsiness, sadness, anger, hopelessness, hyperactivity, social withdrawal, and stupor are relevant (see Criteria for PTSD, ► Chap. 2). In addition, for ASD it is required that the person shows at least 3 dissociative symptoms during or after the extremely stressful event.

Diagnostics of ASD

Dissociative symptoms, of which at least 3 must occur in ASD:

- Subjective feeling of emotional numbness, detachment, or lack of emotional responsiveness
- Impairment of the conscious perception of the environment (e.g., “like being in a daze”)
- Derealization experience
- Depersonalization experience
- Dissociative amnesia (e.g., inability to remember an important aspect of the trauma)

It must be excluded that the symptoms are due to the effect of a substance (e.g., drug, medicine) or a medical disease factor. Similarly, the symptoms must not be better explained by a brief psychotic disorder (DSM-5; APA, 2013). ASD must be distinguished from PTSD and adjustment disorders, as well as short-term depressive reactions, panic disorders, dissociative disorders, and obsessive-compulsive disorders.

The introduction of the diagnosis ASD was clinically meaningful, above all because of the association with PTSD; it enables affected persons to access care. The positive predictive value of the ASD diagnosis (proportion of people with ASD who later develop PTSD) is acceptable, but sensitivity is low, that is, the majority of people who later develop PTSD are not adequately identified by the ASR or ASD diagnosis (Bryant, 2011). Some authors argue that pre-, peri- and post-traumatic protective and risk factors are better suited to predict trauma sequelae (Becker-Nehring et al., 2012; Bryant et al., 2011).

The diagnosis of ASD can be made by anamnesis and exploration, questionnaire procedures and standardized clinical interviews. The mental status, external security and available resources are assessed. The Stanford Acute Stress Reaction Questionnaire (SASRQ; Cardeña et al., 2000), the Acute Stress Disorder Scale (ASDS; Bryant et al., 2000; German: Helfricht et al., 2009), and the Acute Stress Disorder Interview (ASDI; Bryant et al., 1998a; German: Kröger et al., 2011) were developed specifically to assess the early effects of stress. The Essen Trauma Inventory (ETI; Tagay & Senf, 2014) serves to identify ASD and PTSD. Various instruments provide diagnostic indications of the presence of PTSD symptoms according to DSM-III-R or DSM-IV and have been used in various studies in the first months after traumatic events, but do not record dis-

sociative symptoms (► Chap. 8). In order to record symptoms other than ASD or PTSD symptoms shortly after traumatic events, some studies use the Peritraumatic Emotions Questionnaire, which measures the four subscales fear, helplessness, guilt/shame and anger (Ehring et al., 2006; Halligan et al., 2003).

In major catastrophic events, comprehensive and professionally adequate diagnostics are usually not possible due to a large number of people potentially affected. In addition, the assessment of symptoms directly after the event often leads to many false positives. Persistent symptoms and suffering lasting for days and especially weeks after the traumatic experience are, however, predictors of a persistent burden and pathological symptoms (Gray & Litz, 2005; NICE, 2005).

The guidelines of the International Society for Traumatic Stress Studies (ISTSS) indicate that screening after traumatic events should include risk factors for trauma sequelae (Balaban, 2008). Some English-language instruments consider well-studied protective and risk factors, are very economical and have better sensitivity than ASD diagnosis. The Posttraumatic Adjustment Scale (PAS; O'Donnell et al., 2008, 2012) was developed to predict later PTSD (PAS-P) and depression (PAS-D) in injured patients. It consists of 10 items, has been cross-validated and shows good predictive validity. There is another screener for injured patients, which is even more economical but has not been cross-validated (Richmond et al., 2011). With the Freiburg screening questionnaire (FSQ; Angenendt et al., 2012; Stieglitz et al., 2002; see also Schneider et al., 2011), which was developed for accident victims, the Cologne Risk Index (KRI; Bering et al., 2005; Dunker, 2009), which is available for various samples, and the screening questionnaire on risk and protective factors after traumatic events (S-RUST; Becker-Nehring, 2014), there are three German-language

instruments designed for risk assessment after traumatic events. However, the current state of research does not allow for a conclusive assessment of the extent to which these instruments are suitable for valid and economic prediction of trauma sequelae.

10.3 Care of Acutely Traumatized People

The early psychological interventions used have a wide range, but their effectiveness has not yet been sufficiently and fully empirically investigated (see Agorastos et al., 2011; Dyregrov & Regel, 2012; Kröger, 2013; Rosenberg, 2011; Whybrow et al., 2015). The central problem for an effectiveness assessment is the methodological limitations of most studies. Randomized controlled trials to assess the effectiveness of early interventions are urgently needed. However, not treating or treating traumatized persons as a control group is ethically problematic. Furthermore, due to their heterogeneity, the studies are difficult to compare because they differ in terms of trauma definition, type and severity of trauma (e.g., forest fire, earthquake, experience of violence), underlying symptomatology, form of intervention or conditions of implementation, time of measurement and success criteria (mostly PTSD diagnosis). Frequently, there is no information available on pre-existing burdens and risk factors, on interim events and on selection in samples depending on the time of assessment.

Nevertheless, a well-founded indication must be demanded for every early psychological intervention, keeping in mind the risk of negative effects of a measure. A serious event is always an indication of early psychological intervention. However, direct proportionality between the severity of the event and the need for intervention must not be assumed. Particular attention must be paid to current cognitive processing, for example, the severity of the perceived threat

and attribution of blame to oneself, as well as social support. As shown above, it is not possible to base the assessment solely on the presence of an ASD, since its variability over time is great and its predictive value is controversial. Many affected persons develop symptoms of a stress disorder in the first days and weeks, but these symptoms often recede within the first weeks. Medium- and long-term trauma sequelae may also occur without prior clinical symptoms (Bryant, 2011). The protective and risk factors described are of great importance.

vey a change of perspective to the affected person from being a helpless victim to an active copier. Immediate measures following traumatic events were already described as “**psychological first aid**” more than 50 years ago (Drayer et al., 1954) and have since been revised (Australian Psychological Society, 2011; Ruzek et al., 2007; Young, 2006). On the basis of interviews with emergency personnel and accident victims, Lasogga and Gasch (2006, p. 103 ff.) have presented rules for so-called psychological first aid for accident victims (see also Lasogga & Gasch, 2011).

10.3.1 Psychosocial Acute Care

The following describes interventions for the first days and weeks after traumatic events. The general measures after critical events are based on the principles of **crisis intervention** and preventive psychiatric interventions according to Caplan (1964) and are based on the following goals and principles:

Goals and Principles of Early Psychological Intervention and Prevention of the Consequences of Stress

- Providing protection and security, and satisfying current needs
- Informing in a controlled and acceptable way about the events and offering the opportunity for communication
- Informing in a controlled manner about possible consequences of stress and coping strategies
- Promoting self-efficacy
- Activating a social support network and providing access to professional care

These principles are part of the standard clinical-psychological and psychiatric care. However, it has not been proven that these measures can prevent the occurrence of trauma sequelae. These measures aim to con-

Basic Rules for Lay Helpers at the Accident Site (According to Lasogga & Gasch, 2006)

- Say that you are there and that something is happening!
- Shield the injured person from spectators!
- Seek careful physical contact!
- Talk and listen!

Rules for Professional Helpers (Including Rescue Personnel) at the Accident Site (According to Lasogga & Gasch, 2006, p. 103 ff.)

- On the way to the place of action, consider what you can expect and in what order you want to complete the individual actions
- Get an overview first
- Tell the victim who you are and that something is happening to help them
- Seek careful physical contact
- Provide information on the nature of the injuries and the measures taken
- Professional expertise is reassuring
- Strengthen the patient’s self-efficacy by involving them in simple tasks

- Maintain the conversation with the person concerned. Listen “actively” when the person is speaking
- Tell the patient if you must leave them and provide “psychological substitution”
- Pay attention to the relatives
- Shield injured persons from spectators
- Stressful experiences of the helper should be processed through relaxation techniques, individual and group consultation

These rules are derived from supportive psychotherapy. Essential characteristics are the emotional presence, the admission of feelings and the communication of security. The use of psychological first aid should be voluntary and adapted to the needs of the person concerned. In particular, those affected should not be urged to talk about emotional reactions immediately after the traumatic event (ACPMH, 2013; Forbes et al., 2011; Gray & Litz, 2005). In the event of staff shortages, priority should be given to those persons who cannot be released into a stable social support network. A survey of helpers after hurricanes (Allen et al., 2010) showed that helpers did not perceive psychological first aid (according to the Psychological First Aid Field Operations Guide by Brymer et al., 2006) as detrimental to those affected but as an appropriate intervention. However, the TENTS guideline (Bisson et al., 2010b) is against the early use of formal interventions for all affected people after disasters and also expresses skepticism about psychological first aid.

10.3.2 Practical and Social Support as well as Co-care for Significant Others

Perceived social and practical support is generally protective of health. Even after trau-

matic events, social support proved to be a significant protective factor in many studies (Ozer et al., 2003) or its absence was a risk factor (Brewin et al., 2000; Trickey et al., 2012). Negative and positive social reactions are discussed as distinct processes, whereby particularly the lack of support and negative interactions such as accusations of guilt influence later trauma sequelae (Becker-Nehring et al., 2012; Glynn et al., 2007). Furthermore, the perception or experience of social interactions as helpful or unhelpful (functional support) seems to be more significant than the size and complexity of the network (structural support), and peri- and post-traumatic support seems to be more significant than pre-traumatic support (Hepp et al., 2008; O’Donnell et al. 2010). The effects of the traumatic event on relatives must be clarified. With the consent of the affected persons, they should also receive comprehensive information on normal reactions after traumatic experiences as well as on the symptoms, course, and treatment of trauma sequelae (NICE, 2005).

10.3.3 Screening, Monitoring and Indication of Further Treatment

In the acute phase following traumatic events, the initial aim of screening is to identify protective and risk factors, such as peri-traumatic experience, post-traumatic cognition, or inadequate social support, rather than to identify symptoms of stress disorder. The persons affected should be informed about the purpose and procedure before the screening is carried out and not be urged to participate (Gray & Litz, 2005). The recording of symptoms directly after the event often leads to false positives and can be experienced by those affected as stressful or at least inappropriate. A significant, unremitting burden for several weeks after the traumatic event is a predictor of ongoing stress or chronification (Gray & Litz, 2005).

In the case of mild symptoms in the first 4 weeks after the traumatic event, “**watchful waiting**” is recommended, with follow-up contact to be arranged within a month (NICE, 2005). Monitoring, which not only serves to establish indications, can also improve symptoms (Foa et al., 2006). Screening or monitoring can reveal the need for further care. Thus, screening for protective and risk factors or symptoms is an essential component of screen-and-treat or screen-and-refer approaches (► Sect. 10.4). It is important to bear in mind the avoidance attitude with which many patients face psychotherapy. Therefore, it is important to follow up with patients who miss scheduled appointments (NICE, 2005). Since ASD, especially with good social integration, often shows a favorable outcome, it must always be remembered that too intensive professional care can also have negative effects. A Cochrane review shows that post-traumatic symptoms are not reduced by early psychological interventions with several sessions for all affected persons, that is, without limitation to persons at risk (Roberts et al., 2009). Psychological interventions with several sessions aimed at all potentially traumatized persons should not be provided as a matter of principle.

10.3.4 Psychoeducation

Psychoeducation cannot be clearly distinguished from other interventions, as it is part of almost all specific measures following traumatic events. Some guidelines recommend informing people about the usual reactions after traumatic events, including typical post-traumatic symptoms, the course of and treatment options for PTSD and other trauma sequelae, and possible support services and places to go. Written psychoeducational materials can be helpful in this context (Gray & Litz, 2005; NICE, 2005), which can be distributed to affected persons as self-help material. The Association of

Psychotherapists Niedersachsen (Germany), for example, makes materials available online in various languages (► <http://www.pknds.de/index.php?id=139&L=0>). However, some studies argue against the use of psychoeducational materials. Although injured patients considered self-help brochures to be useful, they did not influence PTSD, anxiety and depressive symptoms or quality of life (Ehlers et al., 2003; Resnick et al., 2007; Scholes et al., 2007) or even led to more depressive symptoms 6 months after the traumatic event compared to the control group (Turpin et al., 2005). The recommendation of psychoeducation is based less on empirically proven findings than on a series of assumptions (Wessely et al., 2008):

- Symptoms are less frightening after previous explanation.
- Presentation of the physiological or psychological reactions as normal conveys a feeling of security.
- Psychoeducation leads to early seeking of professional help.
- Dysfunctional schemata concerning the traumatic event, oneself, or the future could be modified by psychoeducation.

Wessely et al. (2008) suggest that the low or even negative effect of psychoeducation found in some studies is due to the sensitization of those affected and the development of self-fulfilling prophecies that disturb normal recovery. The ISTSS guidelines (Litz & Bryant, 2008) derive from these findings that there is sufficient evidence not to recommend information brochures as early intervention. Information material on PTSD, which also includes destigmatizing expectations of early intervention and information on support services, should be distributed in settings where contact with affected persons is possible. The question of differential effects depending on the content of the materials has not yet been empirically investigated to any great extent (Beatty et al., 2010; Kenardy et al., 2008). Similarly, the evaluation of web-based

interventions is still pending (Cox et al., 2010; Freyth et al., 2010; Marsac et al., 2013; Ruggiero et al., 2006).

10.3.5 Specific Early Interventions

The general and supportive measures described are supported by most authors and guidelines. However, they are not considered sufficient, especially when symptoms and risk factors are present (Bryant et al., 1998b; Hobfoll et al., 2007; Kilpatrick & Veronen, 1983; Raphael & Wilson, 2000). In the following, three specific early interventions are presented, and forms of debriefing and psychodynamic approaches are mentioned.

10.3.5.1 Early Intervention Based on Cognitive Behavioral Therapy

Cognitive behavioral therapy (CBT) has also been transferred to the field of prevention or early intervention (Foa et al., 1995; ► Chap. 13). Short-term interventions with trauma-focused CBT (TF-CBT) were initially developed for persons after experiences of violence or rape (Foa et al., 1995) and persons with ASD after traffic accidents (Bryant et al., 1998b, 2003). Treatment typically involves 5–10 sessions with the usual treatment components psychoeducation, exposure in sensu and mostly in vivo, cognitive restructuring and anxiety management (mostly relaxation and breathing techniques).

The effectiveness of TF-CBT as early intervention is well documented, especially for victims of accidents, but somewhat less so for victims of physical and sexual violence. For the patient groups mentioned, the TF-CBT must be considered the most effective early intervention at present. Foa et al. (2005) assume that it is also effective for other stressors and traumatic events. There are randomized controlled trials from various research groups (Bisson et al., 2004; Bryant et al., 1998b, 1999, 2003, 2005,

2008; Echeburúa et al., 1996; Ehlers et al., 2003; Foa et al., 2006; Johnson et al., 2011; Shalev et al., 2012; Sijbrandij et al., 2008) and three meta-analyses (Kliem & Kröger, 2013; Kornør et al., 2008; Roberts et al., 2010). The evaluated interventions vary both in terms of their range, approximately 3–15 h or only one session at Başoğlu et al. (2005), and in their emphasis on exposure (e.g., Bisson et al., 2004) vs. cognitive techniques (e.g., Ehlers et al., 2003) as well as in terms of the temporal distance from the traumatic event. A higher number of sessions was associated with an improvement in PTSD symptom ratings, which suggests a dose-effect (Kliem & Kröger, 2013).

There is meta-analytical evidence of efficacy in persons with ASD within the first month after a traumatic event (e.g. Bryant et al., 1999; Roberts et al., 2009, 2010), in persons with severe symptoms after one month (e.g. Bisson et al., 2004) and persons with symptoms 1–3 months after the event (e.g. Ehlers et al., 2003). Larger effects were also recorded with short follow-up periods – the few studies with longer follow-up periods suggest that the superiority of TF-CBT over other interventions decreases over time (Kornør et al., 2008; Roberts et al., 2010). Kliem and Kröger (2013) also find in their meta-analysis that traffic accident victims – in comparison to victims of other traumatic events – benefit particularly from early TF-CBT, measured by the PTSD diagnosis at the first time of catamnesis. For victims of other traumatic events, the authors recommend modified exposure techniques regarding fear, disgust, and shame. These interventions should also be accompanied by cognitive restructuring.

The combination of TF-CBT with hypnosis (in the form of hypnotherapeutic induction prior to exposure in sensu) led to faster improvement but did not have a better effect after 6 months than TF-CBT alone (Bryant et al., 2005). Additional anxiety management did not improve the intervention either (Bryant et al., 1999). Pilot

studies indicate that behavioral activation could be an effective treatment component (Acierno et al., 2012; Wagner et al., 2007). In one study, cognitive restructuring proved to be less effective than exposure in sensu or in vivo (Bryant et al., 2008), while another study found no significant difference (Shalev et al., 2012); differences in drop-out rates were not found. In one study, patients were randomly assigned on average approximately 11–12 h after the traumatic event. In the control group, an assessment was performed, in the intervention group, the patients received 3 sessions of modified prolonged exposure. The intervention included imaginative exposure of traumatic memories, processing of traumatic material in sensu and in vivo, and imaginative exposure as homework. The intervention group showed significantly lower post-traumatic stress and depressive reactions 1 month and 3 months later than patients in the control group (Rothbaum et al., 2012).

In the field of prevention, web-based interventions mostly based on cognitive-behavioral therapeutic principles are increasingly being tested (Amstadter et al., 2009; Sander et al., 2017). However, there is still insufficient data for early psychological interventions after traumatic events. The web-based trauma TIPS prevention program includes psychoeducation, stress management, cognitive restructuring and exposure; it uses interactive elements as well as visual and auditory materials (Sijbrandij et al., 2008). A pilot study found indications of the program's acceptance by the subjects (Mouthaan et al., 2011c). A randomized controlled trial (Mouthaan et al., 2011a, 2011b) also supports the feasibility of the intervention but finds very low use of the optional modules by the subjects and no group differences in PTSD symptoms, quality of life, and costs. In a randomized study of a TF-CBT-based program, there were no differences between the intervention and control group (Mouthaan et al., 2013).

A subgroup analysis showed a reduction in symptoms among participants with pronounced symptoms; two-thirds of the participants in the intervention group had not logged in at all or had logged in only once.

For a scientific evaluation of effectiveness, a standardization to 5–10 sessions is certainly favorable. In most cases, however, it only becomes apparent in the course of treatment whether this number of hours is sufficient. It can be assumed that the intervention must at least be based on the severity and course of the symptoms, the extent of co-morbidity and the environmental conditions. CBT is limited by the accessibility or willingness to treat the affected persons (Bisson et al., 2010a; Wagner et al., 2007). Due to high drop-out rates in existing studies, the ISTSS guidelines recommend avoiding active treatment components until compliance and motivation have been addressed (Litz & Bryant, 2008). In addition, further research is needed to make TF-CBT more acceptable for patients. Various authors conclude in meta-analyses that TF-CBT should only be recommended as an early intervention for persons at risk, that is, routine use for all persons is not empirically supported (Litz & Bryant, 2008; Roberts et al., 2010).

10.3.5.2 Eye Movement Desensitization and Reprocessing

Eye Movement Desensitization and Reprocessing (EMDR; ► Chap. 14) is recommended or used both for the treatment of PTSD and for early intervention after traumatic events (Hofmann, 2006; Shapiro, 2009). It is assumed that the memory of a recently experienced trauma differs from that of a past trauma in that it is more fragmented, disorganized, and less integrated into a coherent narrative. For this reason, various modifications are available for the use of EMDR as early intervention, for example, the Recent Traumatic Episode Protocol (Shapiro & Laub, 2008).

Phases of the Recent Traumatic Episode Protocol (R-TEP; Shapiro & Laub, 2008)

- Phase 1: Recording of previous history
- Phase 2: Stabilization and preparation for exposure
- Phase 3 and 4: Processing (assessment and re-processing of different episodes of the traumatic event or the subsequent period with external stimulation and change in the meaning of the event)
- Phase 5: Embedding positive cognition
- Phase 6: Body test (test whether there is residual stress on a physical level)
- Phase 7: Closure of the meeting
- Phase 8: Follow-up survey

10

There are no studies with an adequate design for medium and long-term effectiveness as early intervention. A small randomized controlled trial conducted after an earthquake in Mexico found a greater reduction in post-traumatic symptoms after one session of EMDR compared to a waiting control group – however, no data is available on the stability of this effect (Jarero et al., 2011). In a German study, EMDR was compared with multidimensional psychodynamic trauma therapy (MPTT) and a control condition (Grothe et al., 2003). Some of the reported findings suggest the effectiveness of MPTT and EMDR compared to the control group. Methodological deficiencies and a very broad time criterion for early intervention are limiting factors: The traumatic experiences of the subjects were up to 4 months ago. The time criterion is also problematic in an EMDR study following the terrorist attacks of September 11, 2001: the intervention took place 2–48 weeks after the event (Silver et al., 2005). However, a decrease in symptoms is also reported for a subgroup of 12 affected persons who were treated within

the first 10 weeks. Further case reports and uncontrolled studies report positive results on various EMDR protocols, after various traumatic events and in individual and group settings (e.g. Fernandez et al., 2004; Jarero & Artigas, 2010; Kutz et al., 2008; Russell, 2006; Wesson & Gould, 2009). The extent to which EMDR is suitable and indicated as early intervention cannot yet be determined based on current data.

10.3.5.3 Psychopharmacological Intervention

As a rule, drug treatment after traumatic events is not necessary (► Chap. 19). Reviews (Amos et al., 2014; Morgan et al., 2003; Pitman & Delahanty, 2005; Kearns et al., 2012), and guidelines (ACPMH, 2013; APA, 2004; NICE, 2005) do not document any evidence of prevention of trauma sequelae. Slightly positive findings are only found for hydrocortisone (Amos et al., 2014; Delahanty et al., 2013; Schelling et al., 2001, 2004, 2006; Weis et al., 2006; Zohar et al., 2011), but there is currently no recommendation for everyday clinical practice; the contraindications additionally restrict its use. The SSRI sertraline (USA) and paroxetine (D, USA) approved for the treatment of PTSD have not been systematically investigated either in the prevention of trauma sequelae or in the treatment of ASD. Other SSRIs such as escitalopram have not been shown to be effective in preventing PTSD compared to placebo (Shalev et al., 2012; Suliman et al., 2015).

Katzman et al. (2014) state that in controlled trials no substance has been shown to be effective in preventing post-traumatic secondary disorders and can be used reliably. Except in acute suicidal situations, psychotropic drugs should be used with great restraint after traumatic events. Psychopharmacological therapy is based on the severity of the acute post-traumatic symptoms: sedative antidepressants can be used for severe anxiety symptoms, hyperexcitability and sleep disorders. Benzodiazepines are the

drugs of choice for acute suicidal tendencies and increasing suicidal thoughts but should not be administered for longer than 1 week (Flatten et al., 2011; Gelpin et al., 1996).

Recent studies investigate the prevention of trauma sequelae by pharmacological influence on the consolidation of traumatic memories and initial fear reactions or fear conditioning. However, most studies are uncontrolled post-hoc analyses. First indications are available for pain medication: In injured civilians (Bryant et al., 2009), patients of a Dutch trauma centre (physical injury) (Mouthaan et al., 2015), as well as in soldiers (Holbrook et al., 2010) correlations between the administration or dose of opiates and PTSD symptoms were found. There is also initial evidence for the preventive effect of a bronchospasmolytic (salbutamol) administered in the first hours after a traffic accident (Kobayashi et al., 2011) and of omega-3 fatty acids given for 12 weeks after traffic accidents (Matsuoka et al., 2010). The findings on beta-blockers (propranolol) are ambiguous (McGhee et al., 2009; Pitman et al., 2002; Stein et al., 2007; Vaiva et al., 2003). The administration of an anticonvulsant also proved to be ineffective (Stein et al., 2007).

In psychopharmacological interventions, it is particularly important to consider the risks of early treatment. Psychopharmacological early interventions aim to prevent pathological reactions, not to eliminate normal and expected psychological reactions. Psychopharmaceuticals may also interfere with recovery, which in most cases occurs after traumatic events without professional support. For example, psychotropic drugs that lower arousal may interfere with the integration of trauma-related memories (Fletcher et al., 2010). Prior to psychopharmacological therapy, somatic disorders must be explored and known. A physical disorder does not necessarily exclude psychopharmacological medication, but interactions between disorder and medication must be considered (Pajonk et al., 2006).

10.3.5.4 Other Specific Interventions

■ Forms of Debriefing

Psychological debriefing (hereinafter referred to as debriefing) has its origins in the military sector. Soldiers in World Wars I and II received psychological counselling to maintain their readiness for battle (► Chap. 24). Participants are instructed promptly after the traumatic event to report on their personal experiences (Dyregrov, 1989; Mitchell & Everly, 2001; Raphael, 1986; Raphael & Wilson, 2000; Rose et al., 2006). Remembering and discussing the emotional and cognitive reactions to the traumatic event should lead to relief. The information transfer serves cognitive reorganization and avoidance of misinterpretations. The acute psychological stress of the affected persons should be diagnosed during debriefing. Debriefing is described in various forms; the concept originally developed for groups is also applied in individual settings. Acceptance and satisfaction are often high among participants. However, participant satisfaction does not necessarily correlate with the symptoms and measures of mental health. Individual elements of debriefing (e.g. psychoeducation, social support, referral) are standard measures (► Sects. 10.3.2, 10.3.3, and 10.3.4).

Debriefings cannot be recommended as an early intervention for primarily affected persons. So far, studies and meta-analyses have not been able to demonstrate a reduction in symptoms or risk of trauma sequelae by debriefing immediately after the traumatic event. A large proportion of the studies and meta-analyses do not show a clear positive or significant effect on the prevention of trauma sequelae (e.g. Antony, 2010; Paterson et al., 2015; Rose et al., 2006; Tuckey & Scott, 2014; Whitecross et al., 2013; Wu et al., 2012; Young, 2012; Zehnder et al., 2010). The discussion about the effectiveness of debriefings revolves around questions of the timing of the intervention, the target group, the standardized approach,

a onetime intervention and the effect measures used (Deahl et al., 2001; Devilly et al., 2006; Gist & Woodall, 2000; Litz et al., 2002). A distinction is discussed between beneficial (psychoeducation, group cohesion) and potentially harmful (flooding with traumatic impressions, the build-up of negative affects) aspects of debriefing (Brauchle et al., 2005).

Debriefings are used after operations in rescue and civil protection services, fire brigades, police, and other authorities with a security mandate, as well as the army (see Critical Incident Stress Debriefing [CISD; Mitchell, 1983, 1998] and Critical Incident Stress Management [CISM; Everly & Mitchell, 2000; Mitchell, 1998; Mitchell & Everly, 2001; German Hunt et al., 2013; Müller-Lange, 2005]). Depending on the type of organization, the focus is on the stress to which the emergency forces are subjected, but also on questions of operational tactics and the conclusion of the mission. Such debriefings are definitely useful and are positively evaluated by the emergency forces.

■ Psychodynamic Approaches

There are hardly any specific early interventions based on depth psychological therapy. Psychodynamic imaginative trauma therapy (PITT; Reddemann, 2004; ► Chap. 12) integrates elements from psychoanalysis and CBT as well as imaginative procedures and principles of mindfulness meditation. It was developed primarily for the treatment of complex PTSD, dissociative disorders, and personality disorders. It is also used clinically in people with ASD, but no controlled efficacy studies are available to date. Multidimensional Psychodynamic Trauma Therapy (MPTT; Fischer, 2000) is a manualized version of depth psychological and analytical psychotherapy, which has been adapted for treatment after traumatic events. As a focal therapy, it focuses on the individual experience of a traumatic situation and contains both psychoeducational

components and elements of practice; these are integrated into psychodynamic principles of relationship formation and therapy management. There are also no studies with an adequate design for the MPTT to investigate its effectiveness as an early intervention.

10.4 Psychosocial Emergency Care

The current state of research makes it clear that the question of appropriate and practicable early intervention must consider not only the differential indication and effectiveness of early intervention but also the type of emergency, the general conditions and the number of people affected. Early psychological intervention should always be embedded in an overall concept of organized psychological care and aftercare.

Victims of “everyday” traumatic events, such as traffic accidents, should receive early psychological intervention through crisis intervention service, if necessary. In contrast, a major emergency requires a complex and centrally controlled offer for different target groups. In Germany, the term “psychosocial emergency care” (PSEC) is often used for this, and standards have been formulated for the psychosocial care of emergency victims, relatives, and witnesses, as well as emergency services after serious accidents and disasters (BBK, 2012). In major emergencies and disasters involving large numbers of traumatized people, the structure and organization of psychological support services are crucial. Quality assurance and qualified training of professionals are particularly important in early intervention and, above all, in the psychosocial care of primary and secondary victims of major emergencies. The possibility of medium and long-term further care is of central importance in this context.

Various guidelines (Bisson et al., 2010b; Flatten et al., 2011; NICE, 2005) and a meta-analysis (Kliem & Kröger, 2013) rec-

ommend step-by-step programs (**screen-and-treat approaches**) for the prevention of PTSD and other trauma sequelae, especially in major emergencies. Within the framework of staged programs, TF-CBT is usually examined as an intervention, but in some cases, non-specific interventions or psychosocial acute care (► Sect. 10.3.1) have also been used. Initially, all affected persons are screened for protective and risk factors and/or symptoms. For persons at increased risk, detailed diagnostics and indications follow. For impaired persons, this is followed by the offer of early intervention (screen-and-treat) or referral to a therapist or therapeutic facility (screen-and-refer). Studies that examined different samples and combined different symptom screenings predominantly with TF-CBT-based interventions speak for the feasibility and effectiveness of staged programs after traumatic events (Berkowitz et al., 2011; Brewin et al., 2008, 2010; O'Donnell et al., 2012; Zatzick et al., 2004, 2011). Other studies with non-specific interventions by nurses and social workers (Kassam-Adams et al., 2011), psychotropic drugs (Nugent et al., 2010) or communication to the accident insurance administration including recommendations for further treatment management after serious occupational accidents found only minor or no effects (Angenendt et al., 2012).

In major emergencies, an on-site presence (“On Scene Support Service”) of psychologists and psychotraumatologically trained specialists is indicated (Bengel, 2001, 2004; Helmerichs, 2011; Jacobs, 1995; Lueger-Schuster et al., 2006). The professionals must be able to recognize ASD, excessive demands, states of exhaustion and other consequences of stress. A central and effective organization includes the shielding of those affected, the coordination of psychological helpers, the involvement of secondary victims such as relatives and witnesses, psychological support for the emergency services and participation in information and press work. Great importance is

attached to the field knowledge of the specialists, their integration into the management and organizational structure and their acceptance by those affected. When offering early intervention, the different skills of psychologists and psychotherapists trained in psychotraumatology, non-psychologists trained in psychology and helpers without further psychological training must be taken into account. In the context of psychological assistance and care in disasters and major emergencies, documentation has been produced which – although randomized studies on the effectiveness of early interventions were not usually possible – has broadened the basis of experience (e.g. Bengel, 2001 on the ICE accident in Eschede in 1998; Helmerichs et al., 2002 on the rampage in Erfurt in 2002).

An example of an established PSEC is the National Network of Psychological Emergency Aid (Nationales Netzwerk Psychologischer Nothilfe, NNPN) in Switzerland. The NNPN is a specialist group for psychological emergency aid that coordinates for federal organizations and partners of the Coordinated Medical Service (Koordinierter Sanitätsdienst, KSD). The measures are aimed at those directly affected by traumatic events as well as at emergency personnel; procedures and the training of the Care Team are regulated (NNPN, 2013; ► <https://www.notfallseelsorge.ch/nnpn>).

A differentiation between the groups affected – primary victims, bystanders, relatives, emergency services – is sensible and necessary. In major emergencies, community mental health measures such as education about the consequences of stress, for example, through local or national media, outreach counselling and the activation of social and community resources are necessary (► Sect. 10.3.5). Protection against secondary problems, such as excessive media coverage, can be just as important as the implementation of individual measures.

Special challenges arise in the care of refugees (► Chap. 25): Communication problems, cultural norms, divergent disease

concepts and courses, post-migration stressors. Various materials are available online (e.g. Psychosocial Center for Refugees Düsseldorf [► <http://www.wiki.psz-duesseldorf.de/NAWA>]; Association of Psychotherapists Niedersachsen [Psychosoziale Notfallversorgung, ► <https://www.pknds.de/index.php?id=139>]). The multilingual materials are aimed at different age groups and both directly at those affected and at helpers and the social environment. Multilingual information videos can be found here: ► <http://www.drk-gesundheitsfilme.de>.

An example of web-based preventive measures comes from the German Federal Office for Civil Protection and Disaster Relief and the flood disaster of 2004/2005 and shows a selection of possible FAQ (“frequently asked questions”). NOAH (German: Nachbetreuungsmassnahmen, Opfer- und Angehörigen-Hilfe) is the central office for the coordination of aftercare measures, victim and family support for Germans affected by serious accidents or terrorist attacks abroad.

► Example: FAQ and Adequate Answers

- “How can I tell if I’m traumatized?”
- “What are the typical problems after such drastic experiences?”

Answers:

- The characteristics and symptoms of a stress disorder can be very diverse and different. Not always all of the following symptoms occur: sleep disturbances, nightmares, lack of concentration, physical complaints, difficulty feeling as before or perceiving things in the environment correctly, such as being numb.
- The event can be re-experienced spontaneously in the imagination. One feels as if one is still in a threatening situation.
- The enjoyment of life may be reduced, contact with other people, friends or with the partner may be impaired. Some people withdraw, close themselves off, seem apathetic, cannot talk about what they have experienced. ◀

Van der Meer et al. (2017) have conducted one of the first validity studies of a web-based screening app. The web-based app “Smart Assessment on your Mobile” (SAM) was developed as an easily accessible screening for trauma-related symptoms. In one study, 89 police officers were screened in an interview on average 1 month after the traumatic event (Clinician-Administered PTSD Scale for DSM-5 [CAPS-5] and Structured Clinical Interview for DSM-IV [SCID-I/P]), before they used the screening of the SAM app (PTSD Checklist for Diagnostic and Statistical Manual of Mental Disorders DSM-5 [PCL-5] and the Depression Anxiety and Stress Scale [DASS-21]). The results show a high agreement between SAM and the diagnostic interview. SAM could be the first step of a stepped-care model to screen trauma survivors and identify those who need further help. A high response rate and completion rate indicate easy handling and high acceptance. A free PSEC app has been developed for emergency services (► <http://www.krisenintervention-psnv.de/psnv-app/>). This app provides emergency services with checklists and working aids (Nikendei, 2017). Furthermore, the crisis intervention homepage contains a list of regional PSEC services and contact persons in Germany, Switzerland, and Austria (► <http://www.krisenintervention-psnv.de/psnv-dienste/>).

10.5 Outlook

National and international guidelines and recommendations, as well as meta-analyses and reviews of early interventions, are available. Many of the recommendations are consensus among experts but are not (yet) sufficiently empirically grounded. The complex influence of pre-, peri- and post-traumatic protective and risk factors on the development of trauma sequelae makes the indication of psychological early intervention difficult. Also, the type of intervention and the timing cannot be clearly justified by

a model and the study situation at present. A onetime intervention will generally have no positive effect on severely traumatized persons with multiple risk factors.

The TF-CBT is the best investigated and most effective form of early intervention to date. Since it is effective primarily after traffic accidents, while the findings are less convincing in victims of violence, it is necessary to investigate whether different weightings of the modules are necessary after different traumatic events. It is also open whether the CBT intervention must be modified if the focus is not on ASD symptoms but other acute symptoms and stress factors. Furthermore, early interventions should increasingly include elements to strengthen protective factors such as social support and self-efficacy and to reduce risk factors.

However, psychological intervention alone will usually not suffice; early interventions must be integrated into a concept of trauma management. Complex and care-related programs such as screen-and-treat approaches must be further developed and evaluated. General early interventions (screening, monitoring) must be adapted to the respective context, and specific diagnostic instruments for the acute period must be developed and validated. A step-by-step program must be tailored to the needs of the target groups and be backed up by initial and follow-up diagnostics. Screening and early identification of highly stressed persons are of great importance. The problem of accessibility and participation rates also argues in favor of intensifying research into web-based and online programs.

The high degree of complexity and the multitude of influencing factors, but also the fact that some of the measures are not very specific, make systematic intervention research difficult. As in other areas of effectiveness research, an improvement in the data situation can only be achieved through randomized study designs with standardized interventions and assured quality of treatment. The process of change in the context

of and as a result of early interventions, as well as the optimal timing of intervention, must be made the subject of studies. Reports on experiences with psychosocial care after emergencies and damage situations are helpful supplements that can provide information on the organization of the PSEC in major emergencies in particular, but also in everyday crisis intervention.

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Systematics and Effectiveness of Therapy Methods

A. Maercker

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Recently, there is a wide range of psychotherapy forms for trauma sequelae and a broad knowledge base of effective therapeutic approaches. In the following, systematic aspects of the most important psychotherapeutic interventions are presented. A summary of empirical effectiveness research follows. The state of knowledge on pharmacological therapy is described in ► Chap. 19. A detailed description of psychotherapeutic procedures is given in the chapters on individual therapy methods and on specific trauma groups. This chapter is intended to give practitioners an orientation as to which forms of therapy are suitable for which patients.

11.1 Clinical Aspects

11.1.1 Single (Type I) vs. Multiple (Type II) Traumas

The nature of the cause of a single or type I trauma (e.g. accident, disaster, single sexual assault) or a multiple or type II trauma (e.g. child sexual abuse, effects of war) is of great importance for the clinical presentation of the symptoms and the complexity and severity of the symptoms. To date, however, there are no reliable statements as to whether the therapy design should differ for single or multiple traumas, as there are no therapy studies comparing these patient groups.

To date, most of the available therapy studies have been conducted in patients with multiple traumas (female victims of sexual violence, soldiers after war missions or veterans). In contrast, some studies have been conducted after single traumas (traffic accidents, accidents at work), whereby in these studies the not few patients with previous traumatic experiences had to be excluded.

11.1.2 Classical vs. Complex PTSD

The difference between single vs. multiple trauma is commonly considered the main reason for either “classic” PTSD (in the case of single trauma) or complex PTSD (► Chaps. 2 and 3). However, with the development of the ICD-11, the distinction is also made in the official classification directories. Therapeutic research (Karatzias et al., 2019) is only slowly beginning to provide results for this distinction. Increasingly, however, the distinction between classical and complex PTSD is being used in practice for the choice of therapeutic approach (see latest German treatment guidelines: Schäfer et al., 2019).

According to this point of view, the age at the time of traumatisation(s) and the simultaneous occurrence of comorbid disorders such as addiction, affective, anxiety, personality disorders can also be taken into account for which the choice of therapy method is important (see below).

11.1.3 Trauma Type

To date, it is still difficult to answer whether the type of trauma has a significant influence on the basic design of the form of therapy and its effectiveness. PTSD symptoms are essentially the same across all types of therapy, and comparative meta-analyses do not find significant differences in effectiveness according to the type of trauma (Phillips, 2015). Repeatedly, however, studies have shown that patients with PTSD have the highest symptom burden after experiences of sexual violence and ex-soldiers (veterans) with PTSD. The effectiveness of therapy in veterans was found to be lower in most therapy studies than in the other trauma groups,

with most therapies being performed on US soldiers (e.g. Schwartze et al., 2017). Few studies from other countries (Israel, Europe) now show that the therapy of ex-soldiers is not worse than that of civilians.

In more detailed analyses, however, the type of trauma determines the symptom profile. PTSD after experiences of sexual violence is often accompanied by higher symptoms of conscious avoidance and unconscious forms of avoidance (e.g. amnesia, numbing), whereas PTSD after physical assault is often accompanied by feelings of guilt (blaming and self-blaming) (Guina et al., 2018).

In general, it is therefore important to distinguish between man-made (interpersonal, intentional) and accidental (accidental) trauma (► Sect. 2.1) from a clinical point of view. Patients who have experienced intentional traumatisation by another person usually show a higher degree of post-traumatic changes towards themselves and others than people who have not simultaneously experienced the destructiveness of other people during their traumatisation.

11.1.4 Age

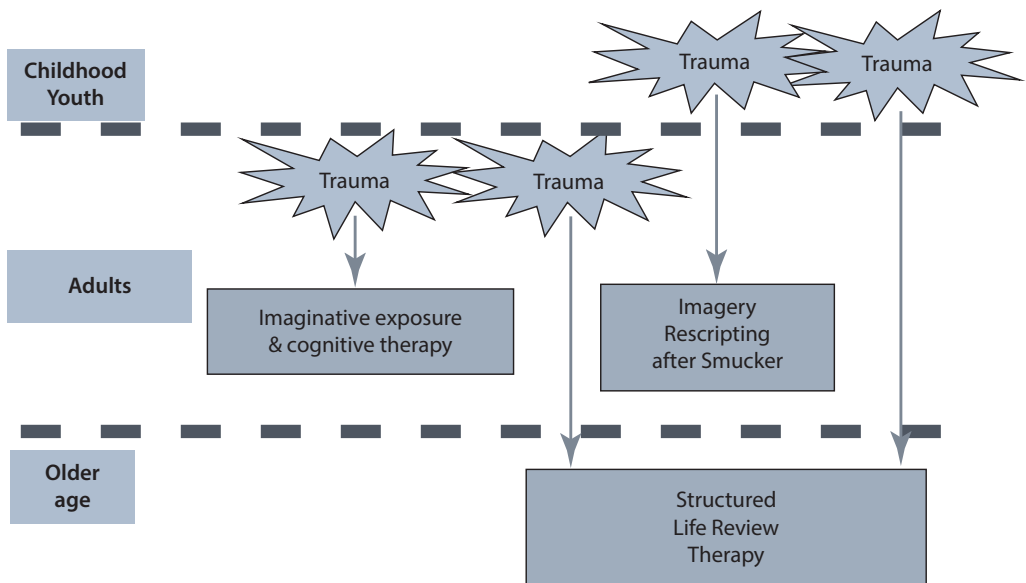
Age-related issues are important in two ways:

- Does the age at which the traumatisation took place (traumatisation age) play a role in therapy?
- At what age is the therapy carried out?

Neither of these questions has yet been systematically investigated. As a summary of unsystematic experiences to date, Maercker (2006) developed an orienting scheme for the trauma outpatient clinic of the University of Zurich, according to which patients are assigned to specific forms of therapy (■ Fig. 11.1).

11.1.5 Co-morbidity

In patients with PTSD, the presence of comorbidity is the rule rather than the exception. Epidemiological studies show that up to 80% of these patients (lifetime diagnosis) have other depressive, anxiety, somatoform



■ Fig. 11.1 Orientation scheme for taking the age of trauma and treatment into account when selecting specific therapy methods

or dependency disorders (► Chap. 2). This fact is of the utmost importance for everyday clinical practice, because the therapy strategies to be chosen for an individual patient should always take the overall picture into account and make it the starting point for concrete therapy planning.

So far, only a few systematic studies have been conducted to investigate combination therapies for comorbidity. This is particularly true for the combination of psycho- and pharmacotherapy (► Chap. 19). More research will have to be done in the near future on the treatment of comorbid disorders. This must take into account both simultaneous and chronologically consecutive (sequential) treatment strategies.

The most advanced studies to date are those on the treatment of comorbid addiction disorders. Here, several studies indicate that the integrated simultaneous therapy of PTSD and addiction disorder shows the best results (Roberts et al., 2015).

11.2 Systematic Aspects

11.2.1 Time Sequence of Therapy Elements

In the wake of the landmark publication by Herman (1993), the following classification of therapy phases in PTSD became popular:

- Security/trust: especially stabilisation and affect regulation,
- Trauma synthesis/trauma exposure,
- Integration and reorientation.

This phase distinction was used – largely independently of treatment schools – especially for inpatient therapy facilities. However, this phase classification is not explicitly used in practice or research. It is therefore not surprising that overviews of the empirical studies available worldwide show no necessity for this phase sequence (Neuner, 2008). However, this assessment

changes when the new diagnosis of complex PTSD is used as a basis for therapy planning. Internationally, a phase-oriented approach has become established for CPTSD in the corresponding guidelines (Cloitre et al., 2015), although the study situation is still insufficient for this (Maercker et al., 2019).

Therefore, it remains doubtful whether the three phases mentioned remain relevant for PTSD and CPTSD and different forms of settlement (inpatient vs. outpatient). It is also questionable whether the phases must necessarily take place one after the other, or whether parallel therapeutic work on the three topics of safety/confidence, trauma synthesis/trauma exposition and integration/reorientation is equally effective.

A pragmatic temporal division of a therapy will acknowledge that at least the first therapy hours (including case history, assessment, resource diagnostics, definition of therapy goals) as well as the last therapy hours (including summaries, outlooks, relapse prophylaxis measures) differ from the intermediate therapy hours (therapeutic work).

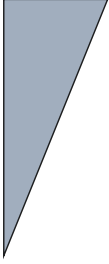
In the following chapters on treatment, no explicit phase classification is given for PTSD (► Chaps. 13 and 14). For complex PTSD, a phased approach is presented in each case (► Chaps. 16 and 17).

11.2.2 Trauma Focused vs. Broad Therapeutic Approach

Trauma-focused procedures (or trauma-adapted procedures) in a narrower sense are those in which the reduction of PTSD symptoms is the focus of the therapeutic approach. These include EMDR (► Chap. 14) as well as prolonged exposure and cognitive therapies (► Chap. 13).

The trauma focus of procedures can in turn be divided into:

- **Exposure-focused therapies:** Here the focus is on reliving and retelling the traumatic event (■ Fig. 11.2).

Affective intensity	Variations of trauma exposure
<p>high</p>  <p>lower</p>	<ul style="list-style-type: none"> – Prolonged exposure according to Foa (▶ Chap. 13) – in vivo exposure (rarely indicated; ▶ Chap. 13, 27) – “Imagery Rescripting” after traumatization in childhood (▶ Chap. 13) – Hot-spot-narration in the context of cognitive therapy (▶ Chap. 13) – Eye Movement Desensitization Reprocessing (▶ Chap. 14) – Imaginative techniques: screen or monitor technique (▶ Chap. - 15) – Narrative exposure or online writing assignments (▶ Chap. 13, 16)

■ Fig. 11.2 Different forms of exposure according to their affective intensity

- **Cognition-focused therapies:** Here the focus is on changing attitudes towards oneself, others and the environment.
- **Low-threshold interventions:** These are carried out by means of very different settings (e.g. psychoeducation or peer groups) and media (e.g. online, app or writing programs; ▶ Chap. 15).

A **broad therapeutic approach**, on the other hand, aims to treat patients not only with regard to PTSD symptoms but also with regard to other therapeutic goals, including orientation towards associated symptom areas such as depression, anger, shame, feelings of guilt and borderline symptoms. However, the focus is also on strengthening individual resources, up to and including meaning and spiritual reorientation (Wagner et al., 2007; Zöllner et al., 2008).

The broader approaches can usually also be categorised:

- psychodynamic therapies (▶ Chap. 12),
- inpatient treatment concepts (Wirtz & Frommberger, 2013),
- complementary therapeutic approaches (art, movement and creative therapies),
- the so-called present-oriented therapy (Shea et al., 2003).

The results of various effectiveness meta-analyses are presented below in ▶ Sect. 11.3.

11.2.3 Language and Cultural Adaptation for Patients from Other Countries and Cultures

Therapies are increasingly carried out with patients from other countries and cultures. For some time now, an informative literature on PTSD therapy has been available with the help of translators, which particularly addresses their specific selection for this activity as well as the pre- and post-treatment briefings (▶ Chap. 25; Abdallah-Steinkopf, 2017). In addition, there is a growing literature on therapies that are carried out in the respective mother tongue of patients with therapists with their own migration background (e.g. Kizilhan, 2010).

The new guiding concepts of “culturally sensitive” or “cultural humiliate” therapeutic attitudes express that, beyond the language adaptation of therapeutic procedures, more is at stake and more comprehensive self-reflection on the therapeutic procedure is required (Maercker et al., 2019).

The “Bernal Scheme” (Bernal et al., 2009) contains several dimensions of cultural adaptation of therapeutic procedures that have proven to be trendsetting internationally:

- Language,
- Personal relationship,
- Local disease/disorder concepts,
- Contents,
- Therapy goals,
- Metaphors: use and reflection,
- Methods/Setting,
- Contexts/social and political conditions.

(more detailed explanations e.g. in Heim et al., 2019)

The application of the Bernal Scheme in a study on the comparative effectiveness of e-health interventions showed that the degree of effectiveness achieved by therapeutic procedures was directly related to the extent of the “Bernal factors” considered. The few therapy projects in which 5 or even 7 of the factors were taken into account were most effective when applied to people from other cultures (Harper Shehadeh et al., 2016).

A comprehensive culturally adapted therapy approach for patients with trauma sequelae is presented in ► Chap. 18.

11.2.4 Therapy Schools and Trauma Therapies

The reality of the application of various psychotherapies is still dictated by the theoretical therapeutic orientation of individual therapists or entire treatment institutions. The use of appropriate forms of therapy with regard to the clinical problems of patients has not yet been based on **flexible** empirical knowledge (“best practice”) or orientation towards evidence-based guidelines (whereby the latter are not unaffected by scientific fashions).

This theoretical orientation remains unsatisfactory for the progress of medical

science, also in the field of the therapy of trauma sequelae, as it inhibits new developments, their practical applications and their financing within the health care systems.

Nevertheless, psychotraumatology, more than other areas of psychotherapy, is seen as integrative, since therapists or treatment facilities occasionally combine different forms of therapy. For example, imaginative stabilisation techniques are combined with cognitive therapy and possibly trauma exposure (Müller et al., 2007).

Various factors contributed to this **integrative power of psychotraumatology**:

- clinical severity and complexity of the disorder presentations, which required new solutions
- clinical effectiveness of imaginative therapeutic techniques,
- combinability of short-term techniques (e.g. EMDR) with long-term techniques (e.g. psychodynamic or cognitive behavioural therapy).

Therapeutic Orientations with Specific Therapeutic Procedures for PTSD Treatment

- **Psychodynamics/Psychoanalysis**: includes the psychodynamic trauma therapy according to Horowitz, imaginative psychodynamic therapy and Brief Eclectic Therapy (► Chap. 12)
- **Cognitive behavioural therapy**: includes prolonged exposure according to Foa, cognitive therapy according to Ehlers and Clark, cognitive processing therapy according to Resick, narrative exposure therapy according to Schauer, Elbert and Neuner (► Chap. 13)
- **Hypnotherapy**: This played a particularly important role in the development of trauma therapy (Brom et al., 1989)

- **Humanistic-existential therapies:** In almost all orientations, therapeutic approaches have been developed, but hardly systematically investigated, for example, in schools of Gestalt therapy (Rosner & Henkel, 2010) and in existential/logotherapy (Gebler & Maercker, 2007)
- **Combined methods:** Genuinely for the therapy of trauma sequelae, the EMDR was developed (“Eye movement desensitization and reprocessing”) according to Shapiro (► Chap. 14)
- **Body based therapies:** Complementary body therapy is generally recognised as an addition to trauma-focused psychotherapy (van Keuk, 2006) and culturally adapted therapy (► Chap. 18); in contrast, purely body-related trauma therapy approaches (e.g. “Somatic Experiencing“; Levine, 2016) are still controversial (Metcalf et al., 2016)

The various low-threshold procedures of trauma follow-up therapy (► Chap. 15) originate from different treatment approaches and their existence and application proves that new developments across schools are well possible.

11.3 Evidence of Effectiveness

The therapy of post-traumatic stress disorders can be regarded as a pioneer in empirical testing of the effectiveness of psychotherapy, since a larger number of controlled therapy studies have been available for years in this area than for other disorders. The results of the individual studies have been summarized in several meta-analyses and reviews (including Cusack et al., 2016; Ehring et al., 2014; Kuester et al., 2016; Lee et al., 2016; Schäfer et al., 2019; Schwartze et al., 2017; Tol et al., 2014).

The basis for such data summaries are studies with high methodological standards. Usually these are the 7 following standards.

Seven Standards for Data Aggregation

- Clearly defined target symptoms
- Reliable and valid measurement methods
- Use of blind raters (i.e., diagnostic assessors who do not know which therapy condition the patients were assigned to)
- Training of the diagnostic assessors
- Manualized, replicable and specific therapy protocols (therapy programs)
- Random assignment to the therapy conditions
- Adherence to the therapy protocol (“adherence”)

■ Table 11.1 is based on several of the more recent meta-analyses for “classical” PTSD; for complex PTSD, as described above, the current state of research is not yet sufficient for reliable statements. If types of procedures are not listed in the table, this means that they cannot be assessed due to a lack of control group studies or studies that are too less randomised (e.g. applies to some psychodynamic therapies).

The meta-analysis shows that a number of psychotherapeutic procedures can claim proven effectiveness. In research, effect strengths are usually classified as: >0.20 low; >0.50 medium; >0.80 high; >1.20 very high. The evidence level was assessed according to the US health authority standards on the basis of various parameters on the extent and quality of the available studies. It is important to note that a direct comparison of effect sizes between the methods is not possible due to the information in ■ Table 11.1 for methodological reasons. Cusack et al. (2016) provides further information on this.

■ **Table 11.1** Effectiveness of PTSD therapies in adulthood

	Effect strengths		Evidence-grade assessment ^a
	[d or g]		
	At the end of therapy (see psychological placebo condition)	6-month catamnesis (compare psychological placebo condition)	
Exposure therapy	1.01–1.27	0.80	High
Cognitive processing therapy	1.08–1.40	0.57	Medium high
Cognitive therapies	1.33		Medium high
EMDR	0.87	1.12 (not significant)	Low
Narrative exposure therapy (NET)	1.25		Medium high
Brief eclectic therapy (BEP)	0.35 ^b		Low
Group therapies (mostly cognitive-behavioural) ^c	0.70		(Not available)
Internet therapy ^d	0.66–0.83		(Not available)

Adapt. according to Cusack et al., 2016; Lee et al., 2016; supplemented by Schwartz et al., 2017; Kuester et al., 2016

^a From Cusack et al., 2016, related to the reduction of PTSD symptoms (estimated according to AHRQ standards: Owens et al., 2010)

^b In Cusack et al., 2016, verbally indicated as “small to medium effect size”, therefore mean value of 0.20 and 0.50

^c From Schwartz et al., 2017

^d From Kuester et al., 2016

The application of a specific therapeutic method in a patient should depend on the aspects mentioned earlier in this chapter (type of trauma, classic or complex PTSD, age, co-morbidities, language/cultural sensitivity of use).

11.4 Outlook: Non-therapeutic Interventions

Traumatic experiences can be the cause not only of mental disorders, but additionally of changes in the biographies of those affected. The various forms of treatment (including psychopharmacological ones) do

attempt to reduce the individual suffering. However, those affected will continue to live with the memories of the trauma and often with attitudes and values that will change over time. This results in further aspects that are important for dealing with traumatised people.

■ “Bear Witness”

Many trauma victims have the desire to share their experiences during the trauma with others and thus contribute to ensuring that such disasters or crimes as they have experienced never happen again. This desire to give testimony is common among victims of interpersonal violence and espe-

cially victims of state violence, repression and torture. Chilean therapists had already developed the testimony method during the military dictatorship in the 1980s, in which the therapeutic reports of the trauma were simultaneously used, for example, as testimonies for NGOs and for later prosecutions (published under a pseudonym: Cienfuegos & Monelli, 1983). The narrative exposition of trauma (Schauer et al., 2011) was developed from this idea and also produces a document that can be used for criminal prosecution if necessary.

■ “Finding a Mission”

Some trauma victims are active in a charitable or social association. This is often motivated by the desire to prevent the possible traumatisation of other people.

Here are three examples.

- Victims of criminal acts work with the victim support organisation “White Ring” (Germany) as advisors for new crime victims.
- In the USA, mothers of children who have died in traffic accidents have founded the Mothers Against Drunken Drivers Association, which publishes educational material and tries to influence legislation.
- Formerly politically persecuted persons work with “Amnesty International” on behalf of political prisoners in other countries.

■ Establishment of Memorials

Beyond individual treatments, the involvement of therapists in the establishment of memorials or places of remembrance for the victims of trauma goes beyond individual therapy. Here it is important,

- to involve the survivors or the grieving surviving family members in the planning of the place, and
- to mention the victims individually by name to satisfy the sense of justice in commemoration.

Impressive examples of this commemorative culture are the Yad Vashem Memorial in Jerusalem with its lists of names, the “Vietnam War Memorial” in Washington and the monument at the site of the plane crash into a high-rise building in Bijlmermeer near Amsterdam. These memorials are frequently visited by survivors and grieving family members.

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Psychodynamic Treatment of People with Trauma Sequelae

L. Wittmann and M. J. Horowitz

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Already in the development of psychoanalysis the treatment of patients with traumatic experiences played a central role. In the approach to the therapy of symptoms summarized under the term “traumatic hysteria“, similarities with current exposure-based approaches cannot be overlooked (Gersons et al., 2011; Nijdam et al., 2012).

» For we found, to our great surprise at first, that each individual hysterical symptom immediately and permanently disappeared when we had succeeded in bringing clearly to light the memory of the event by which it was provoked and in arousing its accompanying affect, and when the patient had described that event in the greatest possible detail and had put the affect into words. (Freud & Breuer, 1987, pp. 9–10)

When Abraham explains at the Fifth International Psychoanalytical Congress in Budapest in 1918 that part of the effect of war traumas can be explained by the loss of the illusionary belief in one’s own inviolability, then it is easy to recognize a forerunner of constructs such as “shattered assumptions” (Janoff-Bulman, 1992) or “posttraumatic cognitions” (Foa et al., 1999).

As in other schools of therapy, theory and practice in psychoanalysis have constantly evolved. This chapter presents three selected current approaches to psychodynamic work with trauma victims. First, however, some basic aspects of a psychodynamic understanding of trauma will be emphasized in order to facilitate the illustration of the specific treatment approaches.

12.1 Aspects of a Psychodynamic Understanding of Trauma

Psychodynamic trauma theories emphasize both the subjective and the processual character of traumatic experiences (Nijdam & Wittmann, 2015). The experiences that pre-

cede and follow a traumatic event may be as important for understanding an impeded processing as the event itself (Becker, 1995, 2007; Keilson, 2005). Because of the central importance attached to the individual personality of the person affected, psychodynamic therapy manuals generally refrain from working towards an overly uniform therapeutic approach. Rather, they generally guide the flexible use of therapeutic principles and techniques. In accordance with psychoanalysis’ view of the human being, according to which the personality develops in social interactions (e.g. Clarkin et al., 2006), past and present interpersonal experiences and the resulting relationship patterns play an important role in understanding and dealing with traumatic experiences.

12.2 Integrative Psychodynamic-Cognitive Psychotherapy

With the description and understanding of stress response syndromes, this approach (Horowitz (1976, 2011) made decisive contributions to the inclusion of posttraumatic stress disorder into DSM-III (APA, 1980). It describes five phases (here in the formulation by Fischer & Riedesser, 2009, pp. 97–98), which trauma victims prototypically – but by no means always linearly – pass through:

- Peritraumatic exposure,
- Denial,
- Intrusions of thoughts and memory images,
- Working through,
- Relative completion.

For each of these phases, normal reactions can be described, but also pathological extremes or chronications can be observed. In particular, the focus is on the oscillating movement between intrusive symptoms on the one hand and defensive reactions such as avoidance, denial or emotional numbing

on the other. A detailed overview of concrete characteristics of these two opposing processes on different levels of experience and behavior can be found in Horowitz (1976, Horowitz, 2011).

The psychodynamic-cognitive theory replaces Freud's original concept of an energetic overload of the mental apparatus as a result of trauma (Freud, 1920) with a concept of information overload (Horowitz 1976, Horowitz, 2011; Horowitz & Becker, 1972; Lazarus, 1966). Information refers to both cognitions of internal and external causation as well as emotions.

Under the Magnifying Glass: Concept of Information Overload

In information overload, people remain in a state of constant stress or are susceptible to recurring stress states as long as the information has not been processed. The information is both repelled and compulsively repeated until the processing is largely complete. The emotions, which are of great importance in the context of stress response syndromes, are seen as responses to cognitive conflicts and as motives for defensive, control and coping behaviors.

The treatment approach of Horowitz (2003), for which the significance of individual case formulations is emphasized, is designed in phases. However, it is emphasized that these phases typically overlap and are arranged in a sequence rather for didactic purposes. For example, treatment planning is continuously reviewed and updated based on new insights. ■ Table 12.1 gives an overview of the individual treatment steps. For a detailed description of patient- and therapist-related activities and aspects of the therapeutic relationship for each phase, see Horowitz (2003).

As described, the consideration of pre-existing personality traits is a basic principle of many psychodynamic trauma-focused approaches. The conceptualization of Horowitz (1976, Horowitz, 2011) offers concrete starting points for adapting the treatment process to observable personality accentuations.

Under the Magnifying Glass: Consideration of Personality

Psychodynamic-cognitive psychotherapy does not pursue comprehensive personality changes. However, people with different personality structures show different types of resistance and relationship formation during these processes. The general techniques are therefore modified and applied in different technical nuances, depending on the personality dispositions of the patient.

Of course, certain personality accentuations (e.g. narcissistic beliefs or histrionic or obsessive-compulsive attitudes) are to some extent part of each personality type, and some of the treatment techniques described may at any time be relevant in other therapies. The description of the adaptation of the therapeutic approach to prototypical personality types should therefore not imply a rigid categorization. In the following, the therapeutic approach will be illustrated by means of a case study.

12.2.1 Prototypical Case Study

Harry is a 40-year-old dispatcher. He worked his way up in a small supply company. One night, due to a lack of personnel, he drove an old truck himself, which contained a load of steel pipes. This unsuitable vehicle had an armored protection between the

■ **Table 12.1** Phases of treatment of stress response syndromes

Phase	Description
Evaluation	The treatment is planned on the basis of a comprehensive anamnesis. For this purpose, a configuration analysis is applied (Horowitz, 1997), which works out in 5 steps what has happened, what the causes are and what needs to be changed to improve the patient's condition. Current symptoms and problems as well as their fluctuation in phases dominated by defense or intrusions are described. In addition, unresolved issues, maladaptive belief systems and relevant defense processes are focused on and assumptions about oneself and others that shape the sense of identity and relationship patterns are addressed. Finally, a treatment plan is developed which, on the one hand, relates the identified aspects, on the other hand, leads to a focusing and thus temporal limitation of the treatment.
Support	Biological support: Consideration of the basic needs of security, care, and sleep. Addressing the risks of substance use in terms of self-medication and examining the need for psychopharmacotherapeutic interventions.
	Social support: Needs-based support for patients in establishing time structure and communication possibilities. With regard to coping efforts, activity development, and work situation, attention should be paid to phase-specific appropriate dosage.
	Psychological support: Assistance in further reporting the trauma story; psychoeducation and help in structuring tasks; development of the therapeutic relationship considering countertransference reactions.
Exploration of meanings	On the one hand, this treatment phase considers the effects of the traumatic events on the patients' self-perception and world view as well as the assessment of their coping possibilities. On the other hand, meanings resulting from the interaction of the traumatic events with pre-existing unresolved issues of the patients are considered. In these explorations, the patients' emotional tolerance and expressions are to be encouraged.
Improvement of coping	Taking into account their individual defense strategies, patients are supported in reducing avoidance behavior. A wide range of techniques can be used here, ranging from interpretations to encouragement and practice of a more confrontational attitude and support for the ability to make rational decisions.
Working through	Based on the course of treatment to date, the therapist can now decide which topics should be further focused. The temporal focus can be placed on the patient's life story, his current life situation or the therapy situation. With the treatment goal of achieving an optimal level of function, this approach does not go any deeper than necessary. In terms of content, this phase is particularly suitable for topics in which aspects of the traumatic experience are mixed with those of the personality.
End of treatment	In this phase, which is conceptualized together with the patient from the beginning, the therapeutic process can be evaluated and issues concerning the patient's future can be discussed. At the same time, the experience of parting can be used, for example, to work through experiences of loss within the therapeutic transference relationship.
Evaluation of results	Horowitz (2003) proposes a number of instruments for the evaluation of the course of treatment, including the Impact of Event Scale (Maercker & Schützwohl, 1998; Weiss & Marmar, 1996).

cargo area and the driver's cab, but this did not completely protect the passenger area. Late at night Harry drove past an attractive woman hitchhiking on a deserted section of the motorway. In a spontaneous decision to disregard the company's ban on taking any passengers with him, he let her get in, as she seemed to be an unsuspecting hippy and could possibly be raped.

A short time later, a car crossed the center line and came onto his lane, threatening a head-on collision. He steered the truck out over the hard shoulder and began to roll on a pile of gravel. The pipes slipped, penetrated the driver's cab on the passenger side and impaled the woman. Harry crashed into the steering wheel and the windscreen and was briefly unconscious. When he regained consciousness, he perceived the gruesome sight of his dead companion.

Harry was taken in an ambulance to the emergency room of a hospital. No fractures were found, his cuts were sutured, and he was left on the ward for overnight observation. The first day he was frightened and dazed, with only a fragmentary account of what happened.

He was released the next day. Contrary to his wife's wishes and the doctor's recommendation to rest, he returned to work. From then on he pursued his usual work for several days as if nothing had happened. A meeting with his superiors took place immediately. As a result, he received a reprimand for violating the regulation on taking passengers with him. At the same time, however, he was assured that the accident was not his fault and that he would therefore not be held responsible.

During this phase of numbing and defense (denial) Harry thought about the accident from time to time, but was surprised that the incident seemed to have so little emotional impact on him. He was

responsible and correct in his work, but his wife reported that he tossed and grinded his teeth when he slept in bed, and seemed more tense and irritable than usual.

Four weeks after the accident he had a nightmare (phase of intrusion of thoughts and memory images) in which mutilated bodies appeared. He woke up with an anxiety attack. During the following days, he saw recurring, intense and intrusive images of the female body in his imagination. These images and the simultaneous ruminating about the woman were accompanied by anxiety attacks of increasing intensity. He developed a phobia about driving to and from work. He experienced outbursts of rage even at small annoyances, had problems concentrating at work and even when watching television.

Unsuccessfully, Harry tried to suppress his musings about feelings of guilt in connection with the accident. Worried about Harry's complaints about insomnia, irritability and his increasing alcohol consumption, his doctor referred him to psychiatric treatment.

Harry refused to report the details of the accident at the beginning of the psychiatric diagnostics. This resistance subsided relatively quickly, and he reported recurring, obtrusive images of the female body in his imagination.

During the following psychotherapeutic treatment, Harry worked on various areas of imagination and feelings that were associatively linked to the accident and the intrusive images. The conflict issues that arose included guilt over having caused the woman's death, guilt over the sexual fantasies he had about her before the accident, guilt that he was glad to be alive while she was dead, and fear and anger that he had been involved in an accident and her death. To a lesser extent, there was also a superstitious belief that the woman had hitched a

ride and thus “caused” the accident. This belief was accompanied by anger at the woman, which in turn increased the various feelings of guilt.

■ Issues

Six problem topics from Harry’s later psychotherapy will be considered as cognitive-emotional structures in schematic form. In **Table 12.2** each topic is contextualized

Table 12.2 Topics activated by an accident. In the first 3 topics (T1-T3) the patient sees himself as the perpetrator, in the last 3 topics (O1-O3) as the victim

Theme (current presentation)	In conflict with...	Resulting in...
Self as a perpetrator		
T1 Relief that she and not he was the victim	... Moral concepts	Feeling of guilt (survivor guilt)
T2 aggression towards her (because she caused his problems)	... Moral concepts	Feeling of guilt
T3 Sexual ideas about her	... Moral concepts	Feeling of guilt
Self as a victim		
O1 Her physical injury could have happened to him	Notion of the invulnerable self	Fear (of death and injury)
O2 He broke rules	Responsibility towards the company	Fear (of accusations)
O3 The hitchhiking caused the situation	General notions of innocence (“the guilt lies outside”)	Anger

with an area of conflict and a resulting feeling. The first three themes (“perpetrator themes”: T1-T3) can be summarized by the fact that Harry sees himself as the perpetrator and the woman as the victim. In the following three themes (“victim themes”: O1-O3) Harry sees himself as the victim.

All 6 themes can be activated by the accident. With different “Harrys” with different personality styles, different topics typically become particularly important or conflictual. For example, in a histrionic Harry, the issue of sexual guilt might dominate (T3), while in a compulsive Harry, the issue of guilt over aggressive impulses (T2), worries about neglect of duty (O2) and the image of oneself as an innocent victim (O3) might dominate. To illustrate how the therapeutic technique is adapted to the personality style, a narcissistic personality variant is used here (examples of other personality styles can be found in Horowitz 1976, Horowitz, 2011). As a point of reference, an excursus on the topic of narcissistic personality style is first presented.

12.2.2 Excursus: Description and Development of a Narcissistic Personality Style

In narcissistic personality disorders, a great self-love, grandiosity or idealization of other people is observed, which is based on an extreme vulnerability of the own self-concept. In psychoanalytic theories, the vulnerability of the self has been attributed to difficulties during the phase of differentiating the self-concept in role relationships with the mother or other early caregivers (Kernberg, 1975; Kohut, 1971). The predominance of narcissistic character traits in one or both parents can also make a child vulnerable to difficulties in developing a stable and independent self-concept, since the parents may treat the child as if it were

one of their own functions rather than an independent existence (i.e., a self-object of the parents).

When the habitual narcissistic satisfactions drawn from being loved, receiving special treatment and admiring the self are destroyed, depression, hypochondria, anxiety, shame, self-destruction or anger towards any other person who can be blamed for the bad situation can result.

Kohut (1971) has described 3 coexisting but split-off self-concepts, which are often present in narcissistic personalities.

Separated Self-Concepts in Narcissistic Personality Style According to Kohut (1971)

- Grandiose self, consisting of an inflated, exaggerated, exhibitionistic self-image
- Lowly valued, ashamed and defenseless self-image
- Dangerously chaotic, destroyed, inconsistent self-image

Substitute images for (imagined) parents are maintained, which support the own self-image, raise self-esteem, prevent rejection and serve as a mirror by allowing the grandiose self to admire itself. The representations of self and objects are strongly egocentric, and interpersonal relationships are found more in the form of “I-It” than “I-Thou” relationships, as described by Buber (1959).

Issues of power and control come to the fore in interpersonal relationships. Narcissistic personalities are concerned with the possession of power to increase their own sense of competence and control, or self-elevation through attachment to a powerful person. At the core of this desire is the use of admiration or closeness for the maintenance of self-esteem.

12.2.3 Thought and Emotion Control in Narcissistic Personality Styles

If a distressing event of major importance occurs, a deviation from the knowledge of reality should prevent the potentially catastrophic state of affairs. This potential loss of self-confidence would be associated with intensely experienced emotions and a painfully experienced feeling of helplessness and disorientation. In order to prevent this state, the narcissistic personality shifts the meanings of events to make the self appear in a better light. Those qualities that are good are assigned to the Self (internalization). Those that are undesirable are excluded from the Self by denying their existence, devaluing associated qualities, externalizing and negating previous self-representations (externalization).

Such fluid shifts of meaning allow the narcissistic personality to maintain an apparent consistency. However, the distorted meanings force further distortions in order to survive. The resulting difficulties give the cognitive-emotional structures a subjectively experienced uncertainty. During states of stress, gaps can occur in the avoidance of threatening ideas. As a result, anger or paranoid states can occur as well as episodes of panic, shame, or depersonalization. Self-destructive actions can be motivated by a desire to end such stress. Likewise, a desire for secondary gain such as sympathy may occur, or playing a role as a “wounded hero”.

These different patterns of a prototypical narcissistic personality can be represented as follows, depending on whether they are information processing style traits, personality traits, or persistent patterns of interpersonal relationships.

Typical Patterns in Narcissistic Patients

— Information processing style

(observable in short time periods)

- Shifts meanings of information that could damage the self-concept
- Uses denial, devaluation, and negation to protect the self-concept
- Attention is paid to sources of praise and criticism
- Externalization of bad properties, internalization of good properties
- Temporary maintenance of incompatible mental attitudes in separate clusters (multiple self-images)

— Personality traits (observable in medium-term time periods, e.g. conversations)

- Self-centered
- Exaggerating or underestimating the self and others
- Self-elevation (or pseudo-humility) in real and imagined performances, in the way of dressing or in the appearance
- Avoiding self-deprecating situations
- Variable use of behavior depending on the state of self-esteem and the context in the form of
 - charm, seduction qualities, efforts to control or charisma
 - superiority, arrogance, coldness, or retreat
 - feeling of shame, panic, helplessness, hypochondriac behavior, depersonalization, or self-destructiveness
 - envy, anger, paranoia, or demands

— Interpersonal relationships (observable in long-term patterns of patient biography)

- Impoverished interpersonal relationships, power orientation or control intentions over others that are only accessories
- Absence of “I-Thou” feelings
- Social advancement or using other people for positive reflection
- Avoidance of self-criticism by inciting others to unfair criticism
- Dropping and devaluation of persons who are no longer useful

In the case of a narcissistic Harry, the following will look at topic O1, in which Harry talks about his intrusive images of the female body in conjunction with ideas about his own susceptibility to death.

The idea of his possible death is incompatible with Harry’s wishful thinking of invulnerability. The danger posed by these incompatible ideas is particularly great for a narcissistic personality, who wants to maintain an intact ideal – but in fact sensitive and fragile – self-image.

To prevent these unbearable emotions from continuing, controls are introduced. There are two reasons for these controls:

- Prevention of the threatening anxiety states and
- Avoiding the cognitions of fear, because admitting that he is afraid would also be a “narcissistic offence” for Harry.

This “double danger” of the narcissistic personality makes therapy particularly difficult, as will be discussed shortly.

Both fears motivate defensive maneuvers. The idea that “someone” dies is a less frightening concept than that you yourself will die. The topic of “having to die” is now shifted from its meaning of having to die oneself to personal immortality. Instead of fear, the shift in meaning now enables a sense of triumph. The same image that previously caused fear now leads, due to a

slight irrationalization, to a more positive emotional experience. However, due to his defensive nature, this state is unstable and Harry will tend to experience his anxiety state repeatedly.

This denial of his own mortality deserves closer attention. The narcissistic Harry frees himself from the realities of being human by thinking: “She is a representative of the kind that dies. I am of a different species.” Using this form of narcissistic defense, Harry classifies himself as an exception. It also means that he is special as an exception.

This kind of shift in meaning is associated with a positive affect: things are better than expected. By shifting and undoing meanings and externalizing deadly dangers such as dying and vulnerability, a complete reversal of emotions could be achieved.

- There is a double problem with the narcissistic personality: Threat of avoided images and experiences as well as avoidance of admitting that something is avoided.

12.2.4 Therapeutic Technique: Restructuring and Stabilization

How can a psychotherapist deal with such fluid shifts of meaning? In terms of cognitive-emotional processing, a re-evaluative restructuring is a useful tool in therapy.

■ Slow Action

The process should be slow; as slow as necessary to help Harry open up to a threat strong enough to throw him into a state of self-destruction. During this slow process, efforts are then made to re-evaluate the events and their various interpretations.

■ Tact

With regard to the therapeutic relationship, tact plays an important role. Tact is essential, as the narcissistic personality is more

focused on the therapist than on the thematic meanings. The therapist is an important current source of praise or criticism. The patient’s realistic or distorted observations of how strongly the therapist’s interest or disinterest is expressed will influence the patient’s overall balance.

■ Realistic Situation Assessment

During the reconstruction, the therapist should place special emphasis on working with Harry to develop realistic attributions of responsibility for all aspects of the event. Both therapist and patient should try to clarify how strongly the patient was involved in each aspect of the action, i.e. what was really his responsibility and what was caused by external circumstances. This clarification involves distinguishing between what is real, probable and fantasies. Clarification and restructuring undoes some of the externalizations. For example, suppose a narcissistic Harry expresses anger at the other driver who forced him to leave the road. This externalization of one’s own share of responsibility represents an attempt to find fault for the death of the woman not with oneself but solely with the driver of the opposite direction. This is based not only on anxious ideas about one’s own mistakes, but also on fear of potentially unrealistic accusations.

■ Identify Responsibilities

The restructuring includes every possible element of responsibility: his responsibility for taking the woman with him; his responsibility for the other cars that almost collided; for driving the car off the road in his own manner; his responsibility for his actions after the accident – all of this must now be reassessed. For each issue, the restructuring process will reach an end point where a realistic decision can be made on the assessment of the responsibility issue, freeing Harry from unrealistic guilt components. The review and reassessment by the therapist enables Harry to make a conscious decision about his level of responsibility.

Furthermore, he can gain the experience of not being attacked by the therapist with criticism. The therapist avoids such attacks, although he may be incited to do so by the patient's blatant externalizations (counter-transference).

■ Responding to Personality Development

Restructuring and reviews include the fear-inducing issue of mortality (O1), for example. It is particularly difficult for narcissistic Harry to work through this topic. Realistic threats to his self-image are his Achilles heel, which stems from narcissistic personality development. If it becomes apparent that earlier memories and fantasies have been awakened, these too need restructuring in the light of the present. Restructuring in narcissistic patients requires particularly extensive efforts to clarify the distinction between self and other in terms of motives, actions and feelings.

12.2.5 Relationship Aspects in Narcissistic Patients

The treatment of narcissistic personalities is often difficult for the therapist because the narcissistic patient tends to use the therapist rather than enter into a relationship with him. Although the therapist may feel unimportant as a real person and, for example, may feel disinterested as a reaction to this (see the empirical results of Betan et al., 2005), he must understand what is going on and approach the patient objectively. The therapist has to be supportive for a while. In the narcissistic patient, support and closeness may be less a question of warmth than of acceptance of his externalizations. However, this is not without consequences, as it may be necessary to discourage such externalizations at a later stage of therapy.

Under the Magnifying Glass: "Quasi-Relationships" in Narcissistic Personality Style

The narcissistic personality uses two forms of "quasi-relationship" to create the sense of security necessary to experience and express their normally avoided ideas and feelings. One form is characterized by personal magnificence combined with the expectation of being admired. The other consists in the idealization of the therapist, whose "light" in turn falls back on the patient.

The magnificent quasi-relationship usually occurs either at the beginning of a treatment or in the recovery phase directly after a successful remission of the initial stress state. Boasting and self-praise occur in subtle or stronger forms and cause the therapy time to be deducted from stress-related issues.

Tact, as emphasized earlier, allows for these efforts in order to restore self-esteem, rather than insisting on sticking with central conflicts or interpreting the great efforts as compensation.

This tact or restraint can be particularly difficult for those therapists who are used to relying on the positive therapeutic relationship to help the patient through periods of hard work on threatening ideas. It is difficult to remember that the relationship with narcissistic patients is not stable and that their need is often imperative and not associated with the usual sympathy.

The second form of quasi-relationship, the idealization of the therapist, aims at repairing the damage by making the patient believe that he is again protected by a powerful or attractive caregiver and that he is considered valuable. The stress response syndrome becomes the ticket to this kind of self-esteem improvement. Once again, tact-

ful tolerance is required at the beginning of treatment, when the patient is still partially overwhelmed by the stress response syndrome. The glorifying statements about the therapist point to an idealization that temporarily makes up for the damage done to the self. In this case, it is necessary to wait for a more secure period of time in which work can be done on restructuring and integrating the stressful events.

Externalizations can also help a patient to gain sufficient emotional distance from stressful issues so that he or she can bear to think about them. For example, if a feeling of disgust towards death is projected onto the therapist, the crucial method is to ask the patient to talk more about the therapist's current presumed feelings. This enables patients to follow their own emotional pathways as if they were the therapist's pathways. A direct intervention, for example in the form: "You feel disgusted by death", should only happen later.

12.2.6 Empirical Evidence

In a randomized controlled trial (Brom et al., 1989) the effectiveness of the presented approach was compared with several comparison conditions (trauma desensitization, hypnotherapy, waiting group). With a pre-post effect size of 1.14 and the strongest effects of all procedures during the 3-month observation period after the end of therapy, the approach impressively demonstrated its effectiveness.

12.3 Psychodynamical Imaginative Trauma Therapy

The 11th revision of the International Classification of Mental Disorders (current tenth revision: WHO, 2004) adds the diagnosis of complex post-traumatic stress disorder to the concept of post-traumatic stress disorder (Maercker et al., 2013). This concept, which goes back to Judith Herman (Herman,

1992), takes into account specific phenomena often observed in victims of long-term trauma, especially during childhood (► Chap. 3). Examples of this are difficulties in regulating emotions, shaping relationships, or altered perceptions of oneself or the perpetrator. While trauma-specific treatment approaches show a clear superiority (effect size .87) over unspecific interventions in the case of non-complex clinical pictures, this difference is largely lost in the case of complex clinical problems (effect size .23; Gerger et al., 2014). It is therefore understandable that separate treatment approaches have been developed for people suffering from complex trauma sequelae. One such approach is the psychodynamical imaginative trauma therapy (PITT) by Luise Reddemann.

Before presenting central aspects of the therapeutic process, the author's remarkable position with regard to her concept of therapeutic attitude and human encounter should be emphasized. When she advises "to meet every new patient as if one were entering new unknown territory with a rather inaccurate map" (Reddemann, 2004, p. 21), the relativization of the importance of supposed therapeutic expertise in relation to an investigative attitude becomes clear.

Under the Magnifying Glass: Primacy of the Therapeutic Relationship Over Technique

In the context of this form of treatment, designed for people who are complex – and thus usually within relationships – traumatized, there is a clear primacy of the therapeutic relationship over technique: "It is always about treating the whole person. And it is about the effectiveness of a relationship" (Reddemann, 2004, p. 43). In concrete terms, this requires on the part of the therapist "... tact, devotion, the willingness to make new experiences possible, and the willingness to admit one's own mistakes and, if necessary, to apologize for them" (Reddemann, 2004, p. 48).

Also worth mentioning here is Reddemann's (2004, p. 73) postulate that PITT therapists should live the principles they advocate: "Resource-oriented psychotherapy needs resource-oriented living therapists!". Despite all the gratifying successes in trauma therapy, empirical research also shows the limits of therapeutic action in view of the often chronic and sometimes irreversible consequences of traumatic events (Wittmann & Schnyder, 2014). When Reddemann (2004, p. 19) speaks of "healing with scars" and emphasizes that therapeutic work in the case of trauma-related personality changes takes up more time – a central case study used in the PITT manual comprises about 240 sessions over a period of 3 years – she is just as proactive in advocating an illusion-free perception of reality as she is in advocating appropriate care for severely traumatized people.

PITT is on the one hand a method-integrated procedure. Thus, influences from ego-state therapy, hypnotherapy, mindfulness-based psychotherapy and many other approaches can be recognized. On the other hand, such elements are not copied unreflectively, but are integrated into a psychodynamic framework. Reddemann (2004, p. 66 ff.) illustrates this principle using the example of cognitive work on a patient's self-perception. PITT does not stop at the cognitive refutation of a self-scheme – for example in the context of a Socratic dialogue – but complements the cognitive aspect with the levels of emotional meaning and the relationship-regulating function of such schemata. The course of a PITT can be described in terms of the phases of initiation, stabilization, trauma confrontation, and integration. However, as with the first approach presented in this chapter, this does not imply a rigid but rather a flexible sequence of phases in which the patient is trusted to have the wisdom to decide what he needs at a given time.

12.3.1 Initiation Phase

As early as possible in the PITT process, the explicit mandate and goal clarification for the treatment is carried out, whereby the latter can be developed on the basis of the patients' life goals. The anamnesis should not take on the character of a trial confrontation by an unbalanced focus or emphasis on difficult aspects. This applies not only, but especially, to the reporting of traumatic experiences. In this context, there are already indications of a possible overlap with distancing or resource-oriented techniques of the stabilization phase. Here, interventions that support the ability to observe oneself or to deal with crises can be used in therapy sessions or as part of homework. Psychoeducational work in explaining the therapeutic procedure and the concepts used also finds room here.

12.3.2 Stabilization Phase

The establishment of external security can be considered a prerequisite for the development of a sense of internal security. If contact with perpetrators exists, patients should be supported in developing the necessary distance, whereby the measures to be taken should be adapted to the factors contributing to contact with perpetrators. In one case, this may be clarification of which part of the patient wants to maintain contact with the offender on the basis of which need structure. In another case social psychiatric interventions may be required. Psychoeducative-normalizing education about traumatization, its consequences, and how to deal with them can promote patients' self-acceptance. For this phase, a great wealth of technical variants is described, ranging from imagination- and mindfulness-based procedures to the use of topic-specific stories or images to exercises in body perception.

- The basic principle here is a consistent activation of resources: the appropriate appreciation of existing problems is accompanied by a focus on existing competencies and those to be developed or positive aspects.

In the following some central techniques are briefly listed (for a detailed description see Reddemann, 2010).

■ Safe Place

For that matter, the person goes to an imaginary place that represents the highest level of security and well-being. This place is designed in such a way that these qualities are perceived with imagination in all sensory dimensions. Through regular imaginative journeys to this place, the person learns to calm down and regenerate in difficult situations.

■ Inner Helpful Beings

Ideas of beings are developed, such as those known from fairy tales, which represent comfort, encouragement, advice, or security. These can be invited to the safe place for support.

■ Inner Team

For this purpose, the patient enters a safe room in his imagination and invites people who represent him/herself in different earlier and later phases of life. By asking them for their opinion or advice in an inner dialogue, the patient gains access to his inner wisdom.

■ Vault Exercise

This is a complementary imagination exercise, working with an opposite conception, so to speak, and serves to temporarily free the mind from incriminating material. For this purpose, memories or pictures that cannot yet be processed are locked away in a safe that has been presented – or in several safes if necessary.

As already indicated in the work with the inner team, PITT makes extensive use of working with ego states. Reddemann takes a pragmatic approach to the concept of the different ego parts: “... of course different people do not live in the patient. ... The value of the concept lies in its clinical coherence, manageability, and simplicity” (Reddemann, 2004, p. 118). A description of the related concept of the inner child facilitates understanding:

- » According to our concept, the vast majority of cases of violent feelings that do not seem to fit the behavior of an adult person are unresolved conflicts, injuries or traumas from the past, usually from childhood. Working with injured childhood parts seems to us to be a very effective instrument to strengthen the adult person of today in his or her ability to function ... (Reddemann, 2010, p. 72)

In order to maintain the functional level of the adult patient in her present life and the current therapy situation, the adult ego encounters the childlike parts in the ego state work, which could be described as a regression limited by the imaginative technique. During the stabilization phase, the Ego-States work does not serve the purpose of trauma confrontation, but rather the safer accommodation and consolation of the inner child. If the adult ego is not yet stable enough to take care of the inner child, inner helping beings, for example, can be used for this.

■ Work with Perpetrator Introjects

Ehlert-Balzer (1996) has described in detail how the psychodynamics of the traumatic situation can lead to a situation where even adult trauma victims can anchor aspects of the trauma or perpetrator like a foreign body in their own ego. This can manifest itself, for example, in accepting the perpetrator’s allocation of guilt. Since the superiority of the perpetrator plays a decisive role here, it is

reasonable to assume that the development of perpetrator introjects is likely to be more frequent and more pronounced in childhood traumatization. In PITT, work on perpetrator introjects takes place either within the framework of ego-states work. For this purpose, the exercise of the inner team, in which ego-syntonic as well as ego-dystonic parts can be represented, is an obvious choice. An alternative, called “dragon slayer model”, aims at the patient rendering the perpetrator introject, represented in symbolic form, harmless. Just as the dragon in myth always guards a treasure, Reddemann (2004, p. 135) emphasizes the importance of not stopping at the dragon slay, but to let the patient find a treasure in her imagination.

12.3.3 Trauma Confrontation

For a long time, it was considered a hardly questionable fact that trauma confrontation (exposure) is the central effective and therefore indispensable component of trauma therapy, and even more, that elements beyond this, such as stabilization techniques, could be superfluous if not harmful (Neuner, 2008). Meanwhile, a randomized controlled study on interpersonal psychotherapy (Markowitz et al., 2015) – classified by some authors as a psychodynamic procedure (Kudler et al., 2009) – shows that post-traumatic stress disorders can be successfully treated without exposure. In patients with comorbid depression, this approach even generated nine times fewer therapy discontinuations than an exposure-based comparison condition (“prolonged exposure”). Thus, Reddemann’s clinical experience that patients suffering from complex traumatization who have gone through the stabilization phase, often “no longer want or need trauma confrontation” (Reddemann, 2004, p. 145) can certainly be put into context with current findings of “evidence-based medicine”. Reddemann recognizes a primacy of

the exposure component only with regard to simple post-traumatic stress disorders resulting from monotrauma (cf. the above-mentioned results of Gerger et al., 2014).

Under the Magnifying Glass: Trauma Confrontation

In PITT, the prerequisites for trauma confrontation are external security, a sustainable therapeutic relationship, and psychological stability. The latter implies a sufficient ability to regulate emotions in order to be able to endure emotional stress without dissociation and to calm oneself down. Trauma confrontation is carried out as gently as possible, in contrast to many procedures based on the habituation paradigm.

Sufficient restabilization must be ensured before repeated confrontation. During the confrontation, care is taken to ensure that the levels of behavior, feelings, bodily experience and thoughts (Braun, 1988) are included without dissociation in relation to the traumatic experience. The patient and therapist decide together which techniques they will use in this process. At this point, only one further approach is mentioned, which can be used in combination with exercises already learned in the stabilization phase.

■ Observation Technique

The therapeutic use of the division into an experiencing and an observing part – the therapeutic ego split – was described early on (Sterba, 1934). When all ego states involved in the trauma, as well as the current experiencing part, are accommodated in a safe place, the observing part of the patient observes the trauma event. Through this quasi dissociative exercise a distancing and thus a reduction of stress and suffering can be achieved. Furthermore, it can be decided

whether the traumatized ego part (e.g. the child ego) stays in touch with the observing part from the safe place or whether it wants to leave this to the adult ego part. With regard to the emerging feelings, a distinction is made between trauma-associated and trauma-processing feelings (Reddemann, 2004): trauma-associated feelings are constricted by being perceived only by the observing part; trauma-processing feelings such as anger or grief are also perceived by the experiencing ego-parts, provided they are not too overwhelming. Even after the confrontation is over, the work with the ego states continues, for example in the care and comfort for the former and present ego.

12.3.4 Integration

Grieving and integrating what has happened and its consequences are part of this final phase, which also symbolizes a new beginning for patients. Here too, the therapeutic process is supported by imaginative techniques. Central themes are, for example, visions of the future, self-esteem-related topics, the use of resources on the further path, or questions of meaning and spiritual experience.

12.3.5 Evidence

Examples of non-randomized studies comparing the effect of PITT in psychotherapy inpatients with waiting list patients are found in Lampe et al. (2008) and Bebermeier (2014). The duration of the inpatient stays evaluated here is described as six and approximately 10 weeks, respectively; at least substantial proportions of the patients described in both studies can be described as suffering from severe or complex traumatization. The patients treated with PITT showed improved values in psychopathological (e.g. severity of depression, anxiety,

or somatization) and resource-oriented (e.g. attentiveness, self-soothing) measures at the end of treatment and in some cases even 6 months later. In both studies, no significant difference was found between treatment and control patients with regard to the course of PTSD severity. It is therefore up to future studies, especially in the outpatient setting and with sufficient treatment duration (see above), to examine at which time point a reduction in PTSD symptoms can be observed.

12.4 Manual of Psychodynamic Trauma Therapy

Particularly with respect to PITT, the strongly integrative approach is striking, for example with the inclusion of imaginative or mindfulness-based elements. In other therapy manuals, psychodynamic components are explicitly included in an eclectic framework, as in Brief Eclectic Psychotherapy (BEP; Gersons et al., 2011). All these approaches have in common that they are committed to a disorder-specific paradigm. More recently, however, voices questioning distinct diagnostic categories under the assumption of separate etiological factors, different biomarkers and the necessity of disorder-specific treatment protocols have gained plausibility in the light of empirical research results (e.g. Caspi et al., 2014; Markowitz et al., 2015). From the numerous other possible psychodynamic examples (e.g. Grothe et al., 2003; Lindy, 1993; Marmar, 1991; Vitriol et al., 2009; Wöller et al., 2012), a more recent development is therefore selected for presentation, which applies an alternative approach in this respect.

At the “15th European Conference on Traumatic Stress” in Odense, Denmark, Wittmann et al. (2017) presented a newly developed treatment manual.

Under the Magnifying Glass

The manual by Wittmann et al. (2017) describes how classical psychodynamic interventions which are considered as non-disorder specific can be adapted to the individual needs of traumatized people. It avoids the assumption that the work here is fundamentally different from that with other patients or that the available spectrum of interventions would have to be expanded integratively.

In order to ensure the flexibility of treatment required from a psychodynamic perspective, the manual applies the principle of parameters. Instead of prescribing which technique to use, it provides criteria for deciding whether and in what form specific psychodynamic interventions could be applied. If a temporal restriction of the treatment is considered realistic in view of the initial situation and treatment goals, this can be

achieved by a focusing treatment formulation. The procedure described by Malan (1965) is adapted by relating the following four levels in the form of a square:

- the traumatic experience and its consequences,
- important relationship experiences in the present,
- formative relationship experiences in the history of development,
- the current therapeutic relationship.

This illustrates the central significance that this approach attributes to interpersonal experiences for personality development, for an understanding of the subjective traumatic experience, and for difficulties in working through the traumatic experience. The current therapeutic work can take any of the four corner points of the trauma square as a starting point, whereby meaning is created by connecting two or more corner points. This is illustrated by an example of the work on the transference process within the therapeutic relationship:

12

Case Study: A Patient with Complex PTSD

A patient suffering from complex traumatization comes to the second hour of therapy in a dissociated state. He explains that the train was so crowded at rush hour and that this frightened him very much. On inquiry, he describes that he had already guessed when making the appointment that the time suggested by the therapist might therefore be unfavorable. The therapist decides not to discuss the details of the anxiety-inducing circumstances of the journey with the patient, which might have resulted in a focus on the traumatic situation and its suggestive stimuli. Instead, he addresses the transference process when making the appointment. He introduces the working hypothesis that the patient

may have put the presumed needs of the therapist in relation to the appointment above his own needs, for which there was apparently no room (the patient had agreed to the appointment proposal without any discernible ambivalence). It became now possible to identify the expression and defense of his own needs as a central theme of the patient. From this observation within the therapeutic relationship, associations with the patient's family history, the consequences of traumatization during childhood for the development of the personality, and the aspect of today's relationship patterns and the danger of re-traumatization arose in the sense of the work with the trauma square.

Just as the four corners of the trauma square are considered equal, the work with re-experiencing and avoidance is considered equal. As described by Horowitz (1976, Horowitz, 2011), the oscillation between the two states can also be observed in the therapeutic sessions. In accordance with the principle of respecting the patient's rhythm, the material currently presented by the patient serves as a starting point for the joint therapeutic work. Cues to the presence of avoidance behaviors, for example, would not be taken as a reason for directive-confrontational interventions, but would rather be used to clarify the need for avoidance and its relation to past or current interpersonal experiences. A reduction of the need for avoidance can then enable a spontaneous, non-directive working through the traumatic experience. A multi-stage phase of evaluation of this manual is currently in preparation.

12.5 Summary

Psychodynamically oriented scientists and clinicians have made significant contributions to the development of today's psychotraumatology. On the one hand, numerous therapeutic approaches for working with traumatized individuals have been developed, and on the other hand, exciting possibilities for combining these with other methods have emerged. Although various approaches have produced first encouraging empirical data, the central shortcoming from the perspective of evidence-based medicine is, however, the small number of randomized controlled trials. While an increase in the number of controlled empirical studies of the effectiveness of psychodynamic procedures can be observed with regard to other disorders (e.g. review by Leichsenring et al., 2015), this positive development is not yet sufficiently reflected in the field of psychodynamic trauma therapy. This is regrettable also for the reason that psychodynamic

approaches differ significantly from procedures already considered evidence-based and could therefore make important contributions to the question of differential treatment indication. This shortcoming can be considered a central challenge for trauma-focused psychodynamic treatment approaches.

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Cognitive Behavioural Therapy

T. Ehring

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13.1 Introduction

Cognitive behavioural therapy (CBT) plays a key role in the treatment of posttraumatic stress disorder (PTSD). There are a number of different evidence-based treatment manuals based on CBT, which have been reviewed in more than 120 randomized controlled treatment studies (Ehring et al., 2019). The aim of this chapter is to provide an overview of trauma-focused CBT in PTSD. Due to the large number of existing treatment manuals, not all specific approaches can be presented in detail for reasons of space. Instead, after a brief overview, the focus will be on basic principles, theoretical models and important treatment components that play a role across individual treatment concepts. Interested readers are referred to the numerous manuals available for details of the specific approaches.

13.2 Overview

13.2.1 Treatment Approaches

Within CBT for PTSD, **trauma-focused** and **non-trauma-focused** approaches can be distinguished. Trauma-focused psychological treatment is defined as a treatment approach that focuses on processing the memory of the traumatic event and/or its meaning. In non-trauma-focused interventions, processing the trauma is not a central component. Instead, the focus is usually on “stabilising interventions” such as teaching skills in emotional regulation, acquiring strategies for coping with PTSD symptoms or support in solving current problems. Results of treatment outcome research unanimously show that trauma-focused psychological treatment is more effective than non-trauma-focused approaches in treating PTSD (e.g. Bisson et al., 2007; Ehring et al., 2014). Guidelines unanimously recommend trauma-focused CBT (and EMDR; ► Chap.

14) as the treatment of choice for PTSD (ACPMH, 2007; American Psychological Association [APA], 2017; National Collaborating Centre for Mental Health [NCCMH], 2005; Schäfer et al.: *S3 guideline Posttraumatic Stress Disorder*).

- In the treatment of PTSD, the focus should be on trauma-focused interventions.

In the presence of complex PTSD, phase-based treatment is frequently offered, in which interventions to improve emotional regulation, reduce dissociation or reduce interpersonal problems are carried out prior to trauma-focused interventions (► Chaps. 16 and 17). However, this is usually not necessary for the diagnosis of (non-complex) PTSD.

13.2.2 Examples of Evidence-Based Cognitive-Behavioural Therapy Programmes

■ Prolonged Exposure

One of the best studied forms of PTSD therapy is prolonged exposure (Manual: Foa et al., 2014). This treatment focuses on imaginal exposure to the trauma memory, often in combination with exposure in vivo to avoided situations.

■ Cognitive Processing Therapy

Cognitive processing therapy (CPT) focuses on the modification of dysfunctional appraisals and beliefs using classical cognitive techniques (Manual: König et al., 2012). An examination of trauma memory also takes place in the form of writing tasks.

■ Cognitive Therapy

Based on an influential theoretical model (Ehlers & Clark, 2000), cognitive therapy integrates cognitive interventions, exposure

elements and behavioral strategies (Manual: Ehlers, 1999).

■ Narrative Exposure Therapy

This was developed for the treatment of survivors of political violence, displacement and war (Manual: Schauer et al., 2011). The treatment involves exposure to traumatic memories and a reorganisation of these memories into a coherent narrative.

In addition, a number of newer CBT treatments have been developed in recent years, which have shown promising results in initial studies, but cannot yet be considered evidence-based treatments in the strict sense. These include imagery rescripting and reprocessing (Schmucker & Köster, 2014) or imagery rescripting (Arntz, 2015) and meta-cognitive therapy (Wells & Sembi, 2004).

- ▶ There are several evidence-based cognitive-behavioural treatments available for the treatment of PTSD, which differ in their focus on exposure-oriented vs. cognitive interventions, among other things. So far, no systematic differences in effectiveness between these specific approaches have been found.

13.3 Cognitive-Behavioural Models of PTSD

The evidence-based treatment approaches are each based on specific theoretical models. As an example, Ehlers and Clark's (2000) cognitive model is presented in more detail in this section. The starting point of this theory is the observation that trauma survivors with PTSD perceive a **current threat**, although the actual threat (the trauma) is already in the past. This means that even in safe situations, people with PTSD often feel and/or behave as if they were still threatened, especially if current situations remind them of the trauma. The difficulty in experiencing the trauma as a completed event

from the past is one of the key features that distinguishes people with PTSD from trauma survivors without the disorder.

- ▶ Trauma survivors with PTSD experience a current threat. An important goal of trauma-focused therapy is therefore to process the trauma in such a way that it is perceived as a closed event from the past and thus reducing the feeling of current threat.

According to Ehlers and Clark (2000), the perception of a current threat is fed from two sources, namely

- The way in which the trauma is represented in memory and recalled,
- Evaluation of the trauma and/or its consequences by the survivors.

Both processes will be discussed in more detail below.

13.3.1 Characteristics of the Trauma Memory

A core characteristic of PTSD is the unintentional re-experiencing of the trauma in the form of intrusive memories, nightmares and/or dissociative flashbacks. This re-experiencing has a number of characteristics that distinguish it from memories of non-traumatic events. In addition, these features of re-experiencing contribute significantly to the feeling of current threat.

Features of PTSD Re-experiencing

- Dominance of sensory impressions
- “Here and Now Quality”: Sensory impressions are experienced to a certain extent as if they were happening in this moment and not as a memory of a past event

- Memories are accompanied by strong emotional and physical reactions similar to those during the trauma.
- Memories contain the original meaning, even if additional information contradicting them was received later.
- Memories are triggered by a variety of stimuli that were temporally associated with the trauma (e.g. certain objects, colours, sounds, smells, moods, personal characteristics, emotional states).

According to Ehlers and Clark (2000), the following processes are responsible for this particular way in which people with PTSD re-experience the trauma.

■ Characteristics of Peritraumatic Processing

Intrusive re-experiencing occurs especially when during the trauma a strong encoding of **perceptual** information occurs with a simultaneous weak encoding of **contextual** or **meaningful** information. The authors also describe this as the dominance of **data-driven** processing over **conceptual** processing (for a similar hypothesis see Brewin et al., 2010). In addition, **reduced self-referential processing** during the trauma is proposed to prevent the event from being integrated in the context of autobiographical memory; instead, it is stored as a relatively isolated memory trace. Finally, **mental defeat** during the trauma (i.e. perceived loss of any autonomy; no longer feeling human) promotes the development of PTSD.

In summary, according to Ehlers and Clark (2000), it is predictive for the development of intrusive re-experiencing if the following phenomena are present during the trauma:

- strong perceptual processing with little contextual processing,
- reduced self-referential processing,
- mental defeat.

These processes show a certain overlap with the concept of peritraumatic dissociation.

■ Inadequate Elaboration and Contextualisation of the Trauma Memory

As a consequence of the peritraumatic processes described above, the consolidated memory representation of the trauma differs in two essential aspects from everyday memories and from trauma memories of survivors without PTSD:

- Perceptual information as well as the original meanings that were present during the trauma are also dominant in the consolidated memory content.
- Trauma memory is only inadequately linked to other autobiographical memories, i.e., the autobiographical context is missing in the memory representation.

However, an important assumption of the model is that these features are not characteristic for the whole memory representation of the trauma, but are specific to the **hotspots**, i.e. the worst moments experienced during the trauma.

Case Study: Trauma Memory

During her car accident, Ms. R. experienced the moment as a hotspot when she saw the headlights of the other car racing towards her. At that moment she was convinced that she was about to die and was scared to death. Years after the accident Mrs. R. still experiences intrusions from this moment, which consist mainly of sensory impressions (headlights, squealing tyres); likewise, during the intrusions the original meaning of this moment (“*I am about to die*”) returns. This part of the traumatic memory has obviously not been updated by the corrective information that Ms. R. has survived.

■ Strong Associative Connections and Priming

First, the model explains the frequent and automatic triggering of intrusive memories by a variety of cues by strong perceptual priming (a form of implicit memory) for trauma-related stimuli, which lowers the perception threshold for these stimuli. Second, the authors postulate that PTSD is characterized by particularly strong conditioned associations of stimuli that were temporally associated with the trauma with the content of the trauma, and also by a strong generalization of these learned associations.

13.3.2 Excessive Negative Evaluations of the Trauma and/or Its Consequences

As a second source for the perception of a current threat, Ehlers and Clark (2000) refer to the way in which trauma survivors with PTSD interpret the event, its causes and/or consequences. The exact content of these appraisals can vary widely, but they all have in common that survivors cannot perceive the trauma as a closed event from the past. The appraisals often refer not only to the trauma itself but also to the situation after the trauma. For example, PTSD symptoms (e.g. intrusive memories, nightmares, sleep disturbances) have been shown to be very common in the first days after trauma and can therefore be considered a normal response to an extraordinary event. However, trauma survivors who interpret these symptoms in a catastrophic way (e.g. “*My intrusions mean that I’m going crazy*”; “*If I continue to sleep so badly, I’ll end up in a psychiatric hospital*”), have an increased risk of developing (chronic) PTSD.

◀ Examples: Excessively Negative Appraisals in PTSD

- **The fact that the trauma happened to me**
 - “*I’m not safe anywhere*”
 - “*I attract misfortune.*”
 - “*It’s my fault it happened.*”
 - “*If I had acted any differently, it wouldn’t have happened*”
- **Initial PTSD symptoms**
 - “*I have changed forever.*”
 - “*I’m going crazy.*”
 - “*I have changed for the worse as a person.*”
 - “*I can’t trust myself anymore.*”
- **Reactions of other people**
 - “*Nobody is there for me.*”
 - “*I can’t rely on anyone.*”
 - “*Others think I’m weak.*” ◀

■ Integration of the Traumatic Experience Through Accommodation and Assimilation

In their theoretical model, the developers of cognitive processing therapy (CPT) emphasize the fact that traumatic experiences are often incompatible with the way people view themselves, others and the world (Resick & Schnicke, 1993). The integration of the trauma into the existing system of core beliefs or schemata can be achieved by two different processes. **Assimilation** is the process by which events are perceived or interpreted in such a way that they fit into already existing schemata. This can be problematic if the trauma confirms already existing negative schemata (e.g. “*I am a bad person and therefore bad things happen to me.*”) or if the trauma is perceived or interpreted in a very distorted way (e.g. “*It’s my own fault that I was raped*”) to maintain beliefs about trust in other people. In contrast to this is the mechanism of **accommodation in which** people change their beliefs/schemata in the light

of new experiences. This is particularly problematic when trauma survivors change their beliefs in the sense of **over-accommodation in a** very extreme way, which can often be described as a form of over-generalisation (e.g. “*I cannot trust anyone*”; “*I am not safe anywhere*”).

13.3.3 Dysfunctional Coping Strategies

PTSD symptoms are very common in the first period after trauma. While most trauma survivors recover from the trauma without treatment, symptoms persist in others, resulting in the development of (chronic) PTSD. From a theoretical point of view, how can it be explained that the traumatic memory characteristics described above, as well as the dysfunctional evaluations of the trauma, spontaneously normalise in some, but remain unchanged in others? The cognitive model postulates that trauma survivors with PTSD use a range of coping strategies to try to control the perceived threat and its symptoms; paradoxically, however, these strategies have in common that they prevent changes in memory processes and assessments and thus maintain PTSD. Important examples are the attempt to suppress intrusive traumatic memories and avoid thoughts and conversations about the trauma. This is often motivated by catastrophic evaluations of PTSD symptoms (“*If I don’t control my memories, I’ll go crazy*”), i.e. patients try to protect themselves in this way. It has been shown, however, that suppression of thoughts and memories does not reduce their frequency of occurrence, but on the contrary, leads to an increase. In addition, the avoidance of memories, conversations and thoughts about the trauma prevents

the trauma memory from being updated and/or excessive negative evaluations from being changed.

Common Dysfunctional Coping Strategies in PTSD

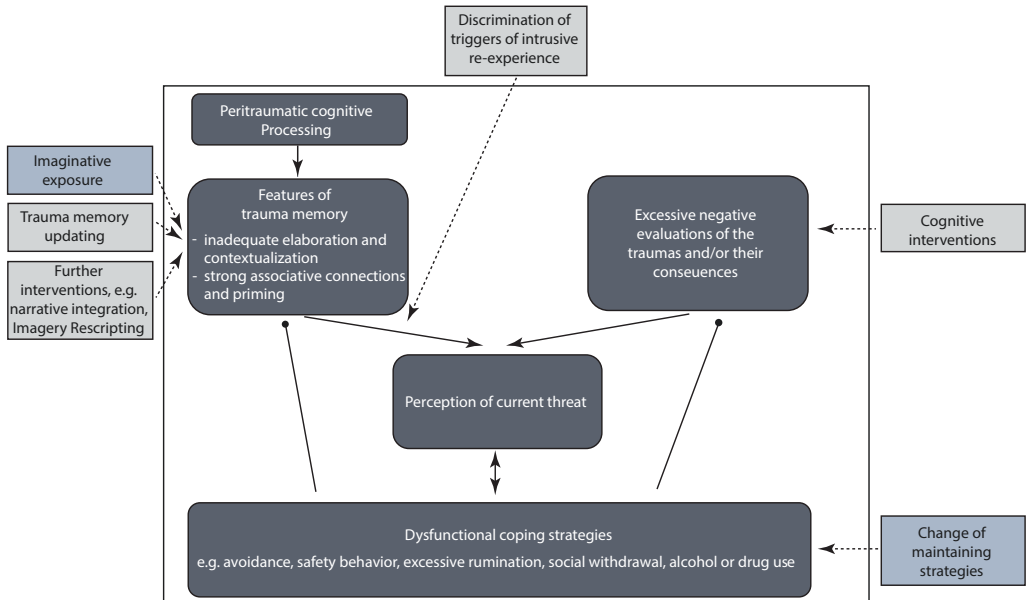
- Avoidance (memories, thoughts, conversations, situations)
- Thought suppression
- Excessive brooding
- Safety behaviour
- Use of alcohol or drugs to cope with the intrusions
- Excessive reassurance behaviour
- Social withdrawal
- Dysfunctional sleeping behaviour (e.g. going to bed too late; sleeping with the light on; alcohol consumption before going to bed)

■ Figure 13.1 gives an overview of the central building blocks of the cognitive theory of PTSD (Ehlers & Clark, 2000) and makes clear at which processes the interventions described in the following section start.

13.4 Core Treatment Components

13.4.1 Diagnostics and Therapy Planning

CBT is characterized by individual case formulation and treatment planning based on detailed assessment. The initial assessment should include both standardised procedures to establish the diagnosis and the severity of symptoms (i.e. questionnaires, structured interviews) as well as an individualised analysis of problems and goals (► Chap. 8).



■ **Fig. 13.1** Cognitive model of PTSD and approaches to intervention in evidence-based CT for PTSD. (Mod. according to Ehlers and Clark (2000))

Evidence-based CBT for PTSD also usually includes **continuing assessment** during the course of treatment. This usually consists of patients filling out a standardised questionnaire every week (e.g. directly before each session), assessing current PTSD symptoms. Although the effects of this continuing assessment during treatment have not yet been sys-

tematically investigated, it can be assumed that the regular monitoring of PTSD symptoms and the joint discussion of symptom changes at the beginning of each session constitute an active ingredient of PTSD treatment that should not be neglected. In this way, symptom changes can be immediately discussed and taken into account in treatment.

Case Study: Treatment of PTSD Following Rape

In the week after an exposure session, in which Ms. S. had reported the details of the rape for the first time, the patient experienced an increase in PTSD symptoms. She was worried that the therapy might harm her. The worsening of the symptoms was also evident in the questionnaire filled in by Ms. S. before the following session. Together with her therapist, Ms. S. analysed the development of symptomatology at the beginning of the next session.

This showed that although the severity of the symptoms had increased in the previous week, they were still significantly lower than at the beginning of the treatment. The therapist also took the time to normalise the increase in symptoms and to make it clear that this did not pose any danger to the patient, but on the contrary showed that a processing process had been initiated. Ms. S. felt relieved and was ready to return to exposure during this session.

- CBT for PTSD also includes continuing assessment during treatment. PTSD symptoms should be recorded regularly during the course of therapy (e.g. before each session) and discussed together at the beginning of the session.

13.4.2 Preparation for Trauma-Focused Therapy

13.4.2.1 Psychoeducation

The aim of psychoeducation is to normalize the symptoms and make them understandable. This usually happens in two steps:

- Normalization of symptoms,
- Providing an explanatory model for the symptoms.

■ Normalization of Symptoms

Many patients with PTSD hold catastrophic beliefs about the symptoms they experience (► Sect. 13.3.2). To normalise symptoms, it is often helpful to provide the following information.

Helpful Information About the Symptoms

- *“The symptoms are common. You’re not alone in this.”*
- *“PTSD symptoms are a normal response to an abnormal event. It does **not** mean there’s anything wrong with you as a person.”*
- *“What you experience has a name, post-traumatic stress disorder, and there are defined criteria (ICD/DSM).”*
- *“The symptoms are understandable and treatable.”*

■ Providing an Explanatory Model for the Symptoms

The model should be developed collaboratively with the patient and should, among other things, help the patient to better understand the issues listed below.

Important Components of the Explanatory Model

- **Development of the disorder:** *“Why do I have this disorder?”*
- **Maintenance of the disorder:** *“Why don’t the symptoms go away by themselves?”*
- **Treatment rationale:** *“How can therapy help me to process the trauma and get rid of my symptoms?”*

For detailed instructions on how to perform psychoeducation, the treatment manuals cited in ► Sect. 13.2.2 are recommended. Patients also often find it helpful if they can continue reading about their symptoms between sessions. Patient guidebooks can also be used for this purpose (e.g. Ehring & Ehlers, 2018; Herbert & Wetmore, 2005).

■ Use of Metaphors in the Development of the Explanatory Model

When developing the explanatory model with the patient, it is important to prepare the information in such a way that the patient can understand it and accept it as a helpful explanation for their own experience. It is therefore first recommended to develop the model in the style of a Socratic dialogue (see also ► Sect. 13.4.2.2). This ensures that the patient is actively involved in the process, checks whether the model fits their individual experience, and can draw the central conclusions of the model themselves. In addition, it is advisable to use

metaphors, for example to clarify the characteristics of the trauma memory.

Example: **Wardrobe metaphor** (for a collection of further metaphors see Priebe and Dyer (2014)): In the context of this metaphor, memory is compared with a wardrobe in order to develop an explanatory model for intrusive re-experiencing and, in a second step, to draw conclusions for treatment. The following steps are recommended (for more detailed instructions see Ehrling, 2014):

Steps to Develop the Wardrobe Metaphor

- Joint development of differences between trauma memory and everyday memories (e.g. re-experiencing in the “here and now”; dominance of sensory impressions; intense feelings as in the past; triggered by multitude of stimuli)
- Introduction of the wardrobe metaphor:
 - Comparison of the memory with a wardrobe (Function: Classification of memories)
 - Memories of everyday events are filed in a suitable compartment; effect: can be consciously taken out, but rarely falls out unintentionally
 - During a trauma this does not work (happens very quickly, is new, accompanied by high arousal); effect: clothes have no place in the wardrobe, fall out again and again when wardrobe doors are opened.
- Exploration of how the patient has dealt with trauma memories up to now; based on wardrobe metaphor explanation why this has not helped (e.g. avoidance/suppression: clothes are quickly thrown back into the wardrobe, door is closed shut; as a

result, they still have no place and keep falling out)

- Deduction of the implications for therapy: Wardrobe must be opened intentionally, clothes must be taken out, looked at carefully, unfolded and sorted into the wardrobe. Applied to the memory of the trauma, this means intentional exposure to the memory in treatment with the aim of processing.

13.4.2.2 Setting the Stage

Trauma-focused therapy is time-consuming, can be emotionally stressful and requires dealing with the treatment content even in-between sessions (homework). It is therefore important to set the stage before starting trauma-focused interventions.

In the view of most experts, trauma-focused treatment should only be started if there is no current threat (e.g. domestic violence; regular contact with a perpetrator who is still dangerous). It is therefore of utmost importance to clarify this prerequisite and – if necessary – to first focus on establishing security.

In addition, thorough planning can help to prevent interruptions or delays in the course of treatment (e.g. frequent cancellation of sessions). Thus, trauma-focused treatment should only begin when the patient has enough time to attend therapy sessions regularly and to do homework between sessions. It may also be important to clarify practical aspects, e.g. child care, holiday planning by the therapist and patient or arrangements at the workplace. For patients with an irregular daily routines or problems with emotion regulation, it is also recommended that therapist and patient make a plan on how the patient can spend the time immediately after the sessions (e.g. distraction and/or social support).

13.4.3 Modification of the Trauma Memory

A central component of most evidence-based treatment approaches for PTSD are strategies to modify the trauma memory (■ Fig. 13.1). In the following, two variants of this therapy module are presented in more detail:

- imaginal exposure according to Foa et al. (2014),
- trauma memory updating in the context of cognitive therapy (Ehlers, 1999).

13.4.3.1 Imaginal Exposure

The basic principle of imaginal exposure is that the therapist instructs the patient to expose themselves to the memory of the trauma in their imagination with their eyes closed. The patient should chronologically let the experiences happen in front of their inner eye and describe them. It is important to include all aspects of the trauma and one's own reaction to it, i.e. the objective event, sensory impressions in all modalities, thoughts, feelings, bodily sensations and one's own behaviour. In order to intensify the experience and initiate processing, the patient is instructed to describe the experience in the present tense and in the first person singular. It is important for the processing that no avoidance and no safety behaviour takes place during exposure, so that the patient also includes those aspects of trauma memory that are particularly stressful or embarrassing for them.

According to Foa et al. (2014), imaginal exposure lasts about 45–60 min in the first treatment sessions, and 30–45 min in later sessions. If a session lasts much shorter, exposure to the same situation should be repeated with the same session if possible, so that the total duration described above is achieved. Therapy sessions of 90–100 min should therefore be scheduled, leaving enough time for the pre- and post-exposure discussion.

Imaginal exposure is repeated during the therapy sessions. If there are several traumatic experiences, several sessions with the first traumatic memory should be conducted first. Only when a clear habituation has taken place between the sessions and the traumatic memory no longer triggers a high level of stress does the processing of the next traumatic memory begin.

Foa et al. (2014) also suggest that after the first 1–2 exposure sessions with the complete traumatic memory, imaginal exposure should subsequently be limited to the **hotspots**, that is to the worst moments within the trauma memory, which often correspond exactly to those parts of the trauma that are relived as intrusions, nightmares or flashbacks. The first hotspot is first re-activated and described in great detail (and possibly even in slow motion); this is repeated until habituation occurs. Then therapist and patient turn to the next hotspot until all relevant hotspots have been processed in this way.

In the following, the course of an exposure treatment is described.

Aims of Imaginal Exposure According to Foa et al. (2014)

- Habituation within the session
- Habituation between sessions
- Elaboration of the trauma memory: Creating a coherent narrative
- Change in trauma-related appraisals (happens spontaneously during the exposure and in the debriefing)

Preparation of the First Exposure Session (see also ► Sect. 13.4.2)

- Clarify motivation
- Setting the stage
- Development an explanatory model and treatment rationale
- In case of multiple traumas: selection of the situation to start with; possible criteria:

- Prioritize traumatic experiences that are often re-experienced in everyday life
- Develop a hierarchy of all events and prioritize events with a high position in this hierarchy
- Thematic clustering of traumas and selection of the most relevant cluster
- Starting with the first and/or worst experience

Procedure of the First Exposure Session

- Remind patient of the treatment rationale
- Introduce the procedure
 - Eyes closed
 - Bring up the experience in your mind and describe it from the beginning (just before the threat started) to the end (when the acute threat is over)
 - Description in first person singular (I, me) and present tense (“as if it were happening now”)
 - Inclusion of all aspects (actions/ events, thoughts, feelings, sensory impressions, bodily sensations, impulses for action)
 - It is important to allow everything to come up, not to suppress thoughts and feelings
- Explore and answer questions and concerns
- Introduce the subjective units of distress (SUD) and vividness ratings (0–100 each)
- Start recording device (for later homework)
- Start imaginal exposition, thereby
 - Support the patient
 - “You are doing very well!”
 - “Stay tuned.”
 - “I realize it’s hard for you, but you’re doing it very well.”

- “You are safe here. Remember, memories are not dangerous.”

– Key questions

- “What is happening now?”
- “What do you think?”
- “What can you see, hear, smell, taste? What does it look like? Please describe it as much detail as you can.”
- “What are you feeling?”
- “What are you feeling in your body? Where in your body do you feel this?”
- Obtain ratings of vividness and stress (SUDs) (0–100)

– Debriefing

- Provide positive feedback, reinforce the patient for their effort and hard work
- If necessary: help patient stabilize and/or to get rid of the memory
- Explore thoughts and feelings about the exposure session; if necessary: normalize
- Explore whether habituation has occurred
- Identify hotspots (for later exposure sessions)

Next Steps

- Homework: Listen to the recording of the session several times (if necessary: plan together, when and where)
- In subsequent sessions: Repetition of imaginal exposition, initially with the same event. After 1–2 regular exposure sessions, possibly focus on the hot spots.

13.4.3.2 Trauma Memory Updating

In cognitive therapy (Ehlers, 1999), imagery is also used to modify trauma memory. In contrast to prolonged exposure, however, the focus here is not on achieving habitua-

tion. Based on the cognitive disorder model by Ehlers and Clark (2000) (► Sect. 13.3.1 and ■ Fig. 13.1), the focus is instead on updating and contextualising the trauma memory and to achieve an emotionally effective modification of dysfunctional peri-traumatic appraisals.

Aims of Trauma Memory Updating in Cognitive Therapy

- Updating the trauma memory by integrating new information
- Contextualisation of the trauma memory by linking it with other autobiographical events and/or clarifying the differences between then and now
- Emotionally effective change in dysfunctional appraisals

In order to first get an overview of the traumatic experience and to identify the relevant hotspots, cognitive therapy initially involves complete imaginal exposure conducted 1–2 times. In the debriefing part of each session, the therapist and patient then jointly explore the relevant hotspots and the appraisals and emotions contained therein. In the next step, dysfunctional appraisals represented in the hotspot are first challenged using cognitive techniques and new more helpful appraisals are developed. Then therapist and patient jointly develop a plan on how the trauma memory can be updated against the background of this new appraisal. In the final step, the target hotspot is re-activated with the help of imaginal exposure, and then the a priori planned intervention to update the trauma memory is implemented. As with prolonged exposure, the session is recorded so that the patient can listen to it again as homework. In addition, the exercise is repeated until there is a significant change in the appraisals and associated emotions.

Trauma Memory Updating: Procedure

- 1–2 sessions of imaginative exposure
- During debriefing: Identification of hotspots (including key appraisals and associated emotions)
- Cognitive restructuring of appraisals
- Joint planning on how trauma memory can be updated
- Re-activation of the hotspot and integration of updating information

When the hotspot is activated in Step 5, the update can be achieved in several ways. For example, after the hotspot is activated, the patient can **verbally** remember important corrective information (e.g. “*I now know that I did not die*”; “*I now know it was not my fault*”). The therapist can support the patient in this by assisting the verbal cognitive restructuring of the hotspot during imagination using Socratic questioning (e.g. “*You blame yourself that it was your fault. What do you know now? What else has contributed to it happening*”) (for a detailed description of this strategy with practical examples see Grey et al. (2002)).

Alternatively, once the hotspot has been activated, the patient may perform **actions** that conflict with the experience of the trauma (e.g. getting up, moving) or that provide them with sensory evidence that contradicts the evaluations (e.g. palpating body parts that were injured and have since healed; looking at a photograph of themselves with other people that was taken after the trauma).

It is also possible to incorporate corrective information into the trauma memory by directly **altering the script using imagery** (e.g. letting other people enter the scene who interact with the victim; imagining the perpetrator in prison).

Case Study 1: Accident Survivor Mrs. R

Ms. R., who has experienced a serious traffic accident (case study from ► Sect. 13.3.1), reports as a hotspot the moment when the headlights of the other car speed towards her (key appraisal: “*I am going to die*”; emotion: fear of death). This hotspot recurs almost daily as an intrusive memory; each time Ms. R. experiences a feeling of fear of dying and the evaluation “*I am about to die*” is again present. After a single trial of the imaginative exposure, therapist and patient plan together how to update the hotspot. The aim is to connect the corrective information (“*I have sur-*

vived; I am not about to die.”) with the traumatic memory. The following session starts with a short imaginal exposure to reactivate the hotspot. Once the sensations, appraisals and emotions associated with the hotspot are activated, the therapist helps the patient with guiding questions (“*You think you are about to die. What do you know now? What evidence do you have that you have survived?*”) to consciously remember the updated information (“*I did not die*”; “*I have been married, had a child and moved since the accident*”).

■ Notes

If – as in this case example – the corrective information/evaluation is clear, Step 3 (cognitive restructuring outside of the imagery intervention) can be skipped. Alternative possibilities for updating in this case would be

- that after updating the hotspot, the patient looks at a photo showing them and their family in the new house,
- that the patient gets up and walks around the room to make themselves aware that they are unharmed, or
- rewrite the scene imaginatively (e.g. let someone enter the scene to rescue them from the situation)

Case Study 2: Surviving War

Mr. A. came to Germany as a refugee after having experienced a civil war in his home country as a civilian. In therapy, he first works on the memory of a situation in which his brother was shot. Mr. A. describes a key hotspot as the moment in which he sees his brother lying in a pool of blood with a head injury before he dies (appraisal: “*My brother suffers unimaginable agony*”; “*My brother was stripped of all dignity*”; emotions: fear, disgust). Within the framework of cognitive processing outside of imagery interventions, the therapist first examines the peritraumatic

appraisals more closely with Mr. A. It thereby becomes apparent that whenever Mr. A. has to think about his brother in everyday life, he always has the feeling that his brother is still suffering unimaginable pain. An important corrective information is to be aware that the brother died soon after the shot and has not suffered any more pain since. As a result, Mr. A. comes to the conclusion that his brother was a good man, who is now safe in paradise, where the undignified circumstances of his death no longer affect him. In order to integrate these new appraisals into the trauma

memory, Mr. A. decides, together with his therapist, to use imagery to bring the trauma to an end. After re-activating the hotspot and the associated appraisals and feelings, the patient engages in imagery that includes him bringing his brother home, paying his last respects, washing, dressing and burying him

and saying goodbye to his brother at the grave. The imagination ends with Mr. A. imagining how his brother faces him again and tells him that he does not need to worry about him, because he is now in a better place and he is doing well.

13.4.3.3 Further Variations of Interventions to Modify Trauma Memory

■ Writing About the Traumatic Event

Within the framework of cognitive processing therapy (König et al., 2012), structured writing therapy (Sloan et al., 2011; van Emmerik et al., 2008) and web-based variants of trauma-focused CBT (► Chap. 15), patients with PTSD are instructed to write about their trauma. Ehlers and Clark (2000) also recommend to ask patients to write a trauma report in addition to the imagery-based interventions described above.

■ Narrative Integration of the Trauma Into the Autobiography

Narrative exposure therapy (Schauer et al., 2011) is characterized by the fact that individual traumatic experiences are not processed separately, but that it aims to integrate different traumatic experiences into their autobiographical context through a reconstruction of the entire life span using a narrative process. Treatment begins with the recording of relevant life events and their chronological classification based on a life line. The core treatment component then consists of the chronological narration of the life story, whereby significant and traumatic life events are dealt with in greater depth using exposure. The narrative is written down and read out again in the next session and corrected or supplemented if needed.

■ Imagery Rescripting

As described above, the direct alteration of trauma-related imagery is used in cognitive therapy (Ehlers, 1999) as a building block to update trauma memory. In some recent approaches, this strategy lies at the core of these treatment.

Imagery Rescripting and Reprocessing (IRRT) (Schmucker & Köster, 2014)

- **Targets:** Reduction of intrusive re-experiencing, change of negative schemas as a result of early-life trauma (especially sexual and/or physical violence in childhood)
- **Three phases** (to be completed one after the other within one session)
 - **Imaginal exposure** (► Sect. 13.4.3.1).
 - **Imagery rescripting I: Disempowering the offender.** Repeat the exposure up to the relevant hotspot, then start rescripting. The therapist guides the patient to imagine entering the scene as the adult they are today and interacting with the perpetrator (and later the child). In phase 2, the aim of rescripting is to disempower or at least neutralize the perpetrator and bring the child to safety. In this way, the traumatic memories, which are characterized by powerlessness and helplessness, are to be replaced with

new images in which the patient experiences themselves as effective and strong. The patient can decide which steps they want to take (e.g. verbal or physical confrontation with the perpetrator; arrest by the police; acceptance of real or imaginary helpers; threat or use of force of arms).

- **Imagery rescripting II: Self-calming and comforting.** After having successfully disempowered the perpetrator, the next phase of rescripting is initiated, which aims to bring about a healing interaction in the imagination between the patient as a present-day adult and the traumatised child. As an adult, the patient can take care of the child's needs (e.g. taking the child in their arms and comforting it; explaining to the child what has happened). Ambivalent or negative feelings towards the traumatised child in the form of self-rejection, self-reproach or disgust can also be dealt with in this phase.

Imagery Rescripting (Arntz, 2015)

Arntz (2015) has developed a variant of imagery rescripting that, among others, differs from the IRRT approach in the following aspects:

- After the rescripting phases, in which the patient enters the scene as a present-day adult and brings about changes, a further phase follows in which these changes are experienced once again from the perspective of the traumatized child. The aim of this additional phase is to achieve a more lasting change in the dysfunctional trauma-related beliefs.

- Patients who feel overwhelmed by the task of confronting the perpetrator as an adult can be supported by the therapist entering the imagined scene and acting as a role model. This is not allowed in the IRRT method.

Imagery Rehearsal Therapy (IRT) for Nightmares (Thünker & Pietrowsky, 2011)

- IRT is used for the treatment of recurrent distressing nightmares.
- First, the content of a nightmare is explored; then the therapist and patient jointly develop a scenario for an alternative end to the dream. This end is then rehearsed repeatedly using imagery techniques.

■ Identification and Discrimination of Triggers of Intrusive Re-experiencing

The interventions described so far aim to change the contents of the trauma memory and/or to promote the embedding of trauma memory in the autobiographical memory base. In contrast, an additional strategy within the framework of cognitive therapy (Ehlers, 1999) aims to change the processes that lead to frequent triggering of intrusive re-experience.

Discrimination Training (Ehlers, 1999)

- Psychoeducation about memory processes that lead to frequent triggering of intrusive memories (► Sect. 13.4.2)
- Identification of triggers for intrusive re-experiencing (e.g. through the use of diaries); this often requires “detective work”, as triggers do not always show a meaningful connection with the trauma, but are often sensory

■ **Table 13.1** Trigger of intrusive memory: Hug by the partner

	At that time	Today
Commonalities	Heat of another body on my body	Heat of another body on my body
Differences		
Who?	Strange man/offender	Person I love/my partner
How?	Forced/couldn't leave	Voluntarily/I can leave at any time
Where?	In the street	In my apartment
Weather?	Summer, hot weather	Autumn, cool and windy
Aim of the other person	To dominate me	To show me his affection
Meaning	Danger	No danger

impressions that only have a temporal association with the trauma

- Deliberate discrimination between “then” and “now”
 - **Example:** PTSD after rape
 - **Trigger of the intrusive memory:** hug by the partner (■ Table 13.1)
- Frequent repetition: deliberate triggering of stimuli, then discrimination exercise (then vs. now)

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13.4.3.4 Difficulties and Possible Solutions

Special challenges can arise when carrying out interventions aiming to modify the trauma memory (e.g. imaginal exposure). In the following, some possible solutions to these difficulties will be outlined.

■ Avoidance

One of the core symptoms of PTSD is the avoidance of traumatic memories. In the context of imaginal exposure, however, confronting oneself to the memories of the trauma and the feelings associated with

them is necessary. The reduction of avoidance is therefore an important challenge for treatment. The communication of a convincing rationale (► Sect. 13.4.2) plays an important role here, as do interventions to increase commitment, for example in the form of a detailed exploration of the advantages and disadvantages of avoidance using list of pros and cons.

Therapists may themselves also feel anxious and engage in avoidance behavior in relation to imaginal exposure and may therefore delay the start of this intervention for too long. Therapists who have little experience in the implementation of trauma-focused interventions also frequently report that when difficulties arise (e.g. short-term worsening of symptoms, dissociation, ambivalence on the part of the patient) they become uncertain whether to continue with trauma-focused treatment. This uncertainty is understandable. However, it is important for successful treatment to continue the trauma-focused interventions (e.g. imaginal exposure) especially in these situations. It is therefore recommended that therapists new to trauma-focused interventions and/or encountering problems seek supervision from experienced colleagues.

Key Considerations

- Although trauma-focused interventions are the first-line treatment for PTSD, they are used less frequently than is actually indicated. Anxiety and avoidance on the part of both the patient and the therapist can play a role.
- It is important for therapists to be aware that treatments such as imaginal exposure or cognitive therapy are effective and safe procedures with a sound evidence base.
- Registered CBT therapists with a qualification have all the skills needed to carry out these interventions. However, it can be useful to have experienced colleagues supervise the first treatments.

■ Low Vividness and/or Emotionality

The effectiveness of imaginative strategies (imaginal exposure; trauma memory updating; imagery rescripting) may be limited if the patient does not succeed in developing vivid imagery and/or if emotions of very low intensity only are experienced. It is not always possible to tell from an observer perspective how strong the vividness and emotionality of imagery is; for this reason, it is recommended to have vividness (0–100) and distress (0–100) assessed repeatedly during imagery-based interventions. In order to increase vividness, it can help to slow down the process and to direct patient's attention to sensory impressions in all relevant modalities as well as physical sensations. However, if the problem persists, the therapist should explore whether this could be an expression of avoidance on the part of the patient. If

this is the case, the patient's possible fears that prevent them from engaging in the intervention should first be explored and challenged. It may also be necessary to go back to the treatment rationale and/or engage in intervention to increase commitment.

■ Dissociation

Some patients experience **mild** dissociative symptoms during trauma-related imagery, such as feelings of derealisation, a changed perception of time or a strong “here and now” quality of a memory. This is usually not problematic. However, it can be helpful for the therapist to normalise these symptoms and make them understandable through psychoeducation so that they are not experienced as threatening.

On the other hand, **severe** dissociative symptoms during trauma-focused interventions can impair the implementation and effectiveness of the intervention. An example of this can be that the patient has lost contact with the “here and now” and hardly or not at all responds to the therapist's utterances. In this case it is absolutely necessary to use strategies to control the dissociation so that the trauma-focused intervention can be continued. However, it is important to remember that the occurrence of dissociative symptoms is not a contraindication for imaginal exposure or other trauma-focused procedures. Patients with severe dissociative symptoms also benefit more from trauma-focused treatments with an exposure element than from purely stabilising interventions (Ehring et al., 2014; Resick et al., 2012). If dissociation occurs, trauma-focused treatment should therefore not be terminated or interrupted for a longer period of time, but should be continued – albeit in a modified form – as soon as possible.

Dealing with Dissociation

- **Short term: dealing with severe dissociation during exposure**
 - **Objective:** To help the patient regain orientation in space and time
 - **Strategies** (examples):
 - Address patient with name
 - Speak loudly and/or making loud noises (e.g. clapping hands)
 - Ask the patient to open their eyes, stand up, walk around the room
 - Draw the patient’s attention to sensory impressions (e.g. visual, acoustic) and ask them to describe these.
- **Long-term: Modification of imagery-based techniques in case of strong dissociative symptoms**
 - **Goal:** Continuation of trauma-focused treatment in a way that the patient remains oriented in space and time and responsive to the therapist’s intervention
 - **Strategies** (examples):
 - Using a more gradual approach
 - Imagery with open eyes
 - Grounding techniques: focusing on sensory stimuli during the imagination, e.g. holding certain objects in the hand, certain smells
 - Use of skills during imagery (► Chap. 17, DBT-PTSD).

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13.4.4 Cognitive Interventions

13.4.4.1 Overview of Cognitive Variants of CBT for PTSD

With cognitive processing therapy and cognitive therapy according to Ehlers and Clark (2000), there are two evidence-based therapies for PTSD in which cognitive interventions play a key role. In this section the most

important principles of these therapeutic approaches will be briefly outlined.

The starting point of **cognitive processing therapy** (CPT) (König et al., 2012) is the assumption that traumatic experiences can lead to rigid beliefs (for a more detailed description of the processes of assimilation and [over]accommodation ► Sect. 13.3.2). Based on this model, CPT aims to promote a balanced system of beliefs about oneself, others and the world, which in turn should lead to a reduction in PTSD symptoms and the development of feelings of safety and control. CPT follows a very structured approach, with a focus on working through worksheets in sessions and homework. The usual setting for CPT is individual treatment with weekly sessions; however, group variants have also been developed and validated.

Cognitive Processing Therapy (CPT): Procedure

- Introduction and psychoeducation
- Therapy goals and introduction of the concept of “stuck points” (dysfunctional beliefs)
- Report on the significance and effects of the trauma
- Identification of thoughts and feelings (ABC sheets)
- Written trauma report
- Identification of the “stuck points”
- Dealing with helpful questions on challenging thoughts
- Problematic patterns of thought
- Safety
- Trust and confidence
- Power and control
- Positive regard
- Intimacy and self-care
- Reflection and conclusion

Cognitive therapy (Ehlers, 1999) is based on the cognitive model of PTSD developed by Ehlers and Clark (2000) (► Sect. 13.3). The authors suggest, among other things, that

excessive negative appraisals of the trauma and/or its consequences, which increase the perception of a current threat, contribute to the maintenance of PTSD. An important distinction is made between peritraumatic and posttraumatic appraisals. **Peritraumatic appraisals** are interpretations that trauma survivors already had during the event and which have not been updated since then, often despite new information being available. To change these peritraumatic appraisals, the strategies for updating trauma memory already described in ► Sect. 13.4.3.2 are suitable. **Post-traumatic appraisals**, on the other hand, are interpretations that the trauma survivors have later developed in relation to the trauma and/or its consequences and which are to be targeted with traditional cognitive interventions. To this end, Ehlers and Clark propose a variety of cognitive techniques, which are described in more detail below.

- According to Ehlers (1999), problematic post-traumatic appraisals should be targeted using traditional cognitive interventions, while dysfunctional peritraumatic appraisals should be targeted with strategies for trauma memory updating.

13.4.4.2 Important Techniques

In principle, all cognitive strategies and techniques that appear helpful in changing dysfunctional appraisals can be used in treatment with PTSD patients. While CPT – similar to cognitive therapy of depression – suggests a very structured approach using a set of worksheets, Ehlers and Clark place a stronger emphasis on interventions of cognitive restructuring in the session as well as on behavioural experiments. Both approaches have proven to be highly effective. In the following, some techniques and strategies will be briefly described.

■ Identification of Dysfunctional Appraisals and Beliefs

Problematic appraisals of the trauma and/or its consequences to be modified in therapy can be identified in various ways. They often appear in patients' spontaneous expressions during the session (e.g. over-generalisation of danger; cognitions related to guilt; negative self-evaluation) and should then be noted for later processing. Within CPT, a **list of stuck points** is kept on which all dysfunctional beliefs that are identified in the course of treatment are noted and targeted one after the other. During debriefing in the wake of an imaginal exposure session (or other interventions to modify trauma memory), patients also frequently express appraisals of the trauma or its consequences that lend themselves to later processing. Another way of identifying dysfunctional appraisals is to use a questionnaire with typical posttraumatic cognitions, e.g. the Posttraumatic Cognitions Inventory (PTCI) (Foa et al. (1999); German translation in Ehlers (1999)). Finally, diaries, for example in the form of ABC worksheets, are suitable to identify appraisals that trigger stressful feelings in everyday situations (► Fig. 13.2).

Before the therapist begins to challenge dysfunctional appraisals, it is necessary to understand the patient's current point of view (What exactly does the patient believe? What had led them to hold this belief? What reasons/evidence do they have to hold this belief? Does the belief offer an explanation for the patient's feelings?) It is also important for many patients to experience that the therapist understands and validates their old point of view before they are ready to challenge it.

- Therefore: first understand – then change!

Date/ Time	A. Trigger event	B. Thought/belief	C. Consequence
	<i>Something has happened</i>	<i>I say to myself</i>	<i>I feel.../I do...</i>
<i>Monday, August 13th.</i>	<i>In the evening on the road, see a foreign looking man</i>	<i>"It's about to hit me"</i> <i>"I cannot trust any man!"</i>	<i>Fear</i> <i>Fear, sadness</i>

■ Fig. 13.2 Example of an ABC worksheet

■ Socratic Questioning

In the disputation of dysfunctional evaluations, **Socratic questioning** has proven to be a helpful method. The therapist helps the patient to reflect on their old point of view, to identify contradictions or shortcomings and to develop alternative views and new insights. The therapist adopts an ignorant, naive, questioning and understanding attitude. It is important that the process is open-ended and that the answers to the questions raised and the new perspectives are not provided by the therapist, but are developed by the patient herself.

- Collect all arguments and evidence that speak for the belief and write them down
- Collect all arguments and evidence that speak against the belief and write them down and check the validity of the evidence for the belief
- Formulate alternative beliefs in concrete terms and put them down in writing
- Have the degree of the original belief and the new alternative belief reassessed (0–100%)

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■ Challenging Beliefs with Empirical Evidence

A common approach to challenging dysfunctional beliefs is to gather arguments and/or evidence for and against the belief, and then develop alternative views in light of the overall evidence.

Challenging Beliefs with Empirical Evidence

- Formulate dysfunctional beliefs in concrete terms and put them down in writing
- Have the degree of conviction of this belief assessed (0–100%)

■ Challenging Beliefs with Hedonistic Arguments

While empirical thought challenging examines the question of whether a thought or belief is true, another form of thought challenging focuses on the question of whether it is helpful for the patient to have this thought or belief. In this way, alternative thoughts are to be developed that better help the patient to achieve her personal goals and/or to leave the trauma behind.

- Sometimes dysfunctional beliefs also have a **function** that must be taken into account in the disputation.

Case Study: PTSD After a Rape

Mrs. S. was raped by a stranger in a park a year ago. Since then she has been plagued by strong guilt-related cognitions (“*I should have prevented it*”; “*It only happened because I was so provocatively dressed*”). The guilt proved to be very resistant to change by cognitive interventions. In the course of the therapy it became apparent that the guilt-related cognitions had the function of avoiding feelings of helplessness and associated appraisals (“*I was helplessly at his mercy*”).

■ Analysis of Problematic Thinking Patterns

In the context of CPT, psychoeducation on problematic thinking patterns (sometimes called **thinking errors** or **cognitive errors**) plays an important role. These are automatic patterns of thinking or reasoning that contribute to the development and maintenance of dysfunctional beliefs.

Examples of Problematic Thinking Patterns

- Arbitrary or selective conclusion
- Over- or understatement
- Black and white thinking
- Catastrophic thinking
- Mind reading
-

■ Behavioural Experiments

The aim of behavioural experiments is to change dysfunctional beliefs by enabling patients to make new experiences that contradict their beliefs. To do this, it is important to formulate the dysfunctional beliefs

as predictions and then create situations in which these predictions can be tested. Behavioural experiments often lead to faster and more lasting emotional change than pure verbal though challenging.

13.4.4.3 Common Topics

In **Table 13.2** common beliefs held by trauma survivors with PTSD are presented as examples and possible cognitive interventions for these beliefs are briefly outlined.

13.4.5 Modification of Maintaining Behaviour

Trauma survivors with PTSD often engage in dysfunctional coping strategies that aim to control the perceived current threat and the symptoms (► Sect. 13.3.3). Some of these strategies are automatically modified using interventions described above (e.g. reducing the avoidance of trauma memories through imaginative exposure). In other cases it may be necessary to use additional interventions to directly modify the dysfunctional strategies.

■ Avoidance Behaviour and Safety Behaviour

Trauma survivors often avoid situations that remind them of the event. This can severely restrict the quality of life. In these cases, **in vivo exposure** is indicated as an intervention. For this purpose, a hierarchy of avoided situations is first established, and each situation from the hierarchy should be dealt with one after the other in a gradual way. If possible, it is recommended that the therapist and patient visit difficult situations together. In vivo exposure can be carried out in different ways, which differ in terms of their objectives.

Table 13.2 Dysfunctional beliefs and possible interventions

Topic	Beliefs (examples)	Interventions (examples)
Guilt	I'm to blame for the attacks. I should have stopped the violence. I should have known it would come to this. I provoked the violence by my behavior.	Psychoeducation about The level of development of children (in case of childhood trauma), Behaviour in traumatic situations, Legal considerations
		Reconstruction of the situation at that time: What were your reasons then? What circumstances contributed to your behavior at that time? What did you know/expect at that time?
		Modification of the hindsight bias
		Surveys: What do others think about it?
Overgeneralisation of danger	I'm not safe anywhere. I can't trust anyone. I'm about to have another accident/robbery. I attract misfortune.	Psychoeducation about Features of trauma memory, Selective attention
		Calculating probabilities
		Identification of reasoning errors: Emotional inferences ("I feel anxious, therefore danger must be imminent") Overgeneralization Selective attention to other disasters
		Behavioral experiments: What happens if I expose myself to situations in which I suspect danger?
Shame	When others find out what happened to me, they will want nothing more to do with me. My behaviour during the trauma shows that I am weak. I am a bad person because I enjoyed the attention of the perpetrator.	Reconstruction of the situation at that time: What were your reasons then? What circumstances contributed to your behavior at that time? What did you know/expect at that time?
Injustice/anger	The world is unfair. I was wronged, and no one cares. The person who caused the accident did it on purpose/wanted to harm me.	Important: Empathy and validation
		Explore context, reduce personalization of the explanation
		Dispute assumptions about intentions of the other side/change of perspective
		Hedonistic thought challenging ("Who wins when I'm angry?") Constructive exchange instead of revenge

In Vivo Exposure

- During in vivo exposure as part of the prolonged exposure treatment developed by Foa et al. (2014), the **reduction of avoidance** as well as **experiencing habituation** are the main focus. Using this procedure, the patient should remain in the situation until habituation has occurred. Furthermore, avoidance and safety behaviour during exposure should be prevented.
- In vivo exposure can also be carried out as a **behavioural experiment**, the aim of which is to test the patient's beliefs (e.g. "*If I am not constantly on my guard, another accident will happen*": driving a car without excessive checking of the rear-view mirror; "*Others don't want anything more to do with me when they find out what happened to me*": telling others about the trauma and getting feedback).
- In the context of cognitive therapy (Ehlers, 1999), in vivo exposure is also used with the aim of promoting **discrimination between "then" and "now"** (► Sect. 13.3.3).

■ Social Withdrawal

Trauma survivors with PTSD often withdraw from other people and/or give up activities that were previously important to them. This can increase the feeling that the trauma has destroyed life and cut off important resources. In cognitive therapy (Ehlers, 1999), patients are therefore systematically guided to **reclaim their lives**. To this end, therapist and patient compile a list of activities and contacts that were important to the patient before the trauma (or work out realistic alternatives if these are no longer available). Then the resumption of these activities is planned in small steps and implemented

by the patient as homework. The progress as well as the effects of this change in behaviour are evaluated at the beginning of each session before a new plan for the coming week is worked out.

■ Further Examples

Other dysfunctional behaviors include **excessive trauma-related rumination, hypervigilance and overprotection of children/family**, excessive **substance use** and **dysfunctional sleep patterns**.

Interventions Used for the Modification of Maintaining Behaviour

- Identification of dysfunctional behaviour and its function through functional analysis
- Psychoeducation about the effects of these behaviours
- Cognitive interventions targeting underlying beliefs
- Cost-benefit analysis of dysfunctional strategies
- Behavioural experiments: What happens if I replace this strategy with something else or leave it out?
- Training of alternative behaviour (e.g. sleep hygiene, emotional regulation skills, social skills)

13.4.6 Targeting Additional Problems

Many patients suffer from comorbid disorders or psychosocial problems in addition to PTSD. In most cases, after successful treatment of PTSD, a reduction in comorbid symptoms and an improvement in the level of function can be observed. It is therefore advisable to first evaluate after PTSD treatment in which problem areas sufficient improvement has already been achieved and whether there are still symptoms or problems for which further treatment is indicated.

- For some patients, treatment is not yet completed after successful reduction of PTSD symptoms. A thorough assessment should therefore be made at this time to determine the need for further intervention.

13.4.7 Concluding Therapy and Booster Sessions

Most evidence-based treatment approaches include so-called booster sessions after the regular (usually weekly) therapy sessions have been completed, which are used to slowly fade the treatment out. These can take place, for example, at gradually increasing intervals of 2 weeks, 4 weeks and 3 months. The aim of the booster sessions is to support the patient in implementing the learned strategies in everyday life.

13.5 Summary and Outlook

The aim of this chapter was to provide an overview of evidence-based cognitive-behavioural treatment approaches to PTSD. Findings from treatment outcome research show that trauma-focused therapies are the treatment of choice for PTSD. A number of evidence-based treatment protocols are available, which – with different foci – usually contain the following building blocks:

- modifying the trauma memory,
- changing dysfunctional appraisals/beliefs and
- modifying dysfunctional maintenance behavior.

An overview of these strategies was provided. For details, interested readers are referred to the original treatment manuals.

The chapter presents the current state-of-the-art of evidence-based cognitive behavioural therapy for PTSD. In recent

years, however, there has been intense research activity aiming to better understand the factors that influence trauma-focused PTSD treatment, improving the effectiveness and tolerability of trauma-focused interventions, and developing treatments based on new principles of action. Further progress in the treatment of PTSD can therefore be expected in the coming years.

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Eye Movement Desensitization and Reprocessing (EMDR)

O. Schubbe and A. Brink

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14.1 Introduction

EMDR stands for “Eye Movement Desensitization and Reprocessing”. This eight-phase treatment concept describes the full process of trauma treatment. As first described in 1889 by Janet (1973 [1889]) and as recommended in the current treatment guidelines for PTSD (Flatten et al., 2001), EMDR treatment begins with trauma-specific history taking, treatment planning and stabilization. Only after sufficient stabilization, the traumatic memory can be processed. For each processing session, a stressful memory is selected and processed in five steps: Assessment, desensitization, installation, body scan and closure. In the best-case scenario, the traumatic memory has lost its stressful quality at the end of therapy, and the client’s quality of life has improved significantly.

Client History

EMDR was empirically developed by Francine Shapiro. She experimented with the use of eye movements for the resolution of traumatic memories. In 1985, she published her findings on the significance of eye movements for the installation of positive ego states (Shapiro, 1985). In 1988 she examined the effectiveness of her approach in her dissertation (Shapiro, 1988). The basic structure of EMDR is based on the phase model of trauma therapy: stabilization, trauma processing, and reintegration (Janet, 1973 [1889]). Then her intern Mark C. Russels and her developed the concept of “Reprocessing”. From this she later developed a theory model, the “Adaptive Information Processing” model. Her meditation teachers Ondrea and Stephen Levine shaped her understanding of what happens when memories are processed. In Vipassana meditation she learned the Lightstream Technique, which she included in her textbook for treating residual physical stress. There are also numerous influences from hypnotherapy, Milton Erickson and his students. The best known of these are Milton Erickson’s VAKOG system, which is reflected in the imagination technique “Safe Place Exercise”, as well as studies by John Grinder on the effectiveness of eye movements in trauma sequelae. The SUD (Subjective Units of Distress) scale (1–10) according to Joseph Wolpe is used to measure the degree of stress and for before-and-after comparison.

EMDR has been developing dynamically ever since. Developments in trauma therapy are reflected in the design of the 8 EMDR phases. EMDR is being used for a wider range of applications. The understanding that EMDR can be used to process dysfunctional memory opens the possibility of using EMDR beyond the diagnosis of PTSD. Thus, EMDR can also be used to process sub-traumatic experiences of origin that have led to dysfunctional beliefs or a phobia, for example. Frequently, new fields of application are emerging. To increase the acceptance and the range of applications, more options to interweave resources into the processing phase and to balance between resources and trauma processing have been created. As EMDR is an empirically based procedure, theoretical considerations and models were developed further in accordance with the advancing knowledge.

Francine Shapiro set up a rather economical working model, the AIP model. Its terminology comes from computer science and appears quite technical (Shapiro, 2001, 2018). On a closer look, however, this model reflects the humanistic approach according to which a person unfolds under good conditions and develops deeply individual solutions and healing methods. The core of EMDR is a process that is initiated and accompanied in such a way that it offers optimal processing conditions. It is worth putting the model into a larger context in order to be able to explore it in depth.

EMDR is intended for combination with other established therapeutic procedures. There is a mutual basis for EMDR with psychoanalytically oriented approaches, as EMDR gives glimpses into the unconscious process. Changes can be brought about by processing original traumatic events as well as current maintaining conditions. EMDR utilizes the process of “free association” as a

vehicle for integration of traumatic memories (Wöller & Kruse, 2014).

EMDR is compatible with the principles of behavioural therapy: It places great value on a clear understanding of symptom maintaining conditions, on informed consent, on the integration of resources, and on the differentiation of cognitive generalizations. The phases of EMDR represent a solution focused structure. The typical EMDR session starts with one traumatic memory, patients' everyday posttraumatic triggers or symptoms, or with a future template, e.g. catastrophic expectations, which are thereto selected. Before confrontation, the therapist asks for the major hotspot of the event, the worst moment, or an image that represents the event. Trauma confrontation in sensu is a core element of EMDR. Following the confrontation in sensu, an in vivo confrontation can be necessary for reality testing (Linden & Hautzinger, 2011).

14.2 The 8 Phases of EMDR

Along the traditional concept for trauma treatment, EMDR starts with an assessment phase and a phase focusing on the patient's stability and quality of life. After these first two phases, the subsequent EMDR sessions guide through exposure, desensitization and reprocessing. The information from the assessment phase, specifically on traumatic events and biographical resources, is used for treatment planning. The resource orientation of EMDR make it a gentle approach (Sack, 2010). The work on stressors is always embedded in at least as many resources.

Four of the following phases (1, 2, 7, and 8) correspond with general treatment standards. The middle phases 3–6 are specific to EMDR (Schubbe & Gruyters, 2018).

EMDR as Procedure in 8 Phases (According to Shapiro)

Phase 1: Client history and treatment planning

Phase 2: Stabilisation and preparation for EMDR

Phase 3: Assessment of the target situation

Phase 4: Desensitization and reprocessing with external stimulation

Phase 5: Installation of the positive cognition within the target situation

Phase 6: Body scan

Phase 7: Closure of the session

Phase 8: Follow-up in the following session

14.2.1 Phase 1: Client History and Treatment Planning

14.2.1.1 Initial Interview

Like any other individual therapy, EMDR begins with the initial consultation. This serves as the first contact. Optimally, it helps with establishing a therapeutic relationship and mutual trust. As usual, it is necessary to ask why the patient is seeking therapy at this particular time, what their living conditions are, and which problems are bothering them. It should be asked whether the patient has previous experience with psychotherapy, and for therapeutic goals. Further questions relate to the motivation for therapy, whether the client is under pressure, or whether coercion has been exerted to enter treatment. The emphasis on wishes, motivation and a defined therapeutic goal determines the direction and layout of the treatment plan.

At this point of EMDR therapy, the symptoms need to be assessed. The therapist records the biographical context, in

which problems and associated beliefs might have originated. The challenge is to identify possible original traumatic and EMDR target events, but not to lapse into a detailed discussion. Hypothesis can be formed, but should not necessarily be discussed at this point of treatment. For example, it is obsolete to name hypotheses about possible traumatisations. The hypothesis may just as well be wrong, and this announcement would be manipulative. In the context of therapy after mono-trauma, on the other hand, the symptoms can be placed very directly in the context of the mono-traumatization. Their function within the trauma can be described psycho-educatively. A normalisation of the symptoms, in particular, should be achieved according to the principle: “This is a normal reaction to an abnormal event.”

Ideally, the therapeutic relationship is always established as accepting and appreciative of the client. The level of distress can be assessed for each traumatic event, but further exploration is too early at this point in time. Even clearly dysfunctional symptoms can be understood and communicated as the best possible attempt to survive a traumatic event or to deal with an existing symptom or family dysfunction.

While more and more patients are asking for EMDR therapy right away, a first trauma-specific initial interview is often not held until after the first phase of psychotherapy. There is not always an immediate supposition of a PTSD diagnosis. Oftentimes comorbid disorders lead to a therapy request. For example, addiction treatment should always be initiated first, according to the rules that apply to this type of treatment. Only after sufficient addiction treatment and stability of the patient, can the initial consultation on EMDR and trauma therapy take place. At

the same time, the patient must be informed that he or she may have possibly reacted with excessive consumption as an attempt to compensate a trauma. He or she can also be assured that a trauma treatment phase can therefore follow smoothly. This applies accordingly to all pre-treated comorbidities.

During the initial consultation, general information about EMDR should be given. The phases of the upcoming therapy can be outlined. Furthermore, the therapeutic conviction can be expressed that even severe incidents can be processed and associated symptoms can be alleviated or completely resolved.

14.2.1.2 Diagnostics

After mono-trauma, short trauma-related questionnaires can already be used for self-assessment in the first session of therapy. The diagnostic of people who have suffered multiple traumas, however, should be well prepared beforehand. It is very useful to check whether these patients already have the ability to regulate the usually significantly increasing emotional load after the presentation of the diagnosis. If this is not the case, the diagnostic phase should be preceded by a phase in which strategies for affect regulation are taught. In this phase, methods for reorientation, containment or hypnotherapeutic methods for emotional regulation can be used. In addition, a step-wise diagnostic can be embedded in several consecutive, otherwise resource-oriented sessions.

Generally, trauma-related diagnostics should never be given to the patient to fill out by themselves. Active therapeutic support should always be provided, so that there is opportunity for a stress-relieving conversation and the possibility of guided emotional regulation.

Under the Magnifying Glass

The first phase lays the foundation for therapeutic work. The relationship has the greatest influence on the moment in time when the traumatized patient will later feel enough trust and security to be able to process his mortifying, tabooed and in any case stressful traumatic memories with EMDR.

14.2.1.3 History Taking

With regard to treatment planning, it is beneficial to ask about stressful events such as separations, deaths, neglect, physical and sexual violence in the medical history right at the beginning of therapy. However, an intensive confrontation with traumatic memories requires sufficient stabilization. For this reason, the specific trauma assessment at this early stage should be carried out in a very structured, speedy and detached style. A resource assessment should be conducted in the same session – either directly afterwards or alternating.

There are two methods we particularly recommend: the first is creating a list, and the second is working with a timeline. When creating a list, it is advisable to fill in only one keyword for the event on each line, together with a number for the respective age. Finally, at the end of each line, a number from 0 to 10 is added for the degree of stress, i.e. for the degree of perceived stress when remembering in the present. Such a list may also make amnesic periods of life perceptible (■ Table 14.1).

Coping questions and stabilization exercises have proven to be useful for stabilization after the client's trauma history.

Afterwards the resources can be assessed in form of a list. The list of positive life experiences is intended to draw the patient's attention back to positive topics after talking about their trauma history and serves – in preparation for EMDR – to systematically

■ **Table 14.1** Specific trauma history taking (example)

Event	Age	Stress level/ SUDs
Parental separation	10	2
First boyfriend split	17	6
Skiing accident	28	5
Motorcycle accident	37	9

inform the therapist about the available resources.

The advantage of working with lists is that it encourages working with keywords. This protects the client against being internally flooded with traumatic material. In addition, the list of resources can be left openly on the table in the following sessions. It can be the aim of the stabilisation phase to amplify the items on this list in a beneficial way and to add missing aspects (► Sect. 14.2.2).

Working with a timeline offers another possibility for specific assessment of trauma history. A timeline of one's life can be laid out in the therapy room (e.g. with a rope), which supports viewing one's life from above, and gives an overview from today's point of view. Thus, interrelations can be detected, for example a connection between a stressful phase of life and the development of special resources.

When working with the timeline one can use the "Stones and flowers" principle. The traumas and burdens can be arranged with stones along one side of the timeline and the resources can be placed along the other side with flowers or stars.

More recent developments in EMDR already begin the introduction of bilateral stimulation in this phase, however it is only used to deepen and install positive resources (Rost, 2016).

14.2.1.4 Treatment Planning

The treatment planning is based on the recording the client's trauma history. This includes estimating which and how much stabilisation is necessary in the context of amplifying existing resources and developing new ones. In addition, topics for the EMDR-processing work can be selected - either from the list or the collected stones.

A typical EMDR processing session begins by focusing on a carefully chosen initial target.

With mono-traumas, the choice of this target is obvious. However, it must also be examined whether there exist earlier events in the client's biography which might be emotionally charged in a similar manner. This earlier incidents in the background have to be targeted before the later mono-trauma.

Patients with complex trauma have different traumatic memories and varying initial themes. These can come in considerable abundance, therefore they should be processed in several sessions. The planning of the EMDR process thus becomes an essential step within the overall treatment and should be approached very carefully and in close attunement with the patient.

The chronology rule was established by Shapiro as the most important rule. Phrases like "First things first" or "Past – Present – Future" characterise the so-called standard protocol. They remind us to process early traumatic memories before later ones. Traumatic memories experienced early in life can be updated for processing without triggering later memories, but not vice versa. The advantage of starting with the earliest memories is also that the distress of later events is reduced on its own, while such a generalisation is not being observed vice versa (Greenwald & Schmitt, 2008). However, Shapiro found limitations of this methodology in complex traumatized patients with a wide range of issues. The most detailed concept for EMDR treatment

planning in complex traumatized patients was developed by Kitchur (2005). She recommends to form thematic groups according to various criteria, and to bring them into a certain treatment order. The treatment topics should be chosen in such a way that they are emotionally accessible, but do not overtax the client's ability to regulate their emotions (affect rule). Completely accessible memories should be processed before fragmented or partially amnesic memories (rule of coherence). This is done in order to not surprise and overwhelm the patient at the beginning with memory fragments that become conscious anew. In Kitchur's approach the chronology rule is subordinated.

- ▶ Early planning of treatment and thus initial topics for the EMDR process leads to a transparent, well-structured course of therapy. It also forms the basis for the subsequent stabilisation phase.

14.2.2 Phase 2: Stabilisation and Preparation for EMDR

The stabilisation phase occupies an individually adapted space within the EMDR-process. For mentally stable patients who experienced a mono-trauma as adults (e.g., the motorcyclist after an accident, whose trauma history can be found in the Table 14.1 no extensive stabilisation phase is required). In this case, it is sufficient to devise the stabilization as a direct preparation for the EMDR-processing. It is also sufficient to practice only one stabilization method for safely switching into a resourceful state, and to practice another method for internal distancing and containment of stressful experiences. Also, patients with a very distressing biography, who have been able to develop an extremely creative and resourceful life (e.g., artists or musicians, who have found an additional expres-

sion for their traumatisation in their creativity), do not need an extensive stabilisation phase. In contrast, this is the most important and time-consuming therapeutic step in EMDR for patients with low resources.

As preparation for EMDR confrontational work, it should be remembered that this should not be carried out as long as unprocessed memory content cannot be combined with the resources necessary for processing. To the extent that traumatic memory content is avoided and dissociated in everyday life, the day-to-day resources available are difficult to access during the processing of traumatic memory content.

Under the Magnifying Glass

In the second phase of EMDR it is part of the concept to systematically support associative access to inner resources and to bring the patient into contact with the present and possible solutions. The effect of EMDR can be understood through the fact that during trauma processing new associative connections between traumatic contents and resources are created.

14.2.2.1 Stabilisation

The patient should learn to reduce the basic level of his or her internal distress. Movement-oriented methods are often better suited for this than quiet relaxation methods. To reduce tension and stress, elements from Qi Gong, Tàì Chi, Yoga, trauma and tension release exercise (TRE), expressive breathing exercises with forced exhalation, as well as any form of endurance sports are recommended. Only when these expressive and movement-oriented methods bear fruit can relaxation methods such as progressive muscle relaxation, autogenic training, painting, making music, listening to

music, relaxation CDs or pleasant manual activities, have a deepening effect on relaxation.

In addition, the patient should learn strategies for dealing with intrusive memories, nightmares and psychological crises. There are numerous strategies and exercises that have proven to be effective. In addition to methods for orienting oneself to the present in space and time, one example is the screen technique, the imagination of a screen. Patients learn to project their intrusions onto this imagined screen and then control them with an imagined remote control (Brink, 2014). The method of episodic contextualization (Ehlers, 2010) has been proven to be very successful. Here, patients are trained to embed chronologically the fragments of memory, which are (resurfacing in their intrusions or nightmares in such a way that a good memory precedes the memory fragment, which is in turn followed by a good later memory. Such a resourceful embedding makes it easier to relax and oftentimes the frequency of intrusions and nightmares decreases significantly. In order to deal with crises that are often experienced as inexplicable at the beginning, it is common practice in trauma therapy with EMDR to create a list of possible triggers and to help the patient to identify them gradually. For each trigger it should be contemplated if and how it can be avoided, or how it can best be dealt with. Working with such a list improves self-perception and self-care and helps to systematically replace harmful avoidance strategies such as addiction or self-harm.

Under the Magnifying Glass: Keeping an "Emergency Case" Ready

For unstable patients and patients, who have suffered multiple trauma, a so-called emergency case with stepwise strategies for stress relief is created:

- well-practiced reorientation techniques
- techniques for distancing oneself from stressful thoughts and feelings such as the film stop technique or the vault exercise
- a selection of cherished objects, favourite music, self-help literature
- addresses and phone numbers of friends
- (if applicable) medication
- telephone number of a previously carefully selected hospital

14.2.2.2 Indication and Contraindication

The first phases of EMDR can be started without considering any contraindications beyond normal patient education. This education should include the fact that psychotherapy can lead to changes and side effects, and that phases can also occur, in which the subjective wellbeing worsens.

When planning the confronting EMDR phases, further considerations regarding the indication or contraindication are necessary. These concern the choice of timing, the general use of a trauma-confronting procedure and EMDR-specific criteria.

In order to prepare the EMDR process, it is important to examine the therapeutic mandate for both - for the topics to be worked on and for the method to be used. If the mandate is connected to ambivalent feelings, the symptoms can still have an important function for the inner balance. Then alternative strategies need to be developed for the symptoms in order to reliably establish this inner balance. It is also possible that the ambivalence towards the task is an expression of avoidance symptoms. In this case, it is advisable to support the patient firstly in dealing with this fear by using other methods, to motivate him patiently for EMDR and to reduce fears by appropriate

explanations. When choosing EMDR as treatment, the choice of timing is crucial. The general and EMDR-specific criteria of a trauma confrontation must be taken into account.

■ Timing

In order to be able to assess whether the “resource mix” is already sufficient for the upcoming trauma treatment and if it fits perfectly, the therapist should check whether the patient

- is currently able to manage his or her everyday life independently (everyday test)
- has an inner idea of a safe place (safe place test),
- can calm down after an intensive conversation about traumatic memories (conversation test)
- is able to clearly identify the limits of his or her resilience (testing self-perception and therapeutic confidence).

In preparation for EMDR processing, it should be remembered that processing should not be initiated as long as unprocessed memory content cannot be connected to the resources required for processing. For this purpose, it should be checked whether enough resources could be (re-)activated in the first therapy phase, in order to sufficiently promote the inner stability of the patient. These resources should also be individually appropriate. The patient should be able to master everyday life independently and to deal with surfacing traumatic memories. This includes being able to calm oneself while experiencing overwhelming emotions and to be able to discern the junction to dissociation and to signal these in therapy.

■ Contraindications for Trauma Confronting Procedures

EMDR trauma confrontation is contraindicated in all cases where insufficient psychological, social or medical stability is a

fundamental argument against trauma exposure. These can be all states of acute psychological instability and lack of accessibility in therapeutic contact: psychotic tendencies, acute suicidal tendencies, influence of drugs, alcohol or sedating medication. In medical risk situations such as an unstable heart disease or high-risk pregnancy, EMDR should only be conducted in a safe medical setting. In the case of patients suffering from epileptic, pseudo-epileptic attacks or asthma attacks, it should be discussed, after a consultation with a physician, what the psychotherapist and patient can do in the event of a seizure. Mental retardation and neurological disorders might limit the effectiveness of EMDR, but do not pose a risk. A trauma confrontation should normally not be carried out if contact with the perpetrator continues.

In the case of dissociative symptoms, EMDR is only indicated to the extent that it is possible to keep the patient in an associated state during trauma processing or to quickly return to the present. Dissociative symptoms should be assessed using for example the FDS questionnaire (Freyberger et al., 2005).

In the case of children, the family context and existing bans on speaking must be taken into account. Before trauma confrontation, very careful preparatory work involving the whole system is necessary. As a rule of thumb, no EMDR processing topics that are taboo in the family should be chosen. Bans on speaking should be dissolved in a family discussion before trauma exposure, unless a child has addressed it by own initiative in therapy: In this case it is also correct to respond to it and to merely keep an eye on the conflict of loyalties.

■ EMDR-Specific Contraindications

The EMDR process presupposes that the therapist and the patient can collectively engage in a self-organizing process. An excessive need for control, strong fears of

failure as well as phobic fears of exposing oneself to a situation that cannot be completely planned from the outset, are major obstacles on the patient side and should be taken very seriously by the therapist. Sensitive preparation, self-determination and the greatest possible choice and control make it easier for patients to get involved in the unknown process. It can be practised in a playful way, that the therapist immediately stops upon the stop signal: no means no, limits are always appreciated. Metaphors can also help the patient to confide in the therapist (► Sect. 14.2.2.3).

EMDR can be performed with various bilateral stimulations. Therefore, eye problems or photosensitive epilepsy are no obstacle when tactile or acoustic stimulation is used.

Checklist for Working with EMDR

- Is there a stable and trusting working relationship?
- Am I prepared to see the patient through the entire process?
- Have the stressors objectively ended?
- Do the stressors create an emotional and sensual reaction?
- Can sufficient physical resilience be assumed?
- Is there sufficient mental stability and ability for self-regulation?
- Is there enough energy available in everyday life for profound emotional processes?
- Can a symptom gain be excluded?
- Have the EMDR targets been defined?
- Is there enough time to finish the session well?

(If one of the questions has to be answered in the negative, this point needs to be clarified before starting EMDR).

Statements in Court

In ongoing legal proceedings, it should be borne in mind that patients' statements in court are sometimes

questioned because of the treatment. We recommend that victim witnesses, witnesses and police officers are not treated with EMDR until after the testimony has been completed, unless prior arrangements have been made with the judge. These could consist in, for example, the patients writing down their testimony before starting EMDR therapy and the therapist handing out his or her treatment notes. Although there is no evidence of EMDR distorting witness testimony, such an argument against the patient's credibility cannot be ruled out. If this risk does not exist, EMDR can be used very effectively to prepare patients for legal proceedings. The most common argument against EMDR therapy before a court case refers to the blatant – and therapeutically desired – difference between intrusive images and processed memories. While a flashback or intrusive image contains comparatively many and reliable optical details that allow, for example, the number of windows in a house to be counted retrospectively, the memory image processed with EMDR may fade, blur or disappear in favour of a narrative memory.

14.2.2.3 Explanation of EMDR and Specific Psychoeducation

EMDR should definitely be explained so that patients know what they are consenting to. Some patients need detailed information and possibly further reading. Whereas for other patients short and concise explanations are sufficient. This explanation could for instance be as following:

► Example: Explanatory Conversation

T: *“When a trauma happens, all memory information is—so to speak—locked up in the nervous system, connected with the original images, thoughts, feelings and body reactions. The trapped memory is separated from the biographically appropriate solution, external stimuli however can trigger corresponding feelings. EMDR seems to make the trapped information accessible for processing again, so that the memory can be better integrated internally and is therefore less easily triggered from the outside.”*

In order to increase familiarity with bilateral stimulation, it is beneficial to try out different visual, acoustic and tactile options and to communicate the different alternatives. Most often, the visual stimulation is

chosen. This is usually executed by horizontal hand movements or a light tap on the back of the patient's hand. In addition, a clear stop signal must be agreed upon. Francine Shapiro recommends the tunnel, train or video metaphor in order to give the patient an impression of the EMDR process. This also serves to remind the clients of their safety at present:

T: *“It's like driving a car through a tunnel. We keep our foot on the accelerator until we are out again. The stimulation has the function of an accelerator. It accelerates the processing and helps to leave the stressful stretch of road behind.”*



14.2.3 Phase 3: Assessment of the Target Situation

The client's history, treatment plan and indication for EMDR have now been completed. EMDR has already been explained to the patient and he has given his consent. He or she is familiar with the “safe place” exercise and the stop signal. The sitting position is synchronized with the chosen form of bilateral stimulation. Only then does the typical EMDR session (phases 3–6) begin.

In phase 3, the patient explores the worst moment (hotspot) of the selected initial situation. The patient assesses this worst moment on several levels. This refreshes the inner perception of the dysfunctionally stored memory on several levels. In addition, it serves the process assessment, so that one can record changes in the processing state at the end of the session and in the catamnesis.

Levels of Inner Perception

Narrative of the situation

Inner sensory perception (usually an image)

Generalized belief about oneself

1–3 triggered emotions (often several) physical sensations that accompany these emotions.

Scales Used

The “Subjective Units of Distress” (SUD) for estimating the perceived stress

The “Validity of Cognition” (VoC) for assessing the validity of the desired belief about oneself

► **Example: Phase 3**

T:	<i>“Do you agree to work on the memory of the helicopter crash today?”</i>
P:	<i>“Yes.”</i>
T:	<i>“What image represents the worst part of this incident?”</i>
P:	<i>“The flames.”</i>
T:	<i>“The flames, okay. What negative belief about yourself does this picture elicit today?”</i>
P:	<i>“I am at the mercy of the flames.”</i>
T:	<i>“When you imagine the flames, what would you rather think about yourself today?”</i>
P:	<i>“What do you mean?”</i>
T:	<i>“When you recall the memory of the flames from today’s perspective – is there something positive you can think about yourself?”</i>
P:	<i>“I can protect myself.”</i>
T:	<i>“When you imagine the flames, how true does the phrase ‘I can protect myself’ feel at the moment on a scale of 1–7, where 1 stands for completely false and 7 for completely true?”</i>
P:	<i>“Two.”</i>
T:	<i>“When you imagine the flames and say the words ‘I am helpless against the flames/I am at the mercy of the flames’, what emotions come up/do you notice now?”</i>

P:	<i>“I feel powerless and scared to death.”</i>
T:	<i>“On a scale of 0–10, with 0 being no bad feelings and 10 being the worst possible feeling, how strong is that feeling for you now?”</i>
P:	<i>“Nine.”</i>
T:	<i>“Where do you feel that in your body? Where can you locate it?”</i>
P:	<i>“There is a tightness in the throat.”</i>
T:	<i>“You have done very well; we now have everything we need that is important to start the EMDR process. Now please imagine the flames again, think ‘I am helpless against the flames/I am at the mercy of the flames’, feel the tightness in your throat and watch whatever comes up. Anything can appear, you can just observe whatever comes up. Are you ready?”</i>
P:	<i>“Okay.”</i>
T:	<i>“Good!”</i>

14.2.4 Phase 4: Reprocessing with External Stimulation

Under the Magnifying Glass

The phase of reprocessing is also called processing, EMDR process or EMDR confrontation. The therapist leads the patient into emotional contact with the memory’s most disturbing image, with the negative cognition and the stressful body sensation and then begins a series of bilateral stimulations.

The therapist ensures that the patient focuses his attention on both the external bilateral stimulation and the unprocessed memory content. He or she ensures that the resources necessary for the solution remain accessible at the same time. The therapist does as many stimulation sets as are needed to significantly reduce the stress. A set lasts until the

patient shows signs of relaxation. After that, the therapist asks what came up. This could be an associated memory for example. Another option would be to ask the patient to ignore everything that has come up so far and to observe what comes up now. During the stimulation, the therapist encourages the patient to keep on going (Exactly! You do that very well! – Keep observing! – Go with that!). If there is strong affect, the therapist can incorporate small breaks between the stimulations with collective breathing, encouragement and support (Let it go – Take a deep breath – What is there now?)

According to an estimate by Shapiro (2001), 30% of all EMDR processes proceed in this way starting with a high stress level and leading to an individually harmonious, resourceful and relieved state. About 70% of the processes, on the other hand, require small external suggestions from the therapist.

Successful processing requires that patients stay within their “window of tolerance”, i.e., in a state in which traumatic memories can be thought of without being flooded with emotions or having a dissociative reaction. The therapist recognizes the “window of tolerance” by the fact that

- images, feelings, sensory impressions and bodily sensations that emerge with the traumatic memory can be observed and described,
- the patient senses that he or she is in the present/here and now and senses the therapeutic contact and their present safety
- the process proceeds on its own.

The process is not always in a state of flow. The distress does not always stay within the “window of tolerance”. Blockades emerge during the process, as well as endless cogni-

tive-emotional loops and flooding versus dissociative symptoms. If necessary, additional strategies can be used to achieve an optimal mix of resources for trauma processing. The therapeutic interweave, as Shapiro (2018) calls it, enables the therapist to integrate external content or information into the patient’s internal processing.

Here the therapist can access various strategies of resource accumulation, emotional distancing and strengthening of the differentiation between the state of trauma memory and the present more resourceful situation.

► Example: Weaving Technology

Bilateral stimulation

P: *“I still see these huge hands around my neck – it’s still there, I can’t stand it anymore!”*

T: *“Mr. A., please remember that you are observing this memory of what happened to you as a child, today as an adult. Let the memory pass”.*

Bilateral stimulation

P: *“Okay, that is a little better, but I still see these huge hands around my neck.”*

T: *“Imagine you were there now as an adult instead of a child. Is that possible? Try to endorse this picture and go with it.”*

Bilateral stimulation

P: *“Wow, I punched him and freed myself. I am free!”*

Bilateral stimulation

T: *“Introduce this experience into your process and let everything come up now”.*



Under the Magnifying Glass: Methods of Cognitive Interweave

Therapeutic interweave is effective, but should only be used when there are blockages in the process. Changes that come from the patient in a flowing, self-organizing process contribute more to the experience of self-efficacy and dissolve the stress more precisely.

The therapeutic interweave should be used sparingly and should be introduced into the process as a small stimulus. It shall only serve as a proposal for the patient, but not as an external “solution”.

In [Table 14.2](#) different categories of therapeutic interweave are listed with examples.

14.2.5 Phase 5: Installation

When the intensity of stress has decreased to the optimal level (the best-case scenario would be a zero on the SUD scale of 0–10) and the positive cognition is appropriate and consistent, installation is started.

Under the Magnifying Glass

In phase 5, the therapist reminds the patient again of the initial situation and repeats the positive cognition. While the patient remembers this combination, the therapist guides through another series of bilateral stimulation.

Table 14.2 Therapeutic interweave

Form of interweave	Example
Mechanically: Change the characteristics and type of stimulation	A woman has very ambivalent feelings about her mother's visits. She illustrates the two sides in two drawings. In EMDR she moves her eyes between the two drawings hanging on the wall.
Perception level: Change of the modality of inner perception	During the EMDR process an athlete experiences body sensation that are incomprehensible to him. I ask him to imagine that his body is talking to him – which dialogue could then develop?
Focusing: Return to the original topic	During an EMDR session about a violent experience with her father, a student thinks about an upcoming exam. As she weaves in, she's asked to “ <i>Observe what the exam has to do with that situation with your father.</i> ”
Emotional bridge: Ask for background information	A teacher feels powerless at the idea of establishing clear boundaries between herself and her mother. I ask her to go back with this feeling of powerlessness to the earliest memory she can think of.
Distant: Use of therapeutic distancing techniques	A man is becoming restless and starts distracting. T: “ <i>Imagine this is just an old movie from the old days. Imagine you are on your mother's lap. Here you are quite safe.</i> ”
Development oriented: Making up for development situations	A woman distrusts her anger towards her father, which she suddenly discovers. I ask, “ <i>When you were a little kid, if you got angry, what would it have been like to have your father lovingly set clear boundaries?</i> ”

(continued)

Table 14.2 (continued)

Form of interweave	Example
Supportive: Encourage, give permission, recognition	A young man is afraid of how the EMDR session will turn out. He is repeatedly encouraged: <i>“Well done, yes ... you’re doing very well ... yes, you’re doing great ... that’s fine ... yes, this is just right.”</i>
Body resource: Activate a previously installed resource at body level	Repeatedly a woman experiences headache when she remembers her drinking father. I ask her to place her hand on the part of her body that hurts the least compared to her head and to leave her attention there.
Cognitive: Socratic question, adult perspective, future perspective	A patient feels powerless to express her anger at her father because she is also afraid of him. I ask, <i>“If you could step into that scene of the past today, what permission would you give t that child you were then?”</i>
Imaginative: Imagination of a resource	One patient was subjected to violence as a child. <i>“Imagine, here comes an adult you know well. He can help you. Watch what happens next.”</i>
With parts work: Resourceful inner parts are activated	A bank employee is constantly ashamed of having stolen as a child. The therapist says, <i>“If that chair over there was the child you were then, what could you say to him now?”</i>
Symbolically: Symbolize concrete contents, e.g., as animals	A man feels the impulse to scratch himself. The therapist says, <i>“If there was an evil animal scratching you until you bled, what animal could it be?”</i>
Humorous: Using surprise and wit as a resource	A woman maintains that she is a bad mother. The therapist draws a comic picture of a bad mother and asks her to draw the next comic picture.

This series of stimulation should be stopped when the patient’s positive cognition seems to fit the initial situation completely.

14

► Example: Phase 5

T:	<i>“When you think about the helicopter crash now, how high is the experienced stress now, with 0 being neutral and 10 being the worst possible feeling?”</i>
P:	<i>“Zero.”</i>
T:	<i>“Is the sentence ‘I can protect myself’ still suitable for you? Or would another sentence be more fitting now?”</i>

P:	<i>“In the meantime I find the sentence ‘I live’ more appropriate. We can’t always protect ourselves but still we sometimes survive.”</i>
T:	<i>“And how accurate does the phrase ‘I am alive’ feel at the moment, with 1 being completely false and 7 being completely true?”</i>
P:	<i>“Seven, without a doubt: I’m alive!”</i>
T:	<i>“Then please think of the helicopter crash, say to yourself the sentence ‘I am alive’ and please follow my hand with your eyes again.”</i>



14.2.6 Phase 6: Body Scan

When the initial situation is associated with positive thoughts and pleasant body sensations, it has really lost its terror. The body scan allows to check this at the end of the session. Following the installation, the first step is to check whether the positive cognition feels true in the face of the initial situation. If it does not fully feel true, the difference is processed with a series of bilateral stimulations. Only when both the level of stress and the coherence of the positive cognition have fully reached the desired values, does the therapist check, whether there is still a residual stress left on the physical level.

Under the Magnifying Glass

For the body scan, the therapist reminds the patient once again of the initial situation of the session and repeats the positive cognition. While the patient visualizes this combination, he is instructed – without stimulation – to slowly scan his body from top to bottom and to describe everything he senses.

► Example: Phase 6

T:	<i>“Very well, I would now like to check with you whether there remains any distress in the body.”</i>
P:	<i>“Good.”</i>
T:	<i>“Then please think of the helicopter crash, say to yourself the sentence ‘I am alive’ and check your physical sensations slowly. From your head ... to ... to your feet.”</i>
P:	<i>“Now the body feels completely alive, warm and relaxed.”</i>



Should the patient notice any remaining physical discomfort after the body scan, these are treated with another series of bilateral stimulations. The body scan is finished when only positive or neutral physical sensations remain.

14.2.7 Phase 7: Closure of the Meeting

Under the Magnifying Glass

The patient should leave the session in a more stable condition than the one he or she came in. In most cases, trauma processing leads directly into a relaxed-balanced state. If the processing could not be completed, Shapiro recommends that the session be concluded with vertical eye movements, visualization of the “safe place”, or the container technique. Other relaxation and distancing exercises are suitable as well. It is also important to make sure that the patient can use such methods himself if necessary. In order to also dissolve residual physical symptoms, she recommends the “light stream technique” from Vipassana Yoga.

It helps the patient if the therapist explains that the processing usually continues in the days after the session. The patient can be advised to write down any emerging content. This can then be processed in the next session. It also makes it easier for the patient to prepare for the next session and he or she is less worried or frightened about content that emerges associatively to the topic. At the end of the session, the therapist should make sure that the patient is completely oriented in the present. Instead of immediately

getting into the car, the patient should first take a short walk or rest after the session.

14.2.8 Phase 8: Follow-Up and Reintegration

After confrontational sessions, one of the first questions in a follow-up session is whether anything new has emerged since the EMDR session with regard to the initial target.

The therapist should state the target of the last session and ask again about the degree of subjective stress. In this way the therapist can check if the initial theme of the last session has been completely processed. In some cases, the theme has been completed, in others new memory material has appeared. Occasionally, patients report particularly vivid dreams after EMDR sessions, which then usually contain very valuable information about topics still to be worked on and symbolizations useful for processing.

What Can Be Processed with EMDR?

- Stressful memories – memories that are still vividly present in the back of the patient’s mind in today’s life and that affect everyday life.
- Emerging memories: During the processing, associatively connected memories, often linked by a bridge of affect, seem to become accessible again, regardless of whether they were previously remembered or not. Important distressing memories that emerge spontaneously can become the next topic of a further EMDR session.
- Nightmares: Dream content is particularly suitable for deepening an already initiated EMDR process in one of the follow-up sessions. In this case, the therapist also inquires after the worst moment the negative cognition when remembering the dream, the feeling as well as the body sensa-

tion. The suitability of the positive cognition as well as the degree of stress give clear information about the patient’s condition relative to his dream or nightmare.

14.3 How Does EMDR Work?

The AIP model (Adaptive Information Processing Model) is a simple theoretical model. Shapiro (2001) assumes an innate ability to process traumatic memory content. The information associated with the trauma must be transferred from the trauma network to adaptive networks. In the adaptive networks the trauma can be processed and reconnected. Comparable to the concepts of assimilation and accommodation according to Piaget (1947), those affected by trauma attempt to integrate new experiences into existing patterns (assimilation) or they try to enlarge existing schemata (accommodation). Traumatic situations are difficult to categorize because they exceed anything imaginable. Unprocessed networks are disconnected. These contain generalized beliefs, sensory unprocessed memory images, stressful emotions and body correlates that appear as symptoms. The symptoms are not regarded as the cause of disorders, but as consequences of dysfunctionally stored information. The AIP model can explain dissociation better than the former fear structure model (Maercker & Rosner, 2006). For treatment with EMDR, the dysfunctionally stored information is identified, recalled and made accessible for processing again. The memory information is integrated, and as a consequence adaptive changes of ego states, cognitions and behavioral patterns occur.

Additionally, there are also various educational, behavioral and neurological hypotheses on the effect of EMDR. They

try to explain how EMDR stimulates the processing of information. There are several processes, which presumably play a role: limiting overexcitation by dividing one's attention, synchronizing brain activity, the orientation reflex and an integration process similar to dream sleep.

14.4 Effectiveness Studies

The efficacy of EMDR has already been quantitatively assessed in many randomized controlled studies and in some qualitative studies. Edmond et al. (2004) analysed the content of the statements of 59 women traumatised by sexualised violence.

The group treated with EMDR was compared with a control group that received a common form of method-integrative psychotherapy. After integrative therapy, these women described a better ability to deal with the trauma consequences: *"I have now gathered some helpful tools I have learned how to feel better; things I can do before I see the therapist again."* Or: *"The panic's gone and I can still feel fear and anxiety, but none that paralyzes me. Now I know that I can make decisions for myself."*

After EMDR, patients described more profound changes: *"Instead of going from the outer layers of an onion to the core, as is done in conventional psychotherapy, EMDR allows you to go straight to the core. It solves the issue at the core, and then the changes penetrate through all layers back to the outermost layer."* Another patient put it this way: *"I think it goes directly to the cellular level ... for me it goes deeper than talking about it, it goes right to the center and frees it ... for me it was like scraping out and removing everything because it no longer belongs there."*

► The statements of patients with EMDR indicate that EMDR achieves a more complete trauma resolution, whereas the comparative group values the relationship to the therapist more.

The quantitative studies also show significant improvements in the treatment of traumatized patients with EMDR. The available research results were summarized by Munker-Kramer (2017) and in various meta-analyses (e.g. by Davidson and Parker (2001)). Watts et al. (2013), Rothbaum et al. (2005) as well as Bisson and Andrew (2007) were able to show that EMDR is one of the most effective forms of treatment for PTSD – alongside exposure training and cognitive behavioural therapy (CBT).

The meta-analysis by Bisson et al. (2013) confirmed that EMDR and CBT continued to have a better effect than other therapy methods 4 months after the end of treatment.

In several studies, EMDR not only works just as well as other therapy methods, but also more quickly (Ironson et al., 2002; Marcus et al., 1997, 2004; Power et al., 2002). Such a result was even found in studies where there the patients did homework on top of the exposure treatment, but not with EMDR (Lee et al., 2002; Power et al., 2002).

Similar results were obtained by a meta-analysis that examined the effectiveness of EMDR with children (Rodenburg et al., 2009). EMDR and CBT proved to be the most effective treatment methods for traumatised children. The EMDR-treatment of children with PTSD was also verified by Ahmad et al. (2007) and Diehle et al. (2015). Again, EMDR proved to be effective in every case, even with children who had previously not responded to other treatments (Chemtob et al., 2002).

EMDR-treatment is also effective if PTSD is combined with comorbid disorders. In a review (Valiente-Gómez et al., 2017) these comorbid conditions are discussed in detail.

EMDR has also been shown to be effective in treating patients with PTSD and psychotic disorders (van den Berg et al., 2015), PTSD and borderline disorders (Brown & Shapiro, 2006; Mosquera et al., 2014), PTSD and pseudoepileptic seizures

(Chemalie & Meadows, 2004; Kelley & Benbadis, 2007), PTSD and addictive sexual behaviour (Cox & Howard, 2007), PTSD and a panic disorder associated with agoraphobia (Fernandez & Faretta, 2007), PTSD with a generalised anxiety disorder (Triscari et al., 2015) and PTSD with depression (Hase et al., 2015; Gauhar, 2016). Broad and Wheeler (2006) achieved a significant improvement of the symptoms of patients with PTSD combined with ADHD and depression. A substance dependence triggered by PTSD could also be effectively treated with EMDR (Hase et al., 2008; Kullack & Laugharne, 2016).

Van der Kolk et al. (2007) compared EMDR with a common antidepressant (fluoxetine) and a placebo. Fluoxetine is a selective serotonin reuptake inhibitor (SSRI) that prolongs the effect of serotonin by preventing it from being transported back/being reabsorbed into storage after the signal transmission. During the application there were no significant differences of the effect. However, 6 months after treatment, 59% of the EMDR group could be considered symptom-free, while not one person from the other groups could say the same. This result confirms that in the case of very severe PTSD symptoms it may be useful to use psychotropic drugs as a supplement at the beginning of psychotherapy (Bauer & Priebe, 1997).

Treatment with EMDR has been shown to significantly reduce the symptoms of women who suffered from PTSD as a result of domestic violence (Stapleton et al., 2007). Firefighters (Kitchener, 2004) and soldiers (Russell, 2006; Russell et al., 2007; Zimmermann et al., 2005) were able to return to their everyday lives after treatment with EMDR. A controlled and randomized study demonstrated the effect of EMDR on traumatized soldiers (Carlson et al., 1998). After the EMDR-treatment 77% of the soldiers examined could no longer be diagnosed with PTSD. In Stockholm, 8 of 13

public transport employees treated with EMDR no longer fulfilled the PTSD diagnosis (Högberg et al., 2007). A follow-up study confirms that this result is still persistent/the same 3 years after the end of treatment (Högberg et al., 2008).

Acutely traumatized people were treated with EMDR after an explosion in Mexico and subsequently showed significant improvements of symptoms (Jarero et al., 2015). The comparison group treated afterwards also benefited similarly from EMDR. Silver et al. (2005) and Konuk et al. (2006) achieved comparable/similar results in other contexts. Thus, the efficacy of EMDR does not seem to depend directly on how timely the treatment is carried out.

Under the Magnifying Glass

Overall, EMDR has proven to be equally or more effective compared to other procedures. Additionally the outcome is usually achieved in fewer sessions and the patients show a high level of acceptance for this method. The biggest disadvantage of EMDR might be that it requires separate training. The truer EMDR is kept to the original, the better are the results (Maxfield & Hyer, 2002).

A research overview by Seidler and Wagner (2006) was the basis for the German Scientific Advisory Board on Psychotherapy (WBP) to recognize EMDR as a therapeutic procedure for the treatment of PTSD in adults.

In an evaluation procedure (2015) of the G-BA (the Joint Federal Committee), EMDR was found to be significantly better than a standard treatment and then various indication-specific treatments. According to the G-BA (2015), a clear indication of a benefit of EMDR compared to an unspecific and a specific therapy can thus be derived (ibid., p. 67).

These sound results have led to EMDR being recommended worldwide for the treatment of traumatised people. Since 2013, EMDR is one of two PTSD treatment procedures recommended by the WHO. It is also recommended by the International Society for Traumatic Stress Studies (ISTSS) and the American Psychology Association (APA).

Up until now, little research has been done to determine which parts of the EMDR procedure are significantly involved in the outcome or are absolutely necessary for the success of the therapy. The best studied element of impact is the eye movement typical for EMDR, however there are controversial results: While there are indications for an effect inherent to eye movements (Stickgold, 2002, 2008), other studies found a similar effect of bilateral touch or acoustic stimuli. Sack et al. (2016) found that eye movements had no greater effect than a resting external focus and that EMDR procedures had a significant effect even without any external focus.

The discussion concerning the significance of other elements still remains undecided. When is their order of sequence of importance, when are changes advised? On one hand, the EMDR procedure was the subject of the effectiveness studies. On the other hand, experiences with early and complex traumatised people as well as fundamental findings of research show the importance of an individualised approach.

14.5 EMDR-Based Enhancements

There are further developments within the framework of special protocols for EMDR, in the form of resource-oriented protocols such as “Resource Development and Installation” (RDI; Leeds & Korn, 2002) or “Brainspotting”. They can be divided into five areas:

- 1. EMDR has been incorporated into the treatment of children and adolescents (Tinker & Wilson, 2000; Greenwald, 2001; Schubbe, 2002; Hensel, 2007, 2014; Dieffenbach, 2007).
- 2. EMDR has been extended to other secondary disorders that can occur in conjunction with PTSD: specific phobias (de Jongh & ten Broeke, 2006; Rost, 2009), depression (Hase et al., 2015; Lehnung et al., 2016), addiction (Hase, 2006; Popky, 2005; Vogelmann-Sine, 1998; Lüdecke et al., 2013), eating disorders (Plassmann, 2014), dissociative disorders (Hofmann, 2004b; Burkhardt, 2016), obsessive-compulsive disorders (Böhm, 2015), chronic pain disorders (Erdmann, 2009; Tesarz et al., 2015; Wicking et al., 2017) and somatoform disorders and psychosomatics (von Saint Paul, 2008; Lehnung, 2016). EMDR has also been used for phantom pain (Tinker & Wilson, 2005), allergies (Erdmann, 2006), post-infarction conditions (Urzt, 2015) and sudden hearing loss and tinnitus (Zengin, 2009).
- 3. EMDR is being modified for an increasingly wider range of different victim groups. Selected examples are traumatized refugees (Schouler-Ocak, 2017), refugee children (Freiha et al., 2015), war-traumatized soldiers (Alliger-Horn et al., 2015), victims of domestic violence (Tarquinio et al., 2012), rape victims (Tarquinio et al., 2012) and EMDR group offers for victims in large-scale emergencies (Jarero & Artigas, 2012).
- 4. EMDR is not only used psychotherapeutically, but also in counselling and individual coaching (Foster & Lendl, 1995, 1996; Augustin & Schubbe, 2003; Munker-Kramer, 2017).

■ 5.

Resource-EMDR: More and more EMDR methods aim to use bilateral stimulation and other EMDR elements outside of the trauma confrontation, e.g., to better install and increase the impact of stabilization exercises. Rost (2016) provides a comprehensive overview of this. The best-known procedures are the “absorption technique” (Hofmann, 2004a) and “resource development and installation” (RDI; Leeds & Korn, 2002). In summary, these processes are based on the idea of supporting processing by making resources more accessible.

■ 6.

New methods were developed from the EMDR tradition. With the Imagery Rescripting and Reprocessing Therapy, Mervyn Smucker developed a treatment approach that extends the behavioral imagery rescripting by adding elements of gestalt therapy and the element of reprocessing from EMDR (Smucker & Vetter, 1997). Brainspotting emerged from Somatic Experiencing and EMDR in conjunction with a method defined by David Grand (2003) for controlling attention via the line of sight. Attention and direction of gaze are closely related – up to common functional areas in the parietal, frontal, and temporal lobes (Corbetta et al., 1998).

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Low-Threshold and Innovative Interventions

Andreas Maercker

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15.1 Introduction

In addition to the conventional psychotherapeutic methods, further alternatives have been developed in the international context over the last decades to help traumatised victims. In this chapter, these interventions are summarised as **low-threshold procedures** defined in such a way that those seeking help usually seek them outside the established health care system (although there is also overlap with more recent approaches within the health care system; ► Sect. 15.2). This is also linked to the fact that the use of an intervention is not dependent on the presence of a diagnosis. Those affected may also have so-called sub-syndromal conditions (i.e. not all the symptoms necessary for a diagnosis are fully present), or it may be a matter of individual prevention including better processing of the experience.

Low-threshold interventions usually stem directly from research and health care for risk groups, for example when they are developed by institutions such as the military (resilience programmes), involve higher investment costs (web-based interventions) or are disseminated by aid organisations (community-based programmes). As will be shown below, they usually have proven good efficacy levels, which are usually equivalent to those achieved by conventional interventions. However, as they are hardly or not at all integrated into official statutory health care and as their respective economic sustainability is problematic, many of the offers remain short-lived – which, however, does not affect all of the following types of intervention.

15.2 Stepped Care and Psychoeducation

Stepped care has already become very well established for so-called common illnesses and conditions, such as diabetes and depres-

sive disorders. The approach of stepped care is initially based on different degrees of severity of the clinical picture; these are usually divided into “mild”, “moderate”, “severe” and “life-threatening”. Alternatively, acute degrees of severity such as early, moderate, chronic and escalating stages are also differentiated.

The following prerequisites belong to the **stepped care approach** (van Straten et al., 2015):

- Evidence-based treatment methods of varying intensity are available.
- Adequate diagnostics are carried out as a basis for treatment selection.
- A systematic assessment of the course and results is carried out.

The therapeutic interventions of the stepped care approach are generally characterised as follows:

- Begin with a treatment option of the lowest intensity with a good prognosis for the patient to benefit from it.
- Ability to take a “step up” or a “step down” with customized treatment options

■ Table 15.1 shows the evidence-based treatment options available for stepped care, some of which are described in this chapter.

There are well established and effective programs for **psychoeducation**. In German, the manual from the Berlin Centre for Survival (formerly: Centre for Torture Victims) by Liedl et al. (2013) has become known (► Chap. 25).

The highly structured manual comprises 17 content or additional modules, e.g. the modules:

- “You can change and may decide – together we are stronger” (about the group as a place of enrichment and relief);
- “Post-traumatic stress disorder: a normal reaction to an abnormal event” (symptoms explained using various exercises);

Table 15.1 Evidence-based treatment options

Degrees of severity or acuteness	Examples of evidence-based treatment options
Mild/early stage	Psychoeducation, reading of self-help materials (printed, online), courses for (secondary) prevention
Moderately severe/medium stage	Online interventions, peer programs
Severe/chronic	Outpatient and inpatient forms of therapy
Life-threatening/escalating	Crisis intervention, stationary forms of therapy

- “Dissociation – stay in the here and now” (including the development of help strategies in everyday life);
- “Get help, help yourself” (treatment options and self-care).

The psychoeducational programme can be carried out in individual or group settings under the guidance of professionals, including the professional groups of complementary therapists (e.g. art therapists, kinesi therapists). The manual contains detailed instructions for therapists with sample formulations, in which possible difficulties and challenges during (group) implementation are addressed. It is also aimed at patients with other native language backgrounds, for whom German-language content often remains difficult to understand at first. In line with the approach of staged care, participation in this psychoeducation may be sufficient for some patients; for others, more intensive phases of (individual) psychotherapy follow.

■ Evaluations

On an international scale, two overall evaluations of approaches to stepped care for traumatized persons have taken place to date, both of which have been able to demonstrate the greatest possible equivalence of stepped-care programmes compared to the sole and long-term use of trauma-focused psychotherapy: in children (Salloum et al., 2017) and in accident victims during and after trauma surgery (Zatzick et al., 2018).

■ Additional Interventions (Add-on or Blended Treatments)

In connection with stepped or alternative care models, additional interventions are increasingly being developed internationally, which are used in parallel with primary treatment. These supplementary interventions are usually compact, time-limited “treatment packages”, e.g. EMDR co-treatment during psychodynamic psychotherapy or an online or app-based intervention (► Sect. 15.4). This means that the patients work with at least two therapeutic/interventive contact persons during this time and requires transparent implementation and basic knowledge of the respective parallel procedure from all sides.

For depression treatment, where additional interventions are most frequently used internationally, some important results and indications are now available from evaluations:

- Additional interventions significantly improve the overall progress in recovery (Kooistra et al., 2016).
- The majority of therapists of a basic procedure are reluctant to advise and recommend additional interventions to their patients (Berger et al., 2017)
- Additional interventions are also indicated in addition to inpatient treatment (Kordy et al., 2016).

15.3 Positive-Psychological Interventions

The intervention programmes presented here are the result of collaboration between “positive psychology” – a field of humanistic psychology – and psychotraumatology. The focus is on linking the interventions to the resources of the target persons. Often these interventions can also be assigned to the field of prevention, with a particular focus on secondary prevention, i.e. they start in the early stages of the disorder or in cases of increased risk exposure. Groups of persons with special risk exposure are emergency responders, emergency services and the military – which is why such interventions have been developed particularly intensively for these areas (► Chaps. 11 and 24; see also Maercker & Bengel, 2017).

15.3.1 Resilience and Mental Fitness

The target concepts of “**resilience**” and “**mental fitness**” are closely related and have developed apart. Despite its high standing in public discourse, “resilience” is a concept that has been poorly defined from a scientific point of view up to now, as there are many different, mutually incompatible definitions, so that there are many criticisms of this concept (e.g. Stamm & Halberkann, 2015). Resilience can approximately be defined as:

- » ... the maintenance of normal, i.e. previous, mental functioning, even after confrontation with extreme stress conditions or potentially traumatic events, without the manifestation of mental illness or restrictions in terms of functional level that severely impair the well-being of the individual concerned. (Kleim & Kalisch, 2018, p. 754)

Mental fitness is a term that was coined for the purpose of improving the acceptance of

certain low-threshold programs for emergency and military personnel. This aspect of acceptance has to do with the fact that men from such occupational groups find it very difficult to engage in psychological interventions or psychotherapy that are experienced as “unmanly” (► Sect. 15.5; see Pieper & Maercker, 1999). Mental fitness is also considered scientifically difficult to define, because it is usually used as a synonym for the entire field of mental health.

Resilience and mental fitness trainings are usually multimodal in structure as a combination of exercises, e.g. cognitive behavioural therapy and mindfulness. The reference to strengths and virtues of the person (Seligman, 2004) and thus to psychological resources, which are used in the intervention, comes directly from positive psychology. As a well-structured example of a resilience intervention based on strengths, the four-step programme of Padesky and Mooney (2012) is presented in ■ Table 15.2.

“Trauma Resilience Training” by Arnetz et al. (2009) became best known for emergency services (military, police, paramedics). This modular program serves to deal with potentially traumatic situations. In 10 weekly sessions of 2 h each, the focus is on

- the learning of relaxation techniques,
- guided imaginations of potentially traumatic events,
- the acquisition of adaptive coping strategies in the confrontation with these events.

The positive evaluation results indicate, in comparison to other, usually much shorter programmes, that such programmes work most effectively with repeated sessions to achieve a better effect, since these psychological habituation/habituation processes can cause trauma-relevant stimuli.

Another modular program, the US “Comprehensive Soldier Fitness” program, was designed to be even more comprehensive (Seligman & Fowler, 2011). The focus was on the individual promotion of resilience,

Table 15.2 Development of a resilience intervention by Padesky and Mooney (2012). (From Lehr et al., 2018. It has not yet been empirically evaluated)

Step	Procedure
1. Search for strengths in everyday life	Exploration of “talent areas”, i.e. activities that are undertaken regularly in everyday life, ideally with passion
	Exploration of obstacles that prevent the activities from being carried out, with the aim of identifying personal strengths that help to carry out the activities despite resistance
	Resilience is shown where the activities continue to be carried out despite obstacles, i.e. resilient behaviour is understood as resistant behaviour
	Preparation of a list of strengths
2. Development of a resilience model based on the strengths	Identification of concrete behaviours that are used to deal with these obstacles and that underlie the identified strengths
	Reformulation of the concrete behaviour into general behaviour strategies, which can also be helpful in other situations
	Formulation of the behavioural strategies in the client’s words and linking them to pictorial imagination or metaphor. This is called the personal resilience model
3. Transferring the resilience model to new requirements	Selecting a new requirement situation in which resilient behavior would be useful
	Selection of strengths and behavioural strategies of the personal resilience model that can be helpful in dealing with the requirement
4. Testing of the resilience model	Development of behavioural experiments for testing the resilience model in the new requirement situation
	Trying to meet the challenge is reinforced, not a successful solution to a problem
	Modification of the resilience model after testing

with additional emphasis on “family resilience”, maintaining social networks and organisational changes for commanders. However, none of the evaluation studies was able to demonstrate lasting effects. One reason being that it was used too universally, i.e. was not tailored to the respective starting situations and needs of the individual participants (Steenkamp et al., 2013).

15.3.2 Forgiveness Interventions

Forgiving and forgiving means, as a victim or affected person, to renounce any accu-

sation of guilt towards the perpetrator or perpetrators. Forgiveness can be described as a positive coping strategy with which a traumatised or injured person can cope with the burdensome consequences of what he or she has suffered. A first short intervention was developed for this purpose by Enright (2006), in which 4 phases are run through:

- Revealing the negative feelings,
- Decision to forgive a specific act of violence,
- Working towards an understanding of the offender,
- Discovering the unexpected positive consequences for yourself.

Programmes according to Enright and other authors have since been applied to people affected by domestic violence, political violence and other problems of interpersonal conflict, for example, those of addicted patients. Online forms of forgiveness interventions have also been developed (Stammel & Knaevelsrud, 2009).

Evaluations of forgiveness interventions show that most of these programmes have so far been conducted with people who have not been traumatised in the strict sense (but people who had experienced adversity) and that a reduction in PTSD symptoms has almost never been investigated. Therefore, the results should only be applied with caution to trauma patients. Specifically, it was found that depressive symptoms changed to a low to medium extent (effect strengths of 0.37), programmes over 12 sessions worked better than shorter ones and individual programmes worked better than group programmes (Akhtar & Barlow, 2018). In one evaluated online programme for a mixed group of patients, no improvement in depression was found (PTSD not studied) (Nation et al., 2018).

Under the Magnifying Glass

Overall, it can be said that, as fascinating as the approaches of positive psychology for intervention programmes may seem, there is little evidence for their successful application in the field of trauma sequelae. A fundamental problem seems to be that traumatized (and prolonged grievers) have a need to address their negative feelings and sensitivities before the issues of strength and resilience are addressed.

15

15.4 Web-Based Interventions and Serious Games

Many terms have become established for the interventions described below: online, internet, e-mental health, telepsychiatric, virtual reality or app-based interventions as well as “computerized cognitive behavioral therapy”. What all these programmes have in common is that they make use of the possibilities of the new digital technologies for health promotion measures. Serious games, on the other hand, originally emerged from the digital entertainment industry and from educational games, which were then also used in the health sector.

Data protection plays a special role for the web-based interventions. For this reason, the application of these programs in the health care sector is strongly regulated. It is important that personal data are protected in the best possible technological way, for example by firewalls and filtering technologies, for which providers are responsible.

Another problem is the sustainability of developments. In the field of e-mental health, new offers were created in rapid succession, often only financed for their project phase and then not sustainable even if the proof of effectiveness was positive. This has to do with implementation and licensing fees, which are of a magnitude comparable to the acquisition of large medical equipment (Maercker et al., 2015). For this reason, only a few examples are given below, each of which has remained available for a long time until today.

■ CoachPTBS App

The CoachPTBS app (available free of charge as Android and iOS version) provides information on trauma sequelae and

the consequences of use. It consists of modules for information, self-assessment and offers various exercises such as “emergency case” (in case of a symptom escalation), relaxation exercises, “own strengthening spell” etc. The original English version comes from the US military (Kuhn et al., 2018). The use of this English-language app has been demonstrated in evaluation studies in the USA:

- a reduction of PTSD and other symptoms after one and 3 months,
- a use intensity – effect relationship,
- the effectiveness as an additional intervention to conventional trauma therapy in US military hospitals (summarised in Kuhn et al., 2018).

■ MyTraumaRecovery

MyTraumaRecovery (MTR) is a self-help program in English and Chinese that is worked on by the clients themselves without contact with a therapist (Steinmetz et al., 2012; Wang et al., 2013). It begins with an introductory and explanatory video. The program consists of several modules that can be worked on one after the other or in parallel. It is recommended to work on the program for a total of at least 30 min per session, but no longer than 60 min. In contrast to the usual trauma-focused therapy (► Chaps. 11 and 13), the first module of the program is the module on mutual social support, and trauma confrontation is avoided throughout the program. The other modules are: relaxation, self-talk, dealing with triggers, coping with problems and seeking professional help. Each of the modules begins with a self-test, in which the initial level of skills in this area is examined. This is followed by structured plans for individual aspects of the module, in which the participants can record the personal benefits of the new behaviour, obstacles and means of overcoming them. The program is particularly effective because of the many automatically generated feedbacks that provide

the client with individualized feedback on their progress and remaining problems.

MTR has been reviewed in several studies, both in the US and in China (including people with very low levels of education), and has been shown to be as effective in reducing PTSD symptoms as standard consulting room therapies. Moreover, MTR was even slightly superior in terms of the extent of self-efficacy conviction achieved among users (Steinmetz et al., 2012; Wang et al., 2013).

■ Interapy

Interapy is the longest existing web-based procedure in the PTSD field (since 1995: ► <http://www.interapy.nl>), developed by the Dutch psychotherapist Alfred Lange. Since 2005, this service has also been available in German (► <http://www.online-psychotherapie.uzh.ch>). The therapy is based on a cognitive-behavioural approach and is limited to 5 weeks with 10 patient-therapist contacts. The treatment takes place entirely within a strongly structured website. This offer is low-threshold, especially due to its use from home, its anonymity to the outside world (the therapist expects to know the client’s regular name, however, and uses it during therapy), and the greater time flexibility for the client as to when one of the writing tasks is carried out (more detailed description in Maercker et al., 2015, p. 3 ff.).

The intervention consists of 3 phases, each preceded by a detailed psychoeducation. At the beginning of each phase, the patient and therapist plan on which days and at what time the patients will complete the writing tasks (essays), with the therapists answering the patient after one working day at the latest. The therapy is divided into 3 phases:

- Self-confrontation with the most painful memories, thoughts and feelings: This phase consists of a total of 4 essays, each of which is agreed to take 45–60 min. In

this phase, the patient is encouraged to write as freely as possible, without regard to wording and grammar.

- Cognitive restructuring: The patient reappraises his experiences in the form of a supportive letter to a fictitious friend who has experienced the same thing as the patient. This phase also includes 4 essays.
- “Social Sharing”: in a fictitious final letter to a close person, the patient describes how he or she imagines to distance himself or herself more and more from the topic of trauma/mourning. In this letter he also expresses what he can tell other people about his changed experiences during the therapy. This phase consists of 2 essays. Here the patient is instructed to pay attention to phrasing and grammar.

The original and the German-language versions of Interapy were highly effective in reducing PTSD symptoms and improving general well-being in several randomized control group and practice studies. At 17–24%, the discontinuation rates in this form of therapy are no higher than in conventional consulting room therapies (Knaevelsrud & Maercker, 2010; Ruwaard et al., 2012).

■ Serious Games

Serious games are computer games that are used for learning or therapeutic purposes. In the German language, only the computer program “CHARLY”, developed within the framework of the German Armed Forces, has been tested so far (► Chap. 24; Wesemann et al., 2016). It is to be understood as part of a blended learning approach; its use has so far been limited to the German armed forces.

The use of the computer game TETRIS, which has existed since the 1980s, in acute intervention immediately after trauma is also part of this area. The cognitively and perceptually demanding puzzle task seems to compete with the capacities for consoli-

dating the trauma contents in the memory. As a result, people in accident departments who played Tetris for 20 min within 6 h after the accident subsequently showed fewer intrusions and flashbacks than a comparison group (Hagenaars et al., 2017).

15.5 Community-Based and Peer Programmes

Due to the fact that the extent and duration of trauma consequences are decisively determined by social and interpersonal factors (see social-interpersonal model in ► Chap. 2), many offers have developed internationally in which the focus is not on consulting room therapy in the individual setting of patient and therapist, but on the large-scale use of intervention programmes. In the following a distinction is made between community-based programmes and peer programmes. Community-based programmes in connection with trauma consequences serve to improve various psychosocial parameters, e.g. aggressiveness, demoralisation, isolation, helpless inactivity. Peer programmes are based on the cooperation of laypersons, mostly people with similar trauma, and are aimed at improving individual and group sensitivities. International programmes are mentioned as examples:

- Psychosocial programmes after natural disasters: There are programmes to promote cohesion among the affected population after natural disasters such as floods, hurricanes or volcanic eruptions (e.g. Chandrasekhar, 2012; Norris et al., 2002).
- Psychosocial programmes for post-war communities (e.g. Ajduković & Ajduković, 2003; Somasundaram & Sivayokan, 2013).
- Community-based programmes in violent social contexts: These are developed for communities where high levels of violence lead to ongoing trauma, for example, in the USA in neighbourhoods of

the black community or in South Africa (e.g. Kim et al., 2009; Laborde et al., 2013).

- Longer-term “awareness raising” programmes for international communities after emergency operations (Epping-Jordan et al., 2015; Humayun et al., 2017).

Programmes with peer or lay assistance are available for interventions after job-related traumatisation and for traumatised refugees. Pieper and Maercker (1999) described starting points for peer interventions in the case of work-related trauma in typical male occupational areas (e.g. fire brigade, prison personnel):

- Motivation for a changed understanding of roles: Responding to increased alcohol consumption as a spontaneous coping behaviour;
- To address the increased risk of suicide due to extreme helplessness and the lack of adaptive coping mechanisms;
- Taking into account the role stereotype/ideal image as a “strong man”, which represents a psychosocial vulnerability constellation;
- Social learning by professional colleagues who talk about their own difficulties and ways of overcoming them—instead of talking to a psychotherapist, which is experienced as too high threshold;
- Emphasizes factually offered psychoeducation (individually or in a group), in which case studies invite identification;
- after a dramatic incident: being approached by a colleague who is in principle ready to do so.

Lay assistance in therapeutic interventions is particularly relevant in the field of humanitarian work. For narrative exposure therapy (► Chap. 14; Schauer et al., 2011), the involvement of trained laypersons is a regular component when this therapy is carried out on site in crisis regions and refugee camps (while in the German-speaking

world, due to better background conditions, the implementation is guided by professionals). In workshops the laypersons are taught how to guide the clients to tell their life story chronologically and how to give sufficient space to the traumatic life events in the sense of a gentle therapeutic confrontation. Finally, the clients are given a written version of their autobiography (Neuner et al., 2008).

Since the refugee crisis in the years after 2015, various psychosocial centres have also offered training and collaboration opportunities for lay people (Leinberger & Loew, 2016; Van Keuk & Wolf, 2017). However, their evaluations are still pending.

15.6 Guided Autobiographical Writing

Many traumatised people feel the need to bear witness to the traumatic events they have suffered (► Chap. 11). This need is used in programmes of guided autobiographical writing.

In the field of mental health, the U.S. health psychologist James Pennebaker was the first to use systematically guided writing about trauma, which he called “expressive writing”. He developed this method as an experimental psychological arrangement to test the assumption that the written expression of stressful experiences has a generally health-promoting effect (initially measured by the average number of visits to the doctor in the following year).

The instructions for the writing exercise were: “You have registered for an experiment in which you will write for 30 min on 4 consecutive days. ... this will be kept confidential. “When writing, please really let go and explore your deepest thoughts and feelings...” (Pennebaker, 2010, p. 45). The method produced the presumed health-promoting effects. However, it must be taken into account that the experimental groups were almost exclusively students and

that the term “trauma” in the instruction was meant in everyday language. In practical terms, this meant that almost all study participants wrote about great disappointments and negative experiences, but hardly anyone wrote about trauma in the narrower sense (► Chap. 2). To this day, the “expressive writing” approach has remained almost exclusively reserved for topics outside of traumatic stress in the narrower, professional language sense.

The second approach came from research on ageing, the **structured life review**, which was intended to help older people achieve less depression, loneliness and memory problems (Maercker, 2002; Maercker & Forstmeier, 2013). In a structured manner borrowed from the approach used for depressive patients, participants are asked to describe selected episodes from important phases of their lives more precisely in many details and to report on them additionally:

- which they failed to do,
- which they did well and
- what they could learn from it for their lives.

When selecting the episodes, care is taken to ensure that they also include one or more of their traumatic life events in this biographical event chain.

Two forms of intervention that have been systematically investigated in the meantime are based – at least partially – on this approach: narrative exposure therapy (► Chap. 14 and ► Sect. 15.5) and integrative testimonial therapy (Knaevelsrud et al., 2013). The latter is a web-based writing intervention, which is described in more detail in ► Chap. 26. Writing interventions already constitute a transitional zone to the usual psychotherapy procedures. On the one hand, this is due to the intensity of their therapeutic guidance, which can be equivalent to that of regular therapy, and on the other hand, their therapeutic effectiveness also reaches the values of regular therapies.

More recently a new trauma-related intervention for guided writing was published, which has been developed for large-scale use (“scalable intervention”) due to its easy accessibility and design: WIRED (Warriors Internet Recovery and Education; Krupnick et al., 2017). It consists of 3 slightly modified phases of the Interapy (► Sect. 15.4), whereby the first phase focuses on the guided, repeated description of the traumatic experience. This intervention can be used as an additional intervention to the usual consulting room therapy. After an encouraging initial evaluation, it was suggested that this should be included in the routine intervention with traumatised former soldiers in the sense of a graduated care.

In all the above-mentioned areas of low-threshold interventions, further innovations can be expected in the coming years. As was shown in this chapter, many of these procedures are very promising. As a rule, interested patients and clients also like to use them because they represent alternatives to the usual therapy in the consulting room or hospital. Public health systems will be happy to make use of the new possibilities offered by these procedures as they modernise.

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Treatment of Complex PTSD with STAIR/Narrative Therapy

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Patients with post-traumatic stress disorder (PTSD) who have been subjected to sexual, physical or emotional violence in childhood often have a wide range of symptoms. These are often difficulties in interpersonal relationships and in the emotional sphere. They may find it difficult to build trust, to allow intimacy, to deal with criticism from others or to advocate for their own needs in an appropriate way. Often they tend to end professional or private relationships abruptly or avoid relationships altogether. Furthermore, those affected often have difficulty in perceiving and differentiating emotions appropriately. They suffer from strong, negative emotional reactions and have difficulty finding emotional balance. The observation that these complaints contribute to the same extent to the impaired functioning of patients and lead to similar restrictions in their everyday life as the PTSD symptoms (Cloitre et al., 2005), formed the starting point for the multi-modular treatment programme presented here.

- In patients with post-traumatic stress disorder (PTSD) following sexual or physical violence in childhood, problems in the area of emotions and interpersonal relationships often contribute to everyday functional impairment to the same extent as the symptoms of PTSD.

With the two modules “Skills Training for Affective and Interpersonal Regulation” (STAIR) and Narrative Therapy) addresses not only PTSD symptoms but also the above-mentioned spectrum of additional symptoms Cloitre et al., 2014) which are now represented in in complex PTSD (Maercker et al., 2013). Originally, STAIR Narrative Therapy was developed for patients who had been subjected to repeated experiences of sexual and physical violence in their childhood. However, clinical experience shows that trauma in adulthood, especially when it is a repeated or prolonged experience, for example in war and crisis zones,

can have a lasting effect on emotional regulation and interpersonal skills. Conversely, competencies in the area of emotion regulation and social interactions are important resources. They make it easier to process traumatic experiences and are generally important for a healthy lifestyle. STAIR’s interventions aim to counteract the loss of resources, which is typically associated with traumatic experiences, and thus contribute to the recovery of those affected. In its structure and its interventions, STAIR Narrative Therapy strives for a balance between dealing with traumatic experiences in the past and working on current needs, in the sense of strengthening important emotional and social competences. We will begin this chapter with a focus on developmental psychopathology in order to set the theoretical frame for the STAIR Narrative Therapy program as it applies to childhood abuse survivors. Later portions of the chapter including the research section discuss considerations of the use of the treatment for other trauma populations who have experienced chronic trauma such as refugees and combat veterans.

- The multi-modular treatment with STAIR Narrative Therapy emphasizes a balance between working on past traumatic experiences and addressing the current challenges in living associated with trauma.

16.1 Importance of Emotion Regulation and Interpersonal Skills

The symptoms described above are consistent with findings from studies on the influence of early stress among those who experience physical, sexual or emotional violence in childhood and adolescence which indicate that abuse can lead to central developmental tasks in the socio-emotional

sphere not being mastered or not being fully mastered. The competences impaired by this often have a negative influence on the self-confidence of those affected, on whether they trust their own perception and whether they can adequately assess themselves and others. Assaults carried out by parental caregivers are particularly significant as parents who are abusive to their children do not fulfil their critical role of supporting and promoting the development of the child. Caring parents know how to alleviate states of arousal in their children by appropriate calming and distraction (Stern, 1985). In this way, the child can learn how to calm himself, learn to distinguish between himself and others, but also between different emotional qualities and different ways of expressing them (Gergely & Watson, 1996; Nichols et al., 2001).

In the course of development, the ability to calm oneself and to be able to differentiate between emotions is initially supported by modulating the voice of the reference persons and later continued with linguistic means. Parents support a healthy emotional development of their child by naming his or her feelings. For example, a mother might say to her depressed child: “*You are sad because you have lost your toy*”. In doing so, she names the feeling, describes what her child is experiencing and ideally explains how the feeling came about. Patients’ testimonies typically include scenes in which they are mistreated and then told: “*That didn’t hurt!*”. The child must therefore deal with a discrepancy between his or her own experience and the statement of the caregiver. This can lead to mistrust of his own perception and develop a limited ability to describe and reliably classify emotional states. Furthermore, abusive parents often have limited abilities to regulate their emotions themselves and therefore often have little ability to help their children learn to do

so. Compared to the parents of children without abuse experiences, they more often suffer from alcohol or drug problems and numerous other stresses. In terms of effective emotion regulation, they are therefore rather unfavourable role models.

► Disturbances in the regulation of emotions can often be traced back to unfavourable parental interaction patterns.

Deficits in the regulation of emotions are often already evident in infants and preschool children (e.g. Cicchetti & White, 1990; Shields & Cicchetti, 1998). In the prepubertal and adolescent phase, they are more likely to exhibit impulsive sexual behaviour, drug use and aggressive reaction patterns (Kilpatrick et al., 2003). Finally, in adulthood, difficulties with emotional regulation come to the fore, which is one of the main reasons why sufferers seek psychotherapeutic treatment (Levitt & Cloitre, 2005). The feeling of self-efficacy is also formed through interpersonal experiences, especially through the attention of a benevolent caregiver who follows and supports what a child does and responds to it in an appropriate way. Experiences of abuse undermine such positive experiences. They demonstrate the perpetrator’s power to act independently of the will and needs of the child. In adulthood, victims may report that in conflictual situations they feel that they are “disappearing”, which may be due to the fact that their sense of self-efficacy was not fostered and their autonomy was persistently violated in childhood. It is therefore not surprising that those affected have particular difficulties in dealing with power dynamics in interpersonal relationships. They may feel overly dependent and passive in appropriate situations and then make a strong effort to have “everything under control” in relationships.

16.2 Interpersonal Development

Parents, siblings and other important childhood caregivers also represent the first models for interpersonal relationships. These early relationship experiences serve as templates for future relationships and have a significant influence on one's own behaviour and expectations of interpersonal relationships. An important aspect of this is that children are dependent on their caregivers as a source of security and care. When abuse experiences occur in these key early relationships, the basic assumption may emerge that relationships are fundamentally hostile, that vulnerability leads to exploitation and intimacy leads to suffering and betrayal. As a result, adults often report serious interpersonal difficulties, such as dealing with criticism, accepting the opinions of others and standing up for their own needs. For example, a study of women undergoing treatment found that the majority had significant difficulties in living intimacy, that they experienced themselves as either too controlling or too submissive, or that they found it difficult to establish and maintain contact with others (Cloitre et al., 1997). Such problems may be contributors to the tendency to abruptly terminate both employment and personal relationships. Interpersonal patterns that have developed through experiences of abuse in early relationships can be particularly evident when emotionally charged situations require the ability to manage conflict or find balance in relationships. The interpersonal patterns of those affected can then lead to the expectation that others will behave coldly, controlling or distanced towards them (Cloitre et al., 2002). In the sense of a forward defence, this can then lead to behaviour patterns whose aim is to avoid the negative interactions that affected persons fear, or it can be a re-staging of interpersonal roles from their family of origin. Overall, those affected have a relatively

small number of schemes that they tend to apply inflexibly in different situations and to different interaction partners. For example, if they were confronted with hypothetical situations in which benevolent behaviour by others was most likely, they still expected cool, hostile and controlling behaviour from others (Cloitre et al., 2002).

- Problems in interpersonal relationships are often related to patterns formed by early negative relationship experiences. They shape the expectations of affected persons in interpersonal relationships and their behaviour in them.

The study also found that the nature of the relationship did not seem to have any influence on the expectations of the persons concerned. Irrespective of whether the relationship was with a mother, father, other family caregivers or the best friend, affected persons reacted similarly and without reactions being appropriate to the respective person and situation. This type of overgeneralization may be explained by the fact that the healthy development of social competences includes instruction about and awareness that effective and appropriate social responses depend on the context and the persons involved. A child learns in the course of its development to distinguish where aggressive behaviour is appropriate (e.g. when romping in the playground) and where not (e.g. when playing with a small sibling), or when obedience to an adult is appropriate (e.g. to a teacher at school) and when not (e.g. to a stranger in the park). Parents help their children to develop this specific knowledge by constantly pointing out the differences in interpersonal expectations within and outside the family and by enabling children to explore their emotional reactions in such different interpersonal situations. The ability to react in a differentiated way in different interpersonal situations

may therefore also be insufficiently developed in persons undergoing treatment due to experiences of abuse.

In STAIR Narrative Therapy, a strong focus is placed on enabling patients to expand the interpersonal schemata available to them and use them in a context sensitive manner. This is also promoted by therapist-patient interaction during treatment, and patients should be made aware that such interaction models are context-dependent. Different types of relationships (e.g. at work, in an intimate relationship or in the parent-child relationship) require different expectations, behaviour and reactions. An important goal of treatment is therefore to enable patients to have relationship experiences that are different from those in abusive relationships and to develop greater sensitivity to the different types and contexts of relationships.

16.3 Overview of the Treatment Programme

STAIR Narrative Therapy is a treatment program consisting of 16 sessions. The first module (STAIR) consists of sessions 1–8 and focuses on changes in the areas of emotional regulation and interpersonal skills. The second module (Narrative Therapy) consists of sessions 9–16 and focuses on the processing of traumatic experiences with the help of trauma narratives. During this therapy phase, skills training is also continued in relation to the still existing everyday problems of the patients.

16.3.1 Module 1: Emotional Regulation and Interpersonal Skills

For the structure of module 1 [Table 16.1](#).

The first sessions of the STAIR module focus on emotional competences, i.e. the

ability to recognise and differentiate feelings and to regulate them in such a way that they serve overriding needs. The STAIR module distinguishes between 3 core areas of emotional competencies:

- Conscious perception of emotions,
- Emotional regulation,
- Use of emotions for personally significant goals.

One of the first interventions of STAIR is to systematically explore how feelings can be named, what intensity they have and in what context they occur. During treatment, expressing and classifying feelings again and again is also an important prerequisite for the client to be able to develop a coherent narrative of his or her personal life story during the course of therapy. Difficulties with emotional regulation are attributed to the physical, cognitive and behavioural systems underlying it. This also makes it clear which approaches can be chosen for training emotional skills.

Approaches to Working on Emotions

- Physical strategies (e.g. breathing exercises, physical activity)
- Cognitive strategies (e.g. altered inner dialogues, guided attention)
- behavioural strategies, especially in the area of social contacts (e.g. asking friends for help, talking about feelings with others)

To this end, the coping strategies already available to patients at each level will be collected, with the aim of strengthening and expanding them. The overall aim is to compile a selection of coping strategies that reflect these three areas so that physical sensations, thoughts and actions positively influence each other and contribute to better modulated emotional experiences. Furthermore, the concept of stress tolerance and related skills in treatment are addressed to

■ **Table 16.1** Module 1 (STAIR)

Subject of the meeting	Content of the meeting
Session 1 Introduction to the treatment	Overview of the process and goals of both modules (STAIR and narrative therapy); conscious breathing as the first skill and therapeutic relationship building
Session 2 Emotional perception	Conscious perception of emotions. Psychoeducation on how abuse and maltreatment in childhood affect the regulation of emotions; importance of perception and differentiation of emotions; guidance in this and first attempts to name feelings; training of self-observation
Session 3 Regulation of emotions	Focus on connections between feelings, thoughts and behaviour; recognise strengths and weaknesses in relation to one's own emotional regulation; identify and practise individual skills for coping with feelings; identify positive activities
Session 4 Living in contact with your own emotions	Acceptance of feelings and tolerance of stress; weighing the advantages and disadvantages of tolerating emotional stress; perceiving positive feelings and using them to identify one's own goals
Session 5 Understanding relationship patterns	Introduction to interpersonal schemes and the relationship between feelings and interpersonal goals; information on the interpersonal scheme worksheet
Session 6 Change relationship patterns	The work with role plays is introduced to practice alternative behaviour in relevant interpersonal situations. Work on alternative interpersonal schemes
Session 7 Capacity to act in relationships	Psychoeducation for self-confident behaviour; discussion of alternative schemes and behavioural reactions; role plays for self-confident behaviour; repetition and extension of alternative schemes
Session 8 Flexibility in relationships	Focus on flexibility in interpersonal relationships; continuation of the role plays on interpersonal situations using individual examples; discussing the transition from phase 1 to phase 2 of the treatment

enable patients to better pursue personally meaningful goals. When patients are better able to identify and deal with their emotional reactions during the course of treatment, they can allow themselves to experience stressful emotions in a well-dosed manner that serve an important purpose or personal goal or that are simply unavoidably linked to certain life experiences. They learn to weigh up the desired goal and the emotional burden that is likely to be associated with it, as well as their own abilities to deal with it, and to decide whether they want to turn towards the goal despite the expected burden.

In subsequent sessions, a key intervention is to identify and change interpersonal patterns. Interpersonal schemata arise in early life phases in interaction with important caregivers. They reflect ideas about oneself and others as well as assumptions about how relationships work. Typical examples of such assumptions are “*If I do what I am told I will be loved*” or “*If I ask for the satisfaction of my needs I will be rejected*”. Interpersonal patterns that were appropriate in childhood may cause problems in adulthood and may lead to unintentional repetition of negative relationship patterns.

In the course of treatment, such interpersonal schemes are systematically identified using appropriate working materials.

Questions for the Identification of Schemes

- What happened in this situation? Who was involved?
- What did I feel and think about myself?
- What did I suspect, how the other person thinks/feels/reacts to me?
- What did I do? What was the result?

In the next step, alternative schemes are examined and tested within the protective framework of the therapy (e.g. *“If I don’t ask for my needs to be met, my friends will never know what I want”*). Whether these schemes can be consolidated is often related to the improvements achieved in the area of

emotional regulation and to the changes in feelings caused by the alternative schemes.

Questions on the Modification of Schemata

- What are my goals in this situation?
- What else could I feel and think about me?
- What else could I assume about the other person? How could they think, feel or react?
- What else could I do?

16.3.2 Module 2: Creation of Narratives

The work in the second module (narrative therapy) is based on a modified version of prolonged exposure (PE). It serves to create narratives of the traumatic experiences (■ Table 16.2).

■ Table 16.2 Module 2 (narrative therapy)

Subject of the meeting	Content of the meeting
Session 9 Introduction to working with narratives	Planning and motivation building; information on the purpose of working on memories, description of the procedure; creation of a memory hierarchy
Session 10 Narratives from the first memory	Repetition of information on the meaning of the narrative work; practice with neutral memory; record the first narrative on a traumatic memory and listen to it together; examine assumptions about yourself and others contained in it; validation and support of the learning process by the therapist
Session 11 Continuing the work on memories	Explore emotional state; evaluate the work on the last memory; perform narrative (of the same or a different memory); identify schemata contained therein and continue work on them; perform role-plays in relation to alternative schemata
Session 12–15 Working on other emotional areas	Continue to select appropriate memories, addressing emotional areas beyond fear (e.g. shame, grief and loss); identify and work through patterns associated with shame and loss; provide clear, appreciative feedback
Meeting 16 Closing	Summarize progress on skills and patterns of self and others; discuss relapse risks; plan next steps, provide resources and recommendations

Both the concept of “narrative” and the process associated with it make it clear that a life story has a past, a present and a future. This makes it possible to assign the traumatizations to the past, but also encourages one to look at the present and turn to our own future. It is one of the aims of narrative work that those affected learn to comprehensively experience feelings related to the trauma and at the same time to be able to control them. As with the prolonged exposure, a hierarchy of traumatic experiences is created. The choice of the first memory to be worked with is based on its subjective relevance and significance for the current impairments. It should trigger a certain amount of exposure, but the client should have the sensation of being able to deal with it. As a rule, about three to six traumatic experiences are dealt with in the course of treatment, with each of them being worked with from one session to three sessions until the associated burden has been significantly reduced. During the sessions, a sound recording is made of the respective narrative, which is listened to again together during the session. After the session, patients should listen to them at least once a day to achieve a further habituation, especially with regard to the fear-inducing aspects of the narratives. Often there is uncertainty about the “right time” to switch to narrative work or whether the patients are sufficiently “stable” for this. It is important to be aware that for most of those affected, there is no “right time” to start narrative work because crises occur repeatedly in their lives. Waiting for “everything to calm down a bit” is not very helpful, since a significant part of the “restlessness” is due to the persistent PTSD symptoms. Parallel to the narrative work, the coping strategies already learned by the patients should be repeated, which they have acquired in the course of the treatment. They should be encouraged to continue applying and practising their skills. It is helpful at this point to return to the concept

of stress tolerance, that is, the idea of **deciding to** tolerate stress in order to achieve a certain overriding goal. This is another effective way to facilitate the work ahead.

During the narrative, attention is paid not only to sensory details and perceptions, but also to the feelings during the events. Often, overriding themes or emotions that appear in all memories, such as shame or guilt, come to the fore. They often reveal the client’s basic convictions about himself and his relationship to the world, which are systematically identified and dealt with during the narrative work. After the trauma narrative has been completed, client and therapist together identify the interpersonal schemata contained within. The adaptive meaning of the schemata during the traumatic situation is worked out as well as their significance in the present and their current function. Typically, schemata are found that were also identified in the first phase of treatment, but they feel even more coherent in the context of the narratives and possess a stronger emotional power. These schemata are contrasted with new, alternative attitudes, which often have already been identified in the first phase of treatment. The schemes are compared in such a way that both the old and the new attitudes are validated. This makes it possible to respect the old, trauma-related schemata, but also to create space for alternative interpersonal attitudes in a new social context. During the sessions, a sound recording is made of the respective narrative, which can be listened to together again during the session. After the session, the client should listen to it at least once a day in order to achieve a further habituation, especially with regard to the fear-inducing aspects of the narratives. The overall goal of this treatment phase is also to help the client develop more flexibility in thinking, feeling and acting, thereby becoming more functional in everyday life and leaving the traumatic contexts behind.

Procedure for Narrative Therapy

- Practise creating narratives using a neutral memory (beginning, middle, end)
- Working out the first narrative of a traumatic memory
- Retrieve memories as vividly as possible
- Describing memory in first person and present form
- Include all levels of experience: thoughts, feelings, body reactions
- Listen to the recording together and identify feelings and beliefs about yourself and others
- Comparison with convictions in the here and now
- Reinforcing new schemes: planning corrective experiences

Some patients find it difficult to limit themselves in the description of their memory. In this case, therapists should try to gently guide them to talk less about the events. Other patients, on the other hand, find it difficult to report accurate information about their memories at all and find only brief or vague fragments. It is then important to tell them back that this is a common phenomenon and that it will not prevent them from benefiting from the narrative work. Many of those affected have a long and complicated trauma history, which can make it difficult to make a selection of memories. Patients can quickly feel overwhelmed as a result. In this case they should be relieved by the therapists, who should explain to them that not every memory has to be taken into account, but those that are experienced as most significant for the present.

When narrative work increasingly focuses on the memories that are the greatest burden to patients, appropriate responses, including dissociative phenomena, may occur. If there is a tendency to dissociative

reactions, concrete strategies for dealing with them should be defined. One possibility is to agree on signals that patients can use to communicate when they perceive their early warning signs. These signals can then be used to reduce the emotional intensity of the narrative or to get more distance from the material being processed and thus remain within the “tolerance window”. In addition, common skills can be used for reorientation. A basic principle of narrative work is to dose the emotional intensity in such a way that the patients always remain in the here and now and keep control of the process. In this way, they should also be able to experience that although they were unable to prevent the traumatic experiences, they can now regain control over their memories and their emotional experience.

16.4 Implementation of STAIR in Group Format

Meanwhile the STAIR module of STAIR Narrative Therapy is also available in an extended group version. According to the individual therapeutic treatment, the goals of the group treatment with STAIR are to learn how to deal with negative and stressful feelings and to improve interpersonal skills and thus your own relationships. In this phase, patients should be supported in recognising and naming their own feelings and experiencing their own influence on their feelings. In addition, they are instructed to recognise relationship patterns learned early on and to change them in such a way that they can shape their relationships as they wish.

Within the framework of group treatment, 2-hour sessions are held once a week in their original form over a period of 12 weeks. After discussing the content, structure and framework of the group (such as the treatment contract and group rules) with the patients in session 1, 5 sessions on

emotion regulation and 5 sessions on working on interpersonal skills follow. The 12th session is scheduled for balance and farewell. As with individual treatment, the overall length of the session can be flexibly adjusted to different settings and needs and can be extended beyond the number of 12 sessions.

Structure of the Group Meetings

- Overview of the current session (“timetable”) and repetition of the group rules
- Debriefing of the exercises between sessions
- Brief summary of the previous session and review of discussed strategies
- Introduction to the new topic and presentation of new strategies
- Preliminary discussion of the exercises between sessions

16.4.1 Expansion of the Concepts for Emotion Regulation

In addition to learning skills for the perception and modulation of emotions, two further important aspects of emotion regulation are included in the group concept: firstly, the acceptance of feelings (skill “emotion surfing”) and secondly, the recognition of the needs that may be behind them (skill “feelings as messengers”).

The skill “**Emotion Surfing**” *is about being* more attentive with your feelings. Patients are instructed to focus their attention on their experience in the current moment and to concentrate on the 3 different levels of experience.

Levels in Emotion Surfing

- Perception of the body level (“Where exactly do I feel the feeling?”)
- Perception of the thought level (“What am I thinking right now?”)
- Perception of the behavioural level (“What am I doing right now?”)

If the feeling is perceived attentively, the subsequent steps are about accepting oneself and the feeling just experienced without evaluating it and without having to change it. Patients are encouraged to allow themselves this feeling. The aim of emotion surfing is for them to perceive that feelings have a “peak” and a “turning point”, that is they are subject to a completely natural change, without having to “go into battle” with them.

- The skill “emotion surfing” helps patients to accept feelings for what they are – namely only feelings and not facts.

The skill “**Feelings as messengers**” additionally focuses on the deeper understanding of feelings and the functions behind them. Emotions are an important resource, we need them for an effective life. If we succeed in understanding our feelings, they help us, for example, to make decisions or act in a certain direction. As a result of traumatisa-tion, feelings are often “switched off” or experienced as excessive and overwhelming. This limits our ability to think and act and distorts our perception of ourselves and others. Those affected therefore often find it very difficult to trust their feelings – this ability is to be regained with this skill. Patients can learn what information our

feelings tell us and what they tell us back about our wishes, goals, likes and dislikes.

- The skill “Feelings as messengers” helps patients to regain confidence in their feelings and to recognize needs that lie behind their feelings.

16.4.2 Concept of Compassion for Oneself and Others

In order to achieve a generally benevolent approach to oneself, one’s own feelings, but also to others in relationships, the concept of (self-)compassion has also been included in the group treatment. In this therapy phase, it should be made clear to those affected how much easier life with themselves and others becomes if they manage to adopt an appreciative attitude, reduce expectations and demands and “allow” themselves and others more.

After a theoretical introduction to the concept of compassion, the group uses worksheets to discuss what patients allow themselves and others to do and where it is still difficult to feel compassion. With the help of appropriate materials, this is worked out in relevant areas such as “making mistakes”, “accepting help”, “doing something good for yourself”, “being insecure” or “being proud”. Afterwards, the group participants are encouraged to imagine what it would be like to have more compassion with themselves or with others and what effect this could have on their thoughts, feelings and behaviour.

- Many patients find it particularly difficult to feel sympathy for themselves. At this point, the corresponding schemes can be worked out again (e.g. “If I allow myself to ask for help, then ...”).

Following on from this, a meditation on self-compassion is carried out to support the perception of the associated feelings, thoughts and body reactions and to practice self-turning.

▶ Example: Meditation for Self-Compassion

- “Concentrate on your breathing for a few minutes. Close your eyes and perceive only your breath. Take a deep breath slowly. Hold it. Slowly exhale again, allowing all the air to escape from your lungs. Repeat for a few minutes: Breathe in, hold it, exhale slowly.
- Now let a picture of yourself emerge in your imagination. Take a good and close look at yourself. Focus on the positive parts of yourself, such as satisfaction, joy, lustful feelings, positive beliefs, beautiful experiences and memories.
- What do you perceive?”
- “Now focus on the parts you associate negative things with, such as emotional pain, fears, sadness, negative beliefs, traumatic experiences.
- What do you perceive?”
- “Now imagine that these two parts inside of you are fighting with each other. It is a long and very exhausting fight that starts anew every day and has been going on for many years.
- What do you perceive?”
- “Now imagine that you allow the positive and negative parts of yourself to stop fighting and instead coexist side by side.
- What do you perceive? “
- “Focus on how the performance feels to you. “
- 5 “Look at all your holdings as they are, without evaluating them.” ◀

The aim of this treatment module is to obtain a more realistic assessment of one’s own difficulties, stress limits and challenges, but also to be able to better accept one’s own progress and successes, such as the increase in competence within the group.

16.4.3 Processes in the Group

The positive effect factors of group therapies can be used well, especially with regard to the training of skills. Patients can give each other mutual support, for example by assessing for themselves in which situations which type of skill can be used sensibly. In addition, the group offers a protected “exercise framework” in order to try out and practice specific skills directly. This can take place through guided role-plays, but also through the dynamics developing within the group, which can be taken up by the therapist and made useful for working on skills.

- Various aspects of the group setting prove to be beneficial for working with the STAIR module, such as the possibility of receiving immediate feedback from other participants and learning on the model.

By validating the difficulties of each individual in the group, patients directly experience corrective experiences which in turn can strengthen the new, healing patterns (e.g. “When I open up and show weakness, I

get understanding and support“ or “When I ask for help, I am taken seriously and my problems are easier to solve”). This type of corrective interaction usually contributes to group cohesion, enables new relationship and bonding experiences for the participants, and there can be immediate learning of interpersonal skills. At the same time, working in a group can also present special challenges against the background of the patients’ interpersonal schemata. Uncertainties, fears of trust and loss of control as well as feelings of shame should be given special attention.

16.4.4 Dealing with Security, Trust and Control

For many of those affected, it is a great challenge to communicate with other people at all. Many of them have had the experience of being ignored, rejected or punished as soon as they reveal themselves and their needs. It is difficult for them to share their experiences, for example because of fear of uncontrollable and threatening consequences.

Case Study: Influence of Interpersonal Schemes on the Client’s Experience in the Group

The STAIR treatment concept was presented to Ms. P. Due to her post-traumatic complaints as well as her difficulties in dealing with her own feelings (especially fear and helplessness) and inhibitions in social interactions (especially in expressing her own wishes and rights), she showed great interest in the procedure, but also expressed uncertainties about participating in the group.

- Mrs. P.: “I honestly do not know whether this is something for me. Somehow I’ve started to doubt whether I really want to be part of such a group.”
- T.: “I can understand that, this is completely new for you. What are you afraid of when you think of group participation?”

- Mrs. P.: “I am afraid that I will make a complete fool of myself – for example I have to start crying or something ...”
- T.: “All right. What do you think would happen if you started crying?”
- Mrs. P.: “Then I would no longer get myself worked up, everything would get completely out of control ... I would lose control, cry uncontrollably.”
- T.: “...and what would happen then? How do you think we and the other participants would react?”
- Mrs. P.: “I know that this probably won’t be the case, but ... I’m afraid that you and the others will then reject me and find me totally stupid.”

- T.: “Okay, so this is your fear: ‘If I show my sadness, I will be rejected and everything will get out of control’?”
- Mrs. P.: “Yes, exactly.”
- T.: “It is understandable that you are so afraid of it ... often enough you had to make exactly this experience when you were a little girl. Right?”
- Mrs P.: “That’s right.”
- T.: “You just said yourself that ‘it probably won’t be like that’ – what do you think it would probably be like?”
- Mrs. P.: “Probably you and the other participants would listen to me, maybe comfort me.”
- T.: “Right. And how would that be for you?”
- Mrs. P.: “I don’t know, a little strange maybe. But I can imagine it better now and I’m not so afraid of it anymore – but what if I really can’t control myself anymore and then just want to leave?”
- T.: “Then you may. If it really comes to that, we will see what you need. You are also allowed to leave the group room for a moment at any time to calm down – with one of us together or alone, if you wish”.
- Mrs. P.: “Okay, then I’ll try the participation.”

By providing an appropriate framework and working continuously on the interpersonal schemata, patients can experience directly in the process that they have possibilities to influence and are not exposed to any danger when they practice their new behaviour and relationship patterns.

16.4.5 Handling Shame

In therapeutic work with traumatised people, various forms of shame also play a role. Internalized feelings of shame, often express themselves in massive devaluation of the own person. Externalised feelings of shame, on the other hand, manifest themselves in the conviction of being devalued by others, for example at the moment when those affected report their biographical experiences. It is accordingly important to take up and work on shame-related schemata and to modify the meaning of the trauma for the value of oneself. In addition, of course, the previously learned strategies for emotion regulation can also be used

here (e.g. emotion surfing, self-compassion or the like).

- Feelings of shame are frequent among those affected and must be explicitly taken into account in the group setting, e.g. by disputing the underlying schemes.

In addition, the therapist should always express his or her own appreciation for the patients and enable them to expand their competencies within the group and at the same time have positive experiences with their fellow human beings.

16.5 Application to Young People

The treatment concept for adolescents is similar in structure to the adult version. It is also a 12-week group programme to promote emotional and social skills. Strategies for dealing with feelings are also presented and in a second step the skills for shaping interpersonal relationships are taught. In the following, the differences to the adult version will be discussed in particular.

16.5.1 Adaptation of Interventions

The therapy materials of the STAIR-A are modified according to age. The presentation of concepts and tasks have been adapted so that they are more tangible for young people and correspond to their living environment. Typical situations from the everyday life of adolescents are taken up in which difficulties may arise, e.g. at school, at home with their parents or within the peer group. The worksheets on appropriate communication strategies include the following very concrete example situations:

► Example: Communication Strategies

“Your classmate Anna says mean things about Nora. Nora is one of your best friends since first grade – how could you react to Anna? What could you say?”

“You meet Robert and Maria after school. They’re planning a party for the coming weekend. Maria asks you to make the invitations, decorate the party room and provide all the food – how could you respond to Maria’s request? What could you say to her?” ◀

Overall, compared to the procedure for adult patients, a greater focus is placed on concrete changes at the behavioural level. The adolescents are supported in formulating tangible goals for each treatment module, such as *“I would like to manage to keep my room cleaner”*, *“I would like to be late for school less often”*, *“I would like to have fewer tantrums when I argue with my sister”* etc.

The intended involvement of caregivers is also a great help in this respect. In order to better understand the experiences and behaviour of the adolescents and to be able to deal with them in the sense of treatment, parents, caregivers or other caregivers are invited to separate sessions in which, in addition to psychoeducational elements, appropriate coping strategies are also taught.

16.5.2 Consideration of Aspects of Developmental Psychology

Adolescence is a very important phase of life in terms of the development of emotional and social skills. Both learning appropriate strategies for dealing with one’s own emotional states and developing the skills needed to enter into and shape relationships are important developmental tasks in adolescence. Traumatic experiences before and during this time can directly undermine these developmental tasks and strongly impair the development of assertive competencies. As a consequence, affected young people often find it difficult to react appropriately to life events or to cope with stressful experiences. A focus on **promoting resilience** is therefore an important component of psychotherapeutic work with young people. It is of great importance to support them efficiently in coping with their everyday life and thus help them to achieve an adequate ability to function. STAIR-A focuses exactly on this. Emotional and social skills serve as protective factors and make it easier for young people to access external and internal resources (using relationships, being able to calm themselves, etc.). They learn to identify their own goals and to achieve them with appropriate problem-solving strategies and skills for stress tolerance.

► Resilience in the sense of the ability to cope with crises with the help of internal and external resources and to grow from them is a central protective factor against the consequences of current and future critical life events.

Faith in oneself and in positive coping strategies has a great influence on the development of self-efficacy. The experience of self-efficacy determines the extent to which a person is convinced that they have the neces-

sary skills and strategies to cope with a challenge. Many young people who have been or are exposed to traumatic experiences assume that external factors such as “fate”, “luck”, “chance” or the influence of other people determine what happens (to them). This is often accompanied by feelings of helplessness, sadness or anger and the use of maladaptive coping strategies. Another focus is therefore on **promoting self-efficacy**. To this end, the young people are given the opportunity to have corrective experiences within the framework of group treatment. They experience that they are up to certain tasks, receive support from the other patients and observe them in successfully coping with their own goals. Therapists should always take care to positively mark and validate even small changes.

Similarly, work on interpersonal schemes focuses in particular on the **modification of** young people’s **control convictions**, i.e. the convictions that they have an influence on themselves, their lives and their own future and that they can make a difference. For example, the control convictions of a 13-year-old boy before and after the modification by the schema work could be: *“If I show myself weak, the others use this to hurt or harm me”* (before), or *“I can decide to whom I show myself weak, and there are people who then like me anyway and even support me”* (after).

- ▶ The promotion of internal control convictions within the framework of the scheme work promotes the perception of one’s own possibilities of influence with regard to personal goals as well as future challenges and crises.

The treatment concept of STAIR-A is therefore not only focused on the reduction of PTSD symptoms or depressive and anxious symptoms, but above all on the development of personal strength and belief in oneself, which supports adolescents in overcoming current and future difficulties.

16.6 Research Findings on STAIR Narrative Therapy

Studies on the effectiveness of the treatment program have been conducted with different patient groups. Three randomized controlled trials (RCT) have been conducted in adult patients with experiences of violence in childhood (Cloitre et al., 2002, 2010; Oprel et al., 2021) and one open trial study of a flexible application of STAIR Narrative Therapy among survivors of the terrorist attacks of September 11th (Levitt et al., 2007). The results speak for the effectiveness of the program in terms of a reduction in PTSD symptoms and improvements in emotional and social functioning. Several studies have investigated the use of STAIR alone. An RCT comparing STAIR to treatment as usual (TAU) in VA primary care found significant reductions in PTSD, depression, emotion regulation and social functioning (Jain et al., 2020). A comparative study of STAIR group versus TAU among individuals with PTSD and chronic mental illness (Trappler & Newville, 2007) found significant reductions in PTSD, psychotic symptoms and behavioral agitation and de-activation. Appropriate to concerns about delivering treatment over distance during times where face-to-face contact is impossible (e.g., environmental events such as the COVID-19 pandemic), STAIR delivered via telemental health to 10 women Veterans with military sexual trauma (MST) found significant reductions in PTSD and related symptoms as well as improvement in emotion regulation and interpersonal functioning (Weiss et al., 2018). Two studies using group STAIR were conducted in adolescents, one an open trial study in an inpatient setting (Gudino et al., 2014) and the other a comparative study of the group version in a school context (Gudino et al., 2016). Both studies showed a reduction in symptoms and significant improvements in coping strategies. We provide details regard-

ing the four studies using STAIR Narrative Therapy.

In a first randomised controlled trial, STAIR Narrative Therapy was compared with a waiting list control group (Cloitre et al., 2002). Compared to the control group, patients in the STAIR Narrative Therapy group showed a significant improvement in terms of PTSD symptoms, emotional regulation, interpersonal problems, social support experienced and global functional level in everyday life. These improvements were maintained even 3 and 9 months after completion of therapy. The sustainability of the therapeutic relationship and improvements in dealing with negative feelings were predictive of the success of the narrative treatment in terms of a reduction in PTSD symptoms (Cloitre et al., 2004). The therapeutic relationship and work on skills thus contribute to the effective use of narrative work.

In a component study (Cloitre et al., 2010) the differential contribution of the STAIR module and the NT module could be identified. In this controlled study 104 patients with PTSD as a result of sexual or physical violence in childhood were randomized into one of 3 treatment groups. They received either the standard therapy with consecutive implementation of both modules, or one module each (STAIR or NT) was combined with a non-specific intervention consisting of supportive counselling sessions. The number of sessions and treatment duration were controlled. The results indicated that patients in the STAIR Narrative Therapy group were more likely to achieve full remission of PTSD compared to patients in both control groups. Furthermore, this group showed greater improvements in emotional regulation, social support and interpersonal problems than patients in the control groups. The effects of STAIR Narrative Therapy treatment were particularly evident at the follow-up times after 3 and 9 months. This finding

could be interpreted to mean that the improvements that continued to increase after treatment were due to the successful application of skills in dealing with everyday stressors, including situations that had previously triggered symptoms of PTSD. The successful handling of such triggers could further enhance the effects of trauma-focused treatment, making it possible for patients to experience that traumatic experiences really are a thing of the past.

The third RCT evaluated STAIR Narrative Therapy (16 weekly sessions) against Prolonged Exposure (PE) (16 weekly sessions) and an Intensive Prolonged Exposure Therapy (16 sessions over 4 weeks) among 149 women with PTSD related to interpersonal violence either in childhood or adulthood. PTSD outcomes were equivalent across all three conditions with large effect sizes (Cohen's $d = 1.6$) at one-year follow-up. Similar equivalence in outcomes were obtained for other measures including emotion regulation and interpersonal functioning. It was expected that STAIR Narrative Therapy would produce better outcomes in emotion regulation and interpersonal functioning than PE as in a previous study (Cloitre et al., 2010). The discrepancy in results between the two studies may be the result of extending exposure from the usual 9–12 sessions to 16 where more sustained PE may have helped improve patient capacities in emotion regulation and interpersonal functioning. In addition, STAIR Narrative Therapy was somewhat diluted in this study in that the PE delivered in the sequence did not include cognitive reappraisal at the end of each exposure session nor continued use or practice of STAIR skills which is the standard approach in STAIR Narrative Therapy. Nevertheless, these new data suggest that patients can utilize their personal preference in selecting any of the above three treatments with the expectation that they are likely to have equivalent outcome.

Patients can choose either a 16 session STAIR plus PE to diversify their treatment activity, an extended 16 session version of PE to maintain focus on past traumas or an extended 16 session version of PE conducted in an intensive way to shorten the duration of the treatment.

An open trial examined the flexible use of STAIR Narrative Therapy in survivors of the terrorist attacks of 11 September (Levitt et al., 2007). Therapists had the option of repeating or skipping individual sessions depending on the therapeutic needs of the patients and the length of treatment. In general, there was greater freedom in the implementation. Thus, additional sessions could be integrated, for example on current life problems. The length of the treatment varied from 12–25 sessions. The previous experiences of the therapists with cognitive-behavioural therapeutic treatment approaches were also very different. This study also showed significant improvements in the areas of PTSD, depressive symptoms and interpersonal problems that were comparable to those in the first randomized controlled trial (Cloitre et al., 2002). In addition, effects on the coping strategies used were shown. The use of alcohol or drugs decreased significantly, while the use of social support as a coping strategy increased significantly.

- The effectiveness of STAIR Narrative Therapy in this flexible format suggests that the program can be adapted to different target groups of traumatized patients and different clinical settings.

16.7 Outlook and Further Developments

An important research question would be the investigation of STAIR as an independent or “stand alone” treatment method for PTSD symptoms. STAIR focuses pri-

marily on the current difficulties in coping with everyday life. At the same time, however, the skill training also indirectly addresses traumatic experiences in the past by helping patients to understand the consequences of traumatization, in terms of emotional and interpersonal skills, but also in terms of beliefs about themselves and others. STAIR offers alternative ways of thinking and behaving to make corrective experiences. The evidence to date shows that STAIR alone can significantly reduce PTSD symptoms. An interesting and important question, however, is whether STAIR, as a stand-alone procedure alongside other “non-trauma-focused” approaches, can be as effective as trauma-focused treatments such as prolonged exposure (PE) or cognitive processing therapy (CPT). In this context, randomized controlled non-inferiority studies would be conceivable. In a study comparing interpersonal therapy (IPT) with prolonged exposure (PE), for example, results indicated that the effectiveness of the treatments was equivalent (Markowitz et al., 2015). Effective non-trauma-focused therapies would help to create more choices in the treatment of traumatised patients. It would also be important to assess their effectiveness in relation to outcomes other than PTSD symptoms. For example, it could further increase patients’ motivation and commitment if other areas besides PTSD symptoms were covered that might affect them in the same way or even more, such as interpersonal problems or difficulties in coping with anger.

A question that follows is that of the factors involved in the treatment of PTSD. What exactly are the mechanisms that make different procedures effective? Are there certain factors in PTSD treatment that act independently of the therapeutic approach? For example, it could be that there is a change in thought and evaluation patterns, regardless of whether the therapy focuses on current

experiences (STAIR) or past experiences (Narrative Therapy). In the case of STAIR, the improvement of emotional regulation and the promotion of interpersonal skills lead to precisely this change in the people concerned, through the experience that they have an influence on their emotions, are increasingly better able to react to stressors and are able to better shape their relationships. In the case of PE, the direct confrontation with the traumatic experiences and the associated experience of being able to cope with them successfully also leads to a modification of convictions and one's own self-efficacy. A survey of the symptoms and possible mediators over time could help to work out concrete factors of impact. If it were possible to identify such central mediators and effective factors, this could help to improve existing procedures and develop new approaches to make the treatment of trauma sequelae even more effective and efficient.

Another important goal in future studies is to explore the potential benefits of flexible application of specific interventions and treatment components. In this context, different components with the respective typical interventions (e.g. for dealing with emotions, building assertive skills or cognitive restructuring) will be selected individually and oriented towards the concrete needs of the patients. In this very patient-centred approach, therapists work with the patients to identify their individual difficulties in order to decide which interventions should be used in which combination and sequence. This results in a highly individualized treatment plan. Various studies on the treatment of psychiatric disorders in childhood and adolescence have already shown how successful this model can be. In this area, very heterogeneous symptom profiles are often found, similar to adult patients with trauma sequelae. Such models have been shown to be superior both to the use of complete treatment manuals for individual disorders (Daleiden et al., 2006) and to the use of dif-

ferent treatment manuals for different disorders in succession (Weisz et al., 2012). In addition, a higher satisfaction of the practitioners was shown, which could facilitate the dissemination of therapy approaches in practice (Chorpita et al., 2015). Similar application-related designs are planned for STAIR. The concept of the classic 10–12 sessions could be compared with a concept that includes fewer sessions but exclusively patient specific interventions. In a recent study, such a flexible application of STAIR interventions limited to 5 sessions in veterans with depression or PTSD proved to be superior to standard treatment (Cloitre et al., 2016), which speaks for the feasibility of this approach.

Finally, it would be of great interest to investigate flexible, patient-oriented treatment models in relation to trauma-focused and non-trauma-focused interventions. While most procedures start with the development of coping strategies and are followed by the phase of trauma processing, it might be conceivable that for some patients the reverse order might be appropriate. The nature and strength of the treatment effects could be examined at the end of each module. In this way it could be ascertained what exactly changes positively for the patients, whether the sequence of treatment phases makes a difference and whether they (regardless of which module was started with) continue to benefit from the following modules. The treatment courses could differ depending on the complexity of the complaints, the motivation and according to the personal goals of the patients. The implementation of such flexible models could not only improve the patients' treatment satisfaction but also the therapeutic relationship, since the treatment goals and contents could be worked out together even more explicitly.

Over the past 20 years there has been significant progress in the development of psychotherapeutic treatment methods for traumatised patients. In the coming decade, the focus will increasingly be on further

increasing their effectiveness and efficiency and disseminating them even faster and more successfully. This can be achieved above all by maintaining a close dialogue with our patients as clinical and scientific practitioners and by systematically focusing on the results and forms of treatment they are seeking.

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Dialectical-Behavior Therapy for Complex PTSD

M. Bohus

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17.1 Introduction

DBT-PTSD is rooted in Seattle, USA. There, in the hospitable home of Marsha Linehan, therapy researchers and developers of Dialectical Behavior Therapy (DBT) met for their annual stocktaking: What is effective about DBT for patients with borderline personality disorders, and where are the outstanding problems and weaknesses?

One problem in particular was all too obvious: several analyses (e.g., Harned et al., 2008) showed that standard DBT had very little impact on improving comorbid PTSD in the population of borderline patients. After 1 year of treatment, only about 10% of those affected, showed significant reductions in symptomatology. Because about two-thirds of all borderline patients report childhood sexual abuse, and about half of all clinically treated borderline patients have manifest PTSD, we could not simply pass over this issue.

In some ways, DBT was blocking its own way. Nearly all patients with borderline disorder and comorbid PTSD report chronic suicidal ideations and a variety of dysfunctional behaviors, such as self-injury that are successfully used to end aversive tension, negative emotions, and also intrusions and dissociative states. Intuitively, we assumed that focusing on trauma-relevant emotions in the context of therapy would lead to an increase in stress levels, and thus to an increase in uncontrollable threatening behavior patterns. The dogma postulated by M. Linehan was therefore logically that the patient should first learn to control dysfunctional behavior with the help of skills in therapy stage I, before the focus was then placed on trauma-relevant content in therapy stage II. On the other hand, many patients had great difficulty relinquishing these behaviors as long as they were tormented by intrusions and flashbacks and did not profit from standard DBT.

How should we treat patients with chronic suicidality, self-injury, and severe dissociative symptoms, intrusions and flashbacks, who suffered from self-contempt, deep rooted shame and guilt and self-hate? To resolve this stalemate, we first decided (we wrote the year 2005) to enrich DBT with trauma-specific interventions, especially in-sensu exposure, and to try out the new protocol in the residential setting at CI Mannheim. In Germany, complex treatment programs over 12 weeks under residential conditions are funded by insurance companies. Here, we had a well-trained DBT team, established structures, and therefore a certain degree of safety and could treat patients with severe behavioral control with exposure based interventions.

To make a long story short- our suspicions were not confirmed: we found no exacerbation of suicidal ideation, suicidal acts, self-injury, or aggressive breakthroughs during exposure (Krüger et al., 2014). Rather, the vast majority of patients expressed considerable relief that someone finally dared to process their traumatic experiences. And we were deeply touched and fascinated by the rapid successes and profound changes that could be achieved through targeted trauma therapy, also – and especially – with these seriously ill sufferers (Bohus et al., 2013). On this basis, we felt encouraged to refine and enrich the treatment concept step by step in the following years in order to do justice to as many facets of this disorder as possible. For a long time now, at the Central Institute in Mannheim, we have not only been treating borderline patients, but in the meantime far more than a thousand affected persons who suffered from the sequelae of interpersonal violence in childhood and adolescence as complex PTSD. As a result, we have also had to significantly expand the treatment manual and gear it specifically to the multi-layered coping with traumatic experiences. Today, the patient manual has grown to about 300 pages. It includes a wide

range of heuristics and interventions that can be adapted for a patient's individual treatment. DBT-PTSD is therefore considered a “blended treatment” as a combination of therapist-guided treatment and self-help manual.

Inpatient treatment programs are safe, highly effective, work quickly, but consume high resources and are hardly available outside the European countries. Therefore, we decided to adapt the manual to outpatient conditions and to evaluate it (Bohus et al., 2020; see also ▶ Sect. 17.5 in this chapter). For pragmatic reasons, we dispensed with the usual DBT skills group in this program and put the responsibility for teaching skills to control dissociation and high stress, to develop mindfulness, compassion, and self-esteem in the hands of the individual therapist and the respective patients. The data prove us right – after 45 hours of individual therapy, the “Intent to Treat (ITT)” analyses of a large RCT showed about the same results as under 3 months inpatient conditions. Nevertheless, this format cannot claim to be the only valid one. Nothing is carved in stone. There are now numerous international working groups trying out and evaluating other formats, primarily combinations of individual and group therapy, and condensed ambulant programs.

DBT-PTSD, like all DBT-based programs, is not to be understood as a finished and completed program but as a good, sound, evidence-based foundation on which to build and to integrate new scientific findings. In the following, I will give a short overview of the underlying model, the resulting consequences for the treatment, the structure of the treatment and the current state of evaluation.

17.2 The Model

We hypothesize that most patients with complex PTSD experience two different types of traumatization: first, repeated sex-

ual or physical experience of violence with all its shades, and second, the social rejection or “traumatic invalidation” by close family members (care-givers). These two trauma-associated experiences trigger very different emotional patterns and behavior. In addition, patients with complex PTSD are characterized by trauma-specific mental and behavioral coping strategies that ultimately result in prototypical basic assumptions about oneself and the world, mature into identity, or self-concept, and thus determine future experience and behavior (see ■ Fig. 17.1).

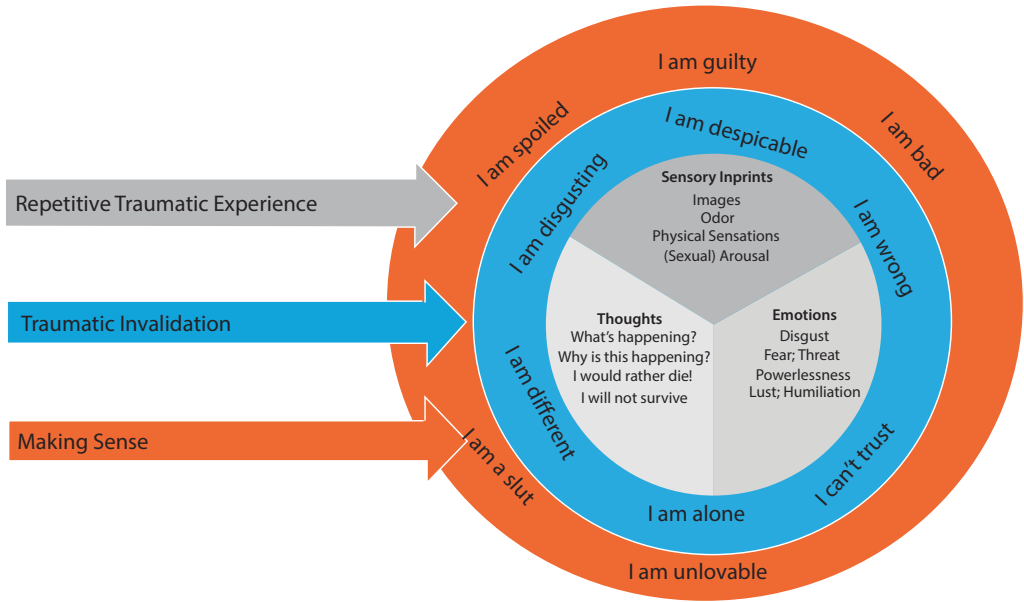
■ Trauma-Associated Primary Experience

During traumatization, sensory, physiological, cognitive and emotional impressions are stored in the form of a mental trauma network. In terms of content, pain, physiological arousal, confusion, and feelings of powerlessness, fear, disgust, humiliation, and shame play the important roles here. This trauma network is depicted in the inner circle of the diagram of ■ Fig. 17.1. Disgust, during, or immediately after sexual trauma, often leads to the perception of being soiled and defiled. And because children make only blurred distinctions between body and self, this often develops into the pervasive sense of being internally, as a human being, tainted, dirty, and sullied. This disgust-associated self-attribution is outlined in the outer ring, together with the basic assumptions.

Overwhelming interpersonal physical and sexual violence in childhood and adolescence can also lead to age-specific brain morphological and functional changes. These are manifested, among other things, in long-lasting disturbances in emotion regulation.

■ Traumatic Invalidation

Often it is not possible for the affected person to share the traumatic experiences, and the corresponding feelings with important attachment figures and to get the appropri-



■ Fig. 17.1 Model of complex PTSD

ate, urgently needed emotional support. This often leads to a second, social traumatization (traumatic invalidation). Insecurities about one’s own perception, difficulties in trusting others, but also profound abandonment, the feeling of being different from everyone else are frequent consequential disorders and are summarized under the symptom complex of “social alienation”.

Repeated traumatic experiences lead to the formation of tightly linked trauma-associated meta-networks. That is, the memory of a traumatic event will usually automatically activate memories of further events.

■ **Early coping Attempts and Negative Self-Concepts**

To reduce the feeling of uncontrollability, powerlessness, and unpredictability, individuals try to find explanations for these events: (“I have to do everything I can, to understand the rules behind this system and adapt to the maximum.”). Moreover, since it is necessary for survival to maintain the relationship with the family, the affected per-

sons are often forced to look for the causes in themselves: “I am to blame for the events”; “I am bad or spoiled.” These explanations then usually lead to an illusion of controllability and loving caregivers. (If I understood that it’s up to me, I might be able to control the course of events; if it’s up to me, then yes, my parents are forced to act that way). But these ideas come at a high price: massive feelings of guilt and shame. These two aspects, i.e., guilt and shame, but also the pronounced disgust with one’s own body and oneself, lead over time and in interaction with the social environment (transaction) to the development of a distinctly negative self-concept, which manifests itself in automated cognitive evaluation processes, emotional patterns, and behaviors toward oneself and the world. In addition, neuropsychologically anchored mechanisms are established to prevent the intrapsychic reactivation of the trauma network. This can lead to long-lasting states of emotional numbness or chronic dissociative symptomatology.

■ **Reactivation of the Trauma Network**

External and intrapsychic stimuli can reactivate established trauma networks. This leads to the generation of highly experiential intrusions or, in the case of extensive loss of reality, flashbacks.

These intrusions are also maintained or intensified by micro-feedback loops: secondary emotions (guilt, shame) but also fear of the memories and the feelings intensify the physiological state of arousal. This leads to more intense intrusions and flashbacks and in turn intensifies the secondary reactions. Similar to panic attacks, we can think of flashbacks as self-reinforcing systems.

■ **Developing Secondary Coping Strategies**

To prevent intrusions or flashbacks from being triggered or to end them as quickly as possible, sufferers usually develop an extensive repertoire of avoidance or escape strategies. These strategies contribute to the short-term relief of the emotional suffering. In the longer term, however, these very strategies lead to the generalization and chronification of the trauma networks. In addition, many of these strategies have a hindering effect on the social system or are ultimately reinforced by it (e.g., through social attention for problem behavior).

■ **Shaping the Social Environment**

Like all other people, female patients with complex PTSD try to shape their social environment so that it meets their expectations and requirements. This applies to the entire social environment in addition to choice of partner, education, and occupation. Even if this is not consciously controlled or intended, it can be assumed that many of these social aspects confirm the patients' view of themselves and the world or reinforce the corresponding safety behavior. This refers to behavior patterns that serve to reduce the occurrence of feared events (e.g., standing at the door on the train, watching all fellow passengers closely).

■ **Consequences for Treatment**

According to this model, DBT-PTBS targets the key maintaining mechanisms of complex PTSD:

1. Reduction of often automated dangerous dysfunctional behaviors by teaching distress tolerance skills. This involves early recognition of states of intense tension or incipient dissociation, using strong sensory stimuli to mitigate them, and re-orienting to the present.
2. Disengaging micro-feedback loops through mindfulness, emotion regulation, and exposure. Here, the goal is to alleviate the anxiety of the memories that occur by teaching patients to take a certain mental distance from these memories: Observing and describing and associating them with the past. This also reduces physiological activation: "I don't need to be afraid of these memories anymore, they won't overwhelm me."
3. Decoupling stimulus-response patterns through in-sensu and in-vivo exposure. This reduces sensitivity to reactivation of trauma networks and decreases their intensity. Triggers for intrusions become more specific, thus the frequency of intrusions and flashbacks is reduced.
4. Social reconciliation (sharing) of what was experienced with an important caregiver who validates these experiences, that is, values them in their emotional significance and confirms: "What I experienced and how I experienced it actually happened that way, and my reactions then, as a child, were normal."
5. Revision of early coping strategies through insight and experience-based cognitive restructuring: "It wasn't my fault at the time. I actually could not control the events at that time – or only to a very limited extent. I am not disgusting or bad because of it."
6. Acceptance of the past through targeted radical acceptance exercises: "I was sexually traumatized over a long period of

time by someone very close to me. This actually happened, and these memories are painful. Yet I am able to create a meaningful life.”

7. Identifying and de-actualizing cognitive, emotional, and behavioral automatisms in daily life: “Although it will take a while for the old patterns to completely disappear, nevertheless, I can now begin to shape my life according to my values and goals.”
8. Building social structures that correspond to the new view of oneself and the world: “I can and I need to reorder some aspects of my life now. I won’t let people treat me so badly anymore – I deserve respect.”

17.3 Basics and Principles

The overarching goal of DBT-PTSD is to pave the way for the client, towards a life worth living. The central treatment goals are:

- Building a life worth living.
- Acceptance of one’s own past.
- Development of a kind and compassionate attitude towards oneself and the world.
- Development of tolerance toward trauma-associated memories, emotions, and bodily perceptions.
- Reduction of dysfunctional avoidance and escape behaviors (suicidal ideation; self-injury; aggressive outbursts).
- Relativization of trauma-associated self-concepts (guilt; shame; body disgust; self-hatred)

Skills-assisted in-sensu exposure is at the center of treatment. The exposure- phase includes three steps: (i) index trauma; (ii) traumatic invalidation; (iii) compassion based integration. The program was designed according to an hourglass structure (see [Fig. 17.2](#)): patients come to therapy with very different personality traits, prior biographical and therapeutic experiences, behavioral patterns, and social backgrounds.

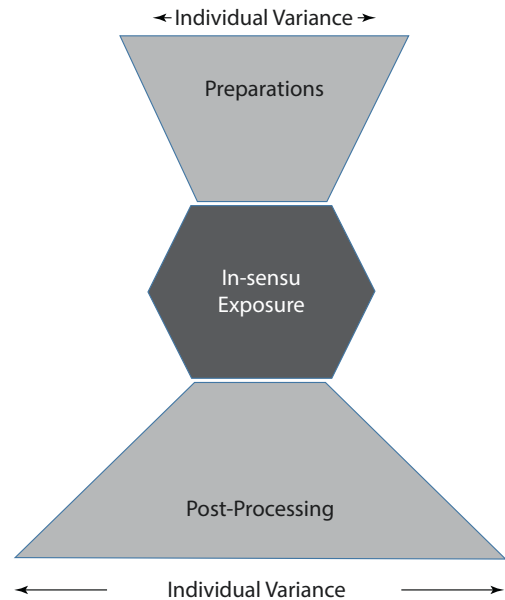


Fig. 17.2 Hourglass structure of DBT-PTSD

Also, the corresponding comorbidities often vary considerably. Nevertheless, during the preparatory phase, these so different people should develop as quickly as possible the competencies to start in-sensu exposure (in the residential setting this takes about 3 weeks, in the outpatient treatment setting about 15–20 sessions). During exposure, clients learn that the previously avoided trauma-associated emotions, including the experience of being rejected and deeply disappointed are now tolerable as an adult. Compassion based exposure enables the clients to understand and revise one’s judgments regarding complex conditions including one’s own sexual arousal, feelings of pride and closeness during the abuse. Accordingly, in during this process, profound changes of the entire self-concept take place. Therefore, in the phase of post-processing, it is necessary to question and reshape important aspects of the previous way of life. It is in the nature of a complex disorder that a step-by-step consecutive treatment concept is not always suitable for any client. For example, it is difficult for a

client to begin therapy with positively formulated therapeutic goals if she believes that she does not deserve to be treated well in life. Should this dysfunctional self-concept be targeted first? But what if this negative self-concept is linked to pronounced feelings of guilt, which in turn serve to cope with trauma-associated experiences of powerlessness? Wouldn't one then first have to treat the fear of this powerlessness? But that would require the patient to engage in therapy first, and she doesn't deserve that... Or how do we work with a patient who has grown up with the conviction that "something terrible will happen" if she ever talks about the trauma? Here, even the diagnosis triggers such intense anxiety that the patient is unlikely to attend a second appointment if the therapist strictly adheres to the manual. Complex disorders are complex not because many problem areas exist side by side, but because these problems influence each other dynamically – and therefore require a high degree of flexibility and variability from the therapist. However, how does one "stay on track," in this therapeutic process, without getting lost in the everyday problems and individual characteristics of the patient?

When Marsha Linehan faced this very problem in treating chronically suicidal borderline patients, she decided to build DBT as a principles- and rules-based program and to align the choice of focus with the patients' particular dysfunctional behaviors as recorded in a diary cards. In terms of an overarching structure of DBT, Linehan (1993) defined five mediator variables (functions), which in turn are implemented in four treatment modules (modes). The five "DBT functions" are: (1) Improvement of the patient's competencies; (2) Teaching skills; (3) Improvement of the patient's motivation; (4) Improvement of competence and motivation of the therapist; (5) Structuring the social environment. The four modules in which classic DBT develops are: Individual Therapy, Skills Training, Telephone Coaching, and Consultation Team.

In this sense, DBT-PTBS is a complete (comprehensive) DBT program. The only difference is that in the outpatient setting skills are taught in the context of individual therapy. We did not use the semi-open skills group in the manual (which has been proven in the inpatient setting) because we wanted to ensure that patients should learn the skills in a specific order and at a specific time in the course of therapy. This is not possible in an ongoing semi-open skills group.

- **Like Classic DBT, DBT-PTBS is a Principles- and Rules-Based Program**

By principles, DBT means unified therapeutic attitudes and perspectives that are always valid. These include the dialectical basic attitude, the balance between acceptance and change, validation, consideration of learning theory and contingency management. Some of these principles can be found in the "basic assumptions" (see below).

Then there are generally valid rules, i.e., decision heuristics, which are also fundamentally valid. These include, for example, the hierarchization of treatment focus, that is, the first priority treatment of acute suicidality or therapy-disrupting behavior whenever it occurs.

These universal principles and rules form the backbone of classic (standard) DBT, and they also apply to DBT-PTBS. With one exception: the choice of treatment focus in DBT-PTBS is not primarily based on the diary card, but on a modularly structured treatment protocol – if there is no serious suicidal or therapy-disrupting behavior. The modules, in turn, are divided into different interventions (e.g., cognitive processing of guilt), which, of course, are also subject to certain rules and procedures (e.g., interrupt any flashback during exposure).

- **Therapeutic Attitude**

A good therapeutic working relationship – is a central, general factor in the effectiveness of psychotherapy. In DBT-PTSD, as in classic DBT, the therapeutic relationship is

shaped very actively and consciously and used for a variety of change processes through targeted therapeutic behavior. The basis of a trusting working relationship is a therapeutic attitude, which in the DBT-PTSD is based on common basic assumptions of the treatment team.

We assume that the following basic assumptions are correct and helpful when working with childhood and adolescent victims of sexualised and physical violence who suffer from complex PTSD:

Basic Assumptions

1. The overall goal of DBT-PTBS is to help the clients to live a life worth living. Even when many patients do not have a concrete idea of what this should look like at the beginning of treatment.
2. The overall attitude of DBT-PTSD is compassion: The wisdom that suffering and failure is part of the shared human experience; the willingness to share and carry the traumatic experiences and the suffering of our clients; the conviction and encourage to motivate our clients to overcome the sequelae of their traumatic experiences.
3. Mindfulness teaches us to take a balanced approach to one's negative emotions so that feelings are neither suppressed nor exaggerated. Negative thoughts and feelings are observed with openness and held in mindful awareness.
4. Clients with cPTSD want to recover from PTSD symptoms and want to change dysfunctional behavior – on the other hand, there are many parameters that ensure that everything stays the same. Continuous motivation is part of the program.
5. Traumatized patients have gone through hell and deserve our full compassion – nevertheless, they will

remain in hell if we do not help them to motivate themselves to walk the new path.

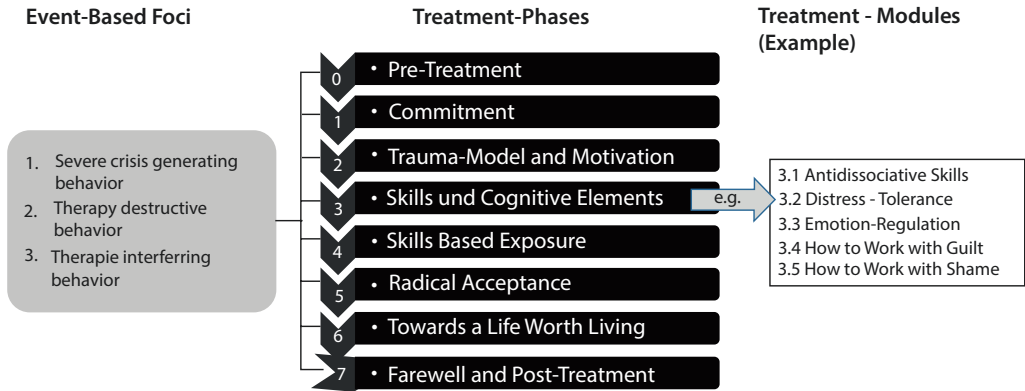
6. Clients with cPTSD deserve – like all other people – a compassionate and supportive attitude, even if they sometimes cause considerable difficulties for themselves and others.
7. Clients with cPTSD need to try out new behavior in the social context, and sometimes the social context is part of the problem.
8. Clients cannot fail in DBT-PTBS.
9. Therapists working with victims of abuse need support and self-compassion.

The consultation-team helps the therapists to motivate themselves, to define the treatment goals, to stay with the manual and to balance acceptance and change.

17.4 Treatment Overview

The outpatient program for DBT-PTSD comprises up to 45 sessions of individual therapy, usually weekly, while the residential treatment program runs 12 weeks. However, outpatient treatment can be condensed and carried out over a shorter period of time. The program is divided into seven thematic treatment phases (see ■ Fig. 17.3), with each phase including both mandatory and optional treatment modules. The latter enable the therapist to individually address the many different symptom constellations in complex PTSD. This is particularly important for symptoms that are seen frequently but not in all cases, such as severe dissociation, feelings of anger, nightmares, or sexual dysfunction.

As outlined in ■ Fig. 17.3, the general principles and rules of standard DBT apply throughout the entire program, including the DBT hierarchy of treatment priorities.



■ Fig. 17.3 Modular structure of DBT-PTSD

According to this hierarchy, the therapist's first focus is always to be on serious crisis-generating behaviors, such as acute suicidal behavior or life-threatening self-injury; the second is on behavior patterns that could endanger the continuity of therapy, such as aggressive outbursts towards the therapist or criminal activities that might result in imprisonment; and third is on problems that could significantly affect the progress of therapy, such as severe dissociative features, avoidance of homework activities, or insufficient emotional activation during the exposure phase.

As in any DBT treatment, the program starts with a **Pre-Treatment Phase**. During this phase, the therapist will carry out diagnostic procedures, ensure that the client meets the indications for DBT-PTSD treatment, and provide information about the treatment concept and the scientific data that underlie it. The vast majority of clients are highly uncertain before the start of treatment as to whether they really should take part in this program. This ambivalence is part of the disorder, and it is part of the program to address this and pave the way accordingly.

If a client appears sufficiently motivated, the next steps in the pre-treatment phase are to conduct the Serious Behavior Dyscontrol Interview (SBDI) and have the client sign a non-suicide agreement, which is a guarantee that she will not attempt suicide under any circumstances during the course of treat-

ment. In return, the therapist assures the client of the availability of crisis intervention by telephone whenever needed.

The seven treatment phases of the DBT-PTSD program are summarized briefly below.

Phase 1, Commitment: In this phase, the therapist will gather the client's medical history, including information on previous treatments, early terminations of treatments, and lifetime suicide attempts; finalize the treatment agreement; and draw up a crisis and emergency plan. In addition, she will provide a brief introduction to the skills concepts, mindfulness wise mind and compassion in particular. A special feature here is the development of a specific mental state, including loving kindness, compassion, joy for others and serenity (Wise Mind State) whereby the therapist records imaginative self-instructions which the client is to listen to over a longer period of time each day. According to the basic principles and rules of DBT, acute problems with severe behavioral dyscontrol should also be targeted in this treatment phase.

The therapist will additionally gather a rough picture of the timing, nature, and frequency of the traumatic experiences that are at the root of the client's cPTSD. Therapist asks the client specifically if any threats had been made at the time to prevent her from reporting what was being done to her. ("We

know that almost all victims of abuse and violence had been threatened by the perpetrators, that they had been warned that terrible things would happen if they told anyone about the events. Did this happen to you? This is important, because these old fears are often still active, but they lose their power if they are discussed in the context of therapy.”)

Phase 2, Trauma Model and Motivation:

The focus here is on developing a coherent model of how the client developed cPTSD, how the disorder has been maintained, and how it can be treated. The therapist introduces a model of “the Old Path and the New Path”, including the concepts of a trauma network, mental and behavioral avoidances, and escape strategies. The client comes to understand how strongly cPTSD has influenced her life, and how thoughts and emotions that once made sense but are now automatic are preventing her from developing a life worth living today. She will also gain some understanding of the mechanisms and effectiveness of exposure-based interventions, whereby the brain learns to distinguish between past and present and learns that the trauma-related feelings that developed in childhood can be bearable to the adult. Based on this understanding, the client will develop operationalized, realistic, and measurable treatment goals that are relevant to her personal value system.

Because many victims of childhood abuse have experienced serious betrayals on the part of primary caregivers, we should assume that some of these interpersonal experiences may prompt behavioral patterns that might impact the therapeutic relationship and hinder this joint work. To address this problem, we have taken up an idea from McCullough et al. (1993) whereby we start by analyzing the client’s past experiences with significant others and their potential impact on the therapeutic relationship. This phase of treatment is completed with an analysis of potentially disruptive behaviors and individual fears regarding the therapy.

Towards the end of Phase 2, the client will identify a so-called “index event”, which consists of two components: (i) the traumatic experience of a sexual or physical violation, and (ii) the traumatic experience of invalidation by an important caregiver: i.e., the failed attempt by the child to share these experiences with someone. Since these memories are usually associated with very different emotions, both components need to be addressed. It has proven useful for the index event to be the experience that is currently associated with the most distressing and stressful intrusions and nightmares and which is most difficult to talk about. The rationale is simple: If a less stressful event were to be focused on during the first exposure (and we have tried this), more stressful events would automatically arise during the exposure phase as well but would not be sufficiently processed. In contrast, if exposure starts with the worst event, once the intrusions and flashbacks associated with that event have been successfully reduced, other, less stressful events can then be focused on later in the course of the treatment.

At the end of this phase, the client’s motivation for treatment should be sufficiently high. Together with the therapist, the client presents the treatment plan to the consultation team, discuss the prospects of success and any necessary support, and obtain permission from the consultation-team to enter the third therapy phase, which will start preparing the client for exposure. This step-by-step procedure may possibly seem a bit overdone at first glance, but we have seen excellent results with it. The client gets to know the members of the consultation group, feels their support, and learns that the exposure treatment will require active participation on her part.

Phase 3, Skills and Cognitive Elements:

In this phase, the therapist will analyze dysfunctional escape and avoidance strategies that the client has been using, whether behavioral (e.g., self-harm) or emotional (e.g., guilt, dissociation), and will teach her

corresponding functional skills. The client learns to recognize levels of inner tension and incipient dissociative states at an early stage, and learns to reduce them by employing strong sensory stimuli or physiological distraction (examples: holding an ice pack, smelling ammonia, tasting chili, juggling, eye movements, balancing). She will also learn the fundamental evolutionary meaning of emotions such as guilt, shame, contempt, and disgust, and will practice how to recognize and dampen overly strong emotions. The large number of worksheets on specific emotions would almost certainly overwhelm her, so at this point you will focus only on those that are important for her individually.

Phase 4, Skills-based Exposure: In this phase, the client undergoes in sensu exposure-based processing of trauma-associated emotions and memories. In order to keep emotions within a tolerable range and to prevent dissociative symptoms, the procedure is based on the principle of skills-assisted exposure. That is, the client applies the skills she learned in Phase 3 to create a balance between the activation of trauma-associated emotions, and references to the present. The goal of this intervention is not so much to develop a coherent narrative but rather to confront trauma-associated primary emotions such as powerlessness, disgust, fear, and pain, which are no longer appropriate for the current situation. Using inhibitory learning processes, she learns to process these emotions. In addition, in the sense of conducting a behavioral experiment, she is able to test and disprove unrealistic fears (e.g., If I allow myself to think about this memory, I will go crazy).

Therapists begin the preparation phase by targeting the client's most important fears, apprehensions, and concerns about the exposure. (If I talk about it, it will become real / I will go crazy / I won't survive this.) These fears are concretized and questioned in a Socratic dialogue, whereby therapists ask questions that are designed to

stimulate critical thinking and to explore underlying presuppositions.

The actual exposure phase starts with the client writing down a description of the index event. This should be done in a distancing manner; i.e., phrased in the third person and in the past. This script is read out by the client during the following therapy session. Next, the client describes the traumatic experience aloud, typically using the first person and present tense, and with closed eyes. During this time, the therapist should try to achieve a high level of emotional activation on the one hand, but actively interrupt dissociative states on the other. Intermittently, therapists should interrupt the exposure to establish the sensory reality reference. (What is the difference between then and now? How do you see it, how do you feel it?) A third exposure round within the same therapy session focusses on the hotspots; e.g. the most distressing episodes, of the trauma report. The whole session is audio-recorded, and the client is instructed to listen to the recording of the hotspots every day at home between therapy sessions. We have developed and evaluated an app, ► <https://vacay.dev/de/start/> (Goerg et al., 2016), which can be used to prevent dissociative symptoms during homework exposure and to monitor the reduction of negative emotions. The in sensu exposure procedure is repeated over the next few sessions.

In most cases, clients experience significant relief after the first two exposure sessions, and report significant reduction of symptoms (i.e., decrease in the frequency and burden of intrusions and flashbacks, and reduction of guilt and shame) within five or six sessions. Once the exposure to the index event is completed, less traumatic events can be focused on, which usually require less time and energy to treat.

For the final session of the exposure phase, the traumatic event is processed from the perspective of the Wise Mind mental state. The goal is to develop an understand-

ing of the distress and suffering the client experienced as a child or adolescent. An important aspect here is examination of aspects of the traumatic experience in which the client had consented or had actively participated. There are good reasons for that to have happened, and this can be worked on from the perspective of the compassion and serenity.

Phase 5, Radical Acceptance: This phase includes exercises on the acceptance of past events and of the emotions related to them. Even after the exposure phase, most clients still struggle with their past and have difficulty in accepting it as unchangeable and done. Part of this arises out of a concern that acceptance might imply that the events were not really that bad, or were even justified, but there may also be also emotional difficulties in saying goodbye to old illusions (If only I had acted differently, this would not have happened and I would have achieved a loving relationship with my father / mother). This phase is thus also about ending the child's illusionary ideas about her relationship with her parents, and giving way to the revised and realistic view of the adult. Acceptance of what has been experienced opens up space for grief, and this takes time.

Phase 6, Create a Life Worth Living: The therapist will encourage the client to open up new areas of life and to actively make improvements in factors that are standing in the way of her leading a meaningful life. Because of the childhood history of sexualized violence, this will naturally include looking at making changes in partnerships, physical experiences, and sexuality, but it is important to focus on changes in professional life as well. Because DBT-PTSD is expected to bring about very significant changes not only in trauma-associated experiences and behaviors but in overall self-concept, the client needs structured support to develop a new concept of life. Methodologically, one can

use the established model of “the Old Path and the New Path”. Many clients find it helpful to refer to their old habits of thinking and feeling as their “little monsters”. In further therapy sessions and in life, the aim is for them to follow the “New Path” despite the little monsters and, in the event of setbacks and difficulties, to take a perspective that is compassionate and at the same time motivating.

Phase 7, Farewell and Post-Treatment: This final phase is dedicated to saying goodbye and to arranging follow-up treatment. Clients should be prepared for the possibility that post-treatment, old behavioral patterns may be temporarily exacerbated, or they may revert to trying block painful experiences after having come to terms with them. In order to address these aspects early on, arrange for a series of follow-up sessions over the next few months in order to stay informed about your client's progress.

17.5 Proof of Effectiveness

In the first randomized controlled, DFG-funded study with 74 female patients with PTSD after sexualized violence in childhood, a significant superiority of residential DBT-PTSD was shown compared to a waiting condition in which usual treatment was allowed even 3 months after discharge (Bohus et al., 2013). The intergroup effect size for posttraumatic symptoms was $d = 1.35$ (Intention to treat) and $d = 1.6$ (Completer). Only 5% of patients (2 of 36) discontinued treatment prematurely. Neither the severity of BPD nor the number of self-inflicted injuries at the beginning of treatment influenced the outcome of therapy (Krüger et al., 2014). No increase in self-injury behaviour or suicidal thoughts was observed during the exposure phase either.

In a second, multicenter BMBF-funded therapy study we investigated the effective-

ness of outpatient DBT-PTSD in a multicenter randomized controlled trial (Bohus et al., 2020; Kleindienst et al., 2021). From January 2014 to October 2016, 193 women who sought treatment were included in a clinical trial with blinded outcome assessments at 3 German university outpatient clinics. The participants were prospectively observed for 15 months. Women with childhood abuse-associated PTSD who additionally met 3 or more DSM-5 criteria for BPD, including affective instability, were included. Participants received equal dosages and frequencies of DBT-PTSD or CPT, up to 45 individual sessions within 1 year and 3 additional sessions during the following 3 months. Predefined primary outcome was the course of the Clinician-Administered PTSD Scale for DSM-5 (CAPS-5) score from randomization to month 15. Intent-to-treat analyses based on dimensional CAPS-5. Scores were complemented by categorical outcome measures assessing symptomatic remission, reliable improvement, and reliable recovery.

One hundred ninety-three patients were randomized (DBT-PTSD, 98; CPT, 95; mean [SD] age, 36.3 [11.1] years) and included in the intent-to-treat analyses. Analysis revealed significantly improved CAPS-5 scores in both groups (effect sizes: DBT-PTSD: $d = 1.35$; CPT: $d = 0.98$) and a significant superiority of DBT-PTSD (group difference: 4.82 [95%CI, 0.67–8.96]; $P = .02$; d , 0.33). Compared with the CPT group, participants in the DBT-PTSD group were less likely to drop out early (37 [39.0%] vs 25 [25.5%]; $P = .046$) and had higher rates of symptomatic remission (35 [40.7%] vs 52 [58.4%]; $P = .02$), reliable improvement (53 [55.8%] vs 73 [74.5%]; $P = .006$), and reliable recovery (34 [38.6%] vs 52 [57.1%]; $P = .01$).

Currently, studies are planned and started to replicate these findings by independent research groups.

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Approaches of Culturally Adapted Cognitive Behavioural Therapy

D. E. Hinton

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18.1 Introduction

This chapter describes key aspects of a culture-sensitive cognitive behavioural therapy for traumatised persons from non-Western cultures. For this purpose, a specific procedure has been developed, which is called “culturally adapted cognitive behavioural therapy” (CA-CBT) (Hinton et al., 2012). The focus is on very different forms of body perception and emotion regulation. In order to make the process of cultural adaptation of this approach comprehensible, the underlying model ideas that are fundamental for this form of treatment are also mentioned in the course of this chapter:

- the multiplex model of the many modalities of PTSD development,
- the multisystemic network model of the emotional state,
- the concept of psychological flexibility,
- the model of the arousal triad.

So far, the team of the author has used the CA-CBT for patients of Latin American and Asian origin (Hinton et al., 2004, 2005a, 2009b, 2011a). Furthermore, the CA-CBT has been used in worldwide collaborative projects, for example, with Afghan refugees in Germany as well as with Egyptian, Turkish and indigenous South African patients (Acarturk et al., 2018; Jalal et al., 2017, 2018; Kananian et al., 2017).

The CA-CBT differs in various aspects from common CBT treatment approaches (► Chaps. 12 and 14) in order to meet the challenges of culturally diverse patient groups. Its contents are presented in easily understandable language so that they can be understood by people with minimal education and language skills. The CA-CBT includes various adapted forms of exposure, each more or less involving a focus on body sensations. In addition, symptoms related to PTSD such as worries and panic attacks are treated, the reduction of anger and rage is aimed at and comorbid anxiety disorders

are also treated. In order to achieve these treatment goals, the CA-VBT, in contrast to other treatment approaches, uses specifically developed emotional exposure and techniques for regulating emotions such as meditation and yoga-like stretching. This is intended to achieve improved **psychological flexibility** in the long term (► Sect. 18.2.3). The CA-CBT aims to provide patients with a variety of new, adaptive ways of processing that differ from their previous approach to the feeling of being threatened. This includes, among other things, the mindful perception of the present moment and the experience of the environment with all sensory modalities.

■ Topics and Components of the Therapy Sessions

The guiding ideas in the chapter consist of certain model ideas, justifications and implementation instructions for this plan of procedure (► Table 18.1).

18.2 Guiding Principles of the CA-CBT

18.2.1 Culturally-Adapted Trauma Exposure

Exposure procedures play an important role in PTSD as repeated confrontations with traumatic memories (► Chaps. 12 and 14). This usually involves the repeated evocation of traumatic memories with all sensory modalities by means of plastic re-experience and the associated high level of emotional activation. For various reasons, this type of exposure may not be ideal for traumatised people from non-Western cultures. Firstly, the risk of a worsening of symptoms has been described several times, which can lead to therapy discontinuation (Lester et al., 2010). Secondly, the theoretical assumptions regarding the mode of action of exposure

Table 18.1 Sequence of the CA-CBT meetings and key components of the sessions

Session number	Session title	Exposure form followed by practice of the indexed protocol	Stretching exercise at the end of the session	Mindfulness exercise at the end of the session
1	Education about trauma sequelae	Emotion (e.g. fear)	X	X
2	Muscle relaxation and stretching using a visualization	Emotion (e.g. fear)	X	X
3	Applied stretching with visualization protocol	Emotion (e.g. fear)	X	X
4	Flashback protocol	Emotion (e.g. fear)	X	X
5	Education about trauma sequelae and about the changeable catastrophic assumptions	Emotion and trauma	X	X
6	Interoceptive exposure I: Circular head movement	Emotion and trauma	X	X
7	Interoceptive exposure II: hyperventilation	Emotion and trauma	X	X
8	Education about breathing and its use for relaxation	Emotion and trauma	X	X
9	Sleep disturbance	Emotion and trauma	X	X
10	Generalised anxiety disorder	Emotion and trauma	X	X
11	Anger/fury	Emotion and especially anger	X	X
12	Neck, shoulder and headache related dysphoria and panic	Emotion and especially anger	X	X
13	Other somatic symptoms and the associated panic	Emotion and especially anger	X	X
14	Culture-bound syndromes in connection with trauma-related emotions: Final report	Emotion and especially fear	X	X

have changed. Earlier assumptions saw the mode of action of exposure in the simple fact that confrontation with traumatic memory content reduces its automatism and activatability, whereas now it is more likely that

exposure creates new, nonthreatening associations with traumatic memory as well as new verbal connections and new mental representations of memory, thereby defusing its uncontrollability (Craske et al., 2008;

Hofmann, 2008). Thirdly, therapy programmes have increasingly begun to teach patients suitable techniques for regulating their emotions before exposure in order to reduce their level of arousal, as otherwise the exposure becomes difficult for them to bear (► Chaps. 16 and 17).

In addition, exposure should not only be carried out for traumatic events (and the thoughts and feelings associated with them), but also for physical sensations (Hinton et al., 2008; Otto & Hinton, 2006; Wald & Taylor, 2007, 2008). Such **interoceptive exposure** is particularly important for patients with

- conspicuous somatic complaints,
- including catastrophic assumptions about these complaints,
- distinct associations between trauma and physical sensations (i.e. the trauma was stored on the basis of a physical sensation), and
- many comorbid anxiety disorders.

All these conditions are often present in patients from different cultural backgrounds (Barlow, 2002; Craske et al., 2009; Wald & Taylor, 2007, 2008).

These preliminary considerations resulted in the following characteristics for implementation:

■ **Phased Approach**

Taking these theoretical assumptions into account, the CA-CBT first teaches skills for emotion regulation, such as muscle relaxation, stretching and meditation, before exposure is started. The first three sessions preceding the exposure and the techniques for emotion regulation are presented in ► Table 18.1.

■ **Indexed Protocol Technique**

In each session, a protocol is developed that includes the central theme and the techniques used (e.g. mindfulness, trauma, interoceptive or emotional exposure, stretching), preferably in a visualized form.

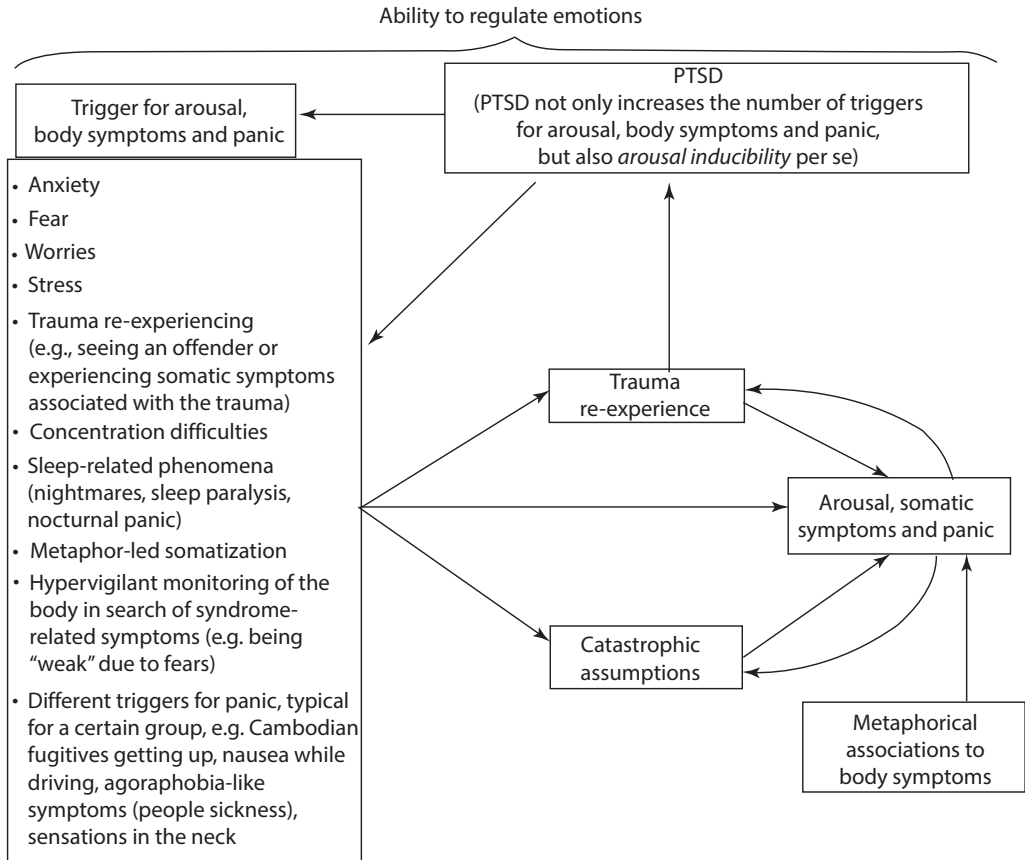
■ **Interoceptive Exposure**

For this purpose, certain bodily perceptions (e.g. dizziness) are used and these are linked to new positive associations, which are intended to replace the association with the trauma as well as the catastrophic assumptions. Creating such positive new associations increases the acceptance and effectiveness of the intervention (► Sect. 18.2.5).

18.2.2 Multiplex Model and Emotion Exposure

Trauma patients from different cultures often experience not only fear and shame but also anger, general anxiety and worry (Hinton et al., 2009c, 2010). The multiplex model of the many modalities of PTSD development shows (► Fig. 18.1) that these emotions often trigger tension, arousal, flashbacks and catastrophic assumptions that lead to a vicious circle of worsening.

This model illustrates how different triggers (e.g., emotional states, stress, hypervigilant monitoring of the body for syndrome-related symptoms) induce somatic symptoms, arousal, and panic, and induce various vicious circles that contribute to the maintenance and aggravation of PTSD. The triggers (e.g., nightmares) can produce somatic symptoms, which in turn can trigger trauma re-experience and catastrophic thoughts. The trigger (e.g. a nightmare) can also directly trigger the re-experiencing of the trauma (e.g. associations between dream content and the traumatic experience) or catastrophic assumptions (e.g. the fear that the dream is an indication of dangerous spiritual depletion). Trauma re-experiencing and catastrophic thoughts in turn trigger excitement and somatic symptoms. We attribute a prominent position in the model to emotion regulation because it influences most processes: if patients have a good capacity for emotion regulation, they will be able to calm down quickly and reduce tension.



■ Fig. 18.1 Multiplex model for the development of PTSD

■ Derived Meaning for Emotional Exposure

The confrontation with intense emotions is an important element of treatment, through which patients learn to endure emotions and apply more adaptive strategies in dealing with these emotions. Emotional exposure is easy to perform in different cultures, especially when combined with exercises to improve emotional regulation. Emotional exposure is understood as both the confrontation with negative emotions and the promotion and experience of positive emotions such as **compassion** and **loving kindness** (elements of mindfulness; see Singer & Bolz, 2013).

■ Emotional Exposure

In the CA-CBT certain emotions are evoked in the most vivid way possible. Some of these emotions are induced during the conscious recall of traumatic memories at the beginning of the sessions. Other emotions, i.e. fear, anger and worry, are triggered by asking patients about their experiences with a particular emotion that has recently occurred. In particular, it is asked which events triggered the emotion and which body perceptions were associated with this emotion. After an emotion has been evoked in this way during a CA-CBT session, exercises for the regulation of emotions are applied, whereby the patients consciously

experience a change in their emotional state (■ Table 18.1).

■ Implementation in the CA-CBT

Almost every session of the CA-CBT begins with the question about anxiety states that have occurred in the previous week, followed by an application of the indexed protocol, e.g. with a focus on the individual anxiety experiences. This is particularly suitable for sessions 1–4 (■ Table 18.1). In the following sessions 5–10, it is possible to move on to combined exposures to anxiety on the one hand and trauma on the other, followed by the development of hourly indexed protocols. Later sessions (11–14) focus more on triggers for anger or resentment if this is the patient’s primary concern – this would then be recorded in writing through indexed anger/rage protocols.

■ Therapeutic Goals

The aim is to enable patients increasingly to apply techniques for emotion regulation and acceptance. These techniques can be applied whenever the trauma is remembered or other dysphoric states are experienced. Through the written induced protocol, patients connect new and adaptive experiences with the trauma memory (e.g. their own ability to act, self-confidence, uninvolvement observation, loving kindness, compassion). Dysfunctional modes such as pondering or ruminating about problems, for example, change into the mode of mindfulness (e.g. to current impressions such as leaves moving in the wind, the colour of clouds, the feeling that the body is moving through the room or paying attention to the flow of breath).

have experienced anxiety. The indicated protocol for this can be used whenever patients experience anxiety or other forms of stress. The indicated Protocol not only helps to regulate emotions, but also serves as an inter-receptive exposure. For example, confrontation with dizziness may result in a positive reassociation with this feeling (for patients of Southeast Asian origin, dizziness may be associated with the image of the lotus flower [cultural meaning ▶ Sect. 18.2.3.2], which could replace images of a physical catastrophe). If this substitution succeeds, this can be understood in the sense of **psychological flexibility** (here: visual flexibility).

18.2.3.1 Psychological Flexibility: Basics

Psychological flexibility – defined as the ability to distance oneself from current ways of thinking and to consider alternative ways of thinking (Kashdan, 2010) – is a meta-level processing method that CA-CBT tries to establish as a standard processing method. Compared to the previously existing psychopathology, psychological flexibility creates a new adaptive way of processing, which replaces the feeling of threat and thus enables emotion regulation that is disconnected from the trauma consequences (Hinton & Kirmayer, 2017; Hinton et al., 2013; Kashdan, 2010; Kok & Fredrickson, 2010).

In addition, psychological flexibility is an important skill for people from different cultures who are faced with a variety of adjustments and who are expected to reconcile their own and the new culture and acquire a new language. To this end, contemporary cultural theory uses the terms “postcolonial hybridity” and “bricolage”, which express the difficult condition of immigrants to construct identity (see Bhabha, 2000).

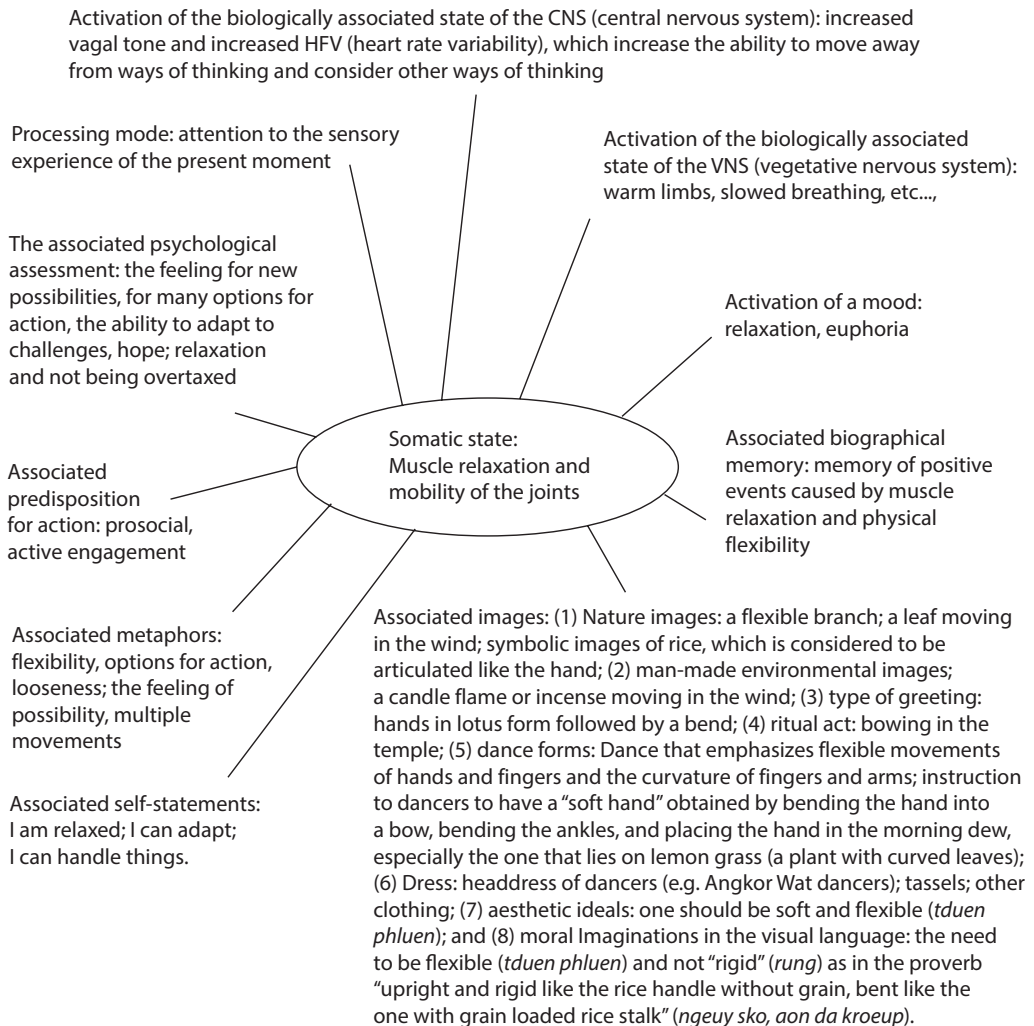
The CA-CBT aims to increase psychological flexibility in many ways. On the one hand, this is achieved by teaching emotional

18.2.3 Techniques for the Regulation of Emotions

Emotional exposure with anxiety is done at the beginning of most sessions, after patients describe a recent situation in which they

detachment, a major aspect of emotional flexibility, and by practicing the naming and distancing of affects. On the other hand, flexibility is increased through emotional and trauma exposure, as patients distance themselves from one affect and accept another (“emotion switch”). Visualization exercises, muscle relaxation and newly learned self-expressions about one’s own flexibility have the same effect.

One of the basic principles of the CA-CBT is the “multisystemic network model”, which summarises the involved processes of psychological flexibility and which is shown in the appendix in ■ Fig. 18.2. It refers to the model of “interacting cognitive subsystems” developed by Teasdale (1996), which also focuses on the interaction between body state and mood (for further discussion of the effectiveness of such body-based flexibil-



■ Fig. 18.2 Multisystemic network model


ity techniques see Hinton, 2008; Hinton & Kirmayer, 2017).

18.2.3.2 Exercises

■ Stretching and Lotus Visualization

In the first part of the emotional or anxiety exposure, patients use the yoga-like stretching technique (or “fascia yoga”) to release possible tension. Stretching and muscle relaxation (e.g. progressive muscle relaxation according to Jacobsen) are then performed with a special focus on the shoulders. The second part is guided by a picture that fits the cultural background of the patient. The patients are asked to stretch the spine by tensing the abdominal muscles. This is accompanied by circular head movements. In the work with Southeast Asian patients, this exercise is guided by the idea of a lotus flower circling in the wind on its stem. The spine is compared with the stem and the head with the flower. At the same time, patients are asked to repeat the following statement about their own flexibility: “*I can flexibly adjust to any situation just as the lotus flower is able to adjust to each new breeze*”. For patients of other origins, the image of a palm tree or a tree on the beach can be used accordingly, with a long trunk and palm or other leaves moving in the wind.

■ Loving-Kindness Meditation

Later in therapy (in the 3rd phase,  Table 18.1), a Loving-Kindness Meditation is also performed to reduce anger (Hofmann et al., 2011). Here, too, the accompanying image is adapted to the cultural group. Southeast Asian patients are asked to imagine how love, like cool water, spreads in all directions, as water in Buddhism is associated with positive values of love, kindness, charity, care and the acquisition of spiritual merits, that is good deeds such as donations for the poor or for the temple.

Whenever the Buddha made “merit”, for example by giving an object to the poor, he poured water on the ground to symbolize this merit-making. In order to defeat Mara and his army of demons, Buddha asked the earth goddess to bear witness to his previous merit-making, and she wrung out her hair to create a flood of water symbolizing all the meritorious acts of Buddha in previous lives.

In many Buddhist rituals, water is poured into a bowl to symbolize the merit that comes from participating in the rite, which also symbolizes the “cooling” effect of the merit of the dead and living. Patients, e.g. of Latin American origin, are asked to imagine love as warmth and light that spreads from the heart and body in all directions. Reference is made to the image of the “Sacred Heart of Jesus” (Spanish: “Sagrado Corazón de Jesús”), which is one of the most famous images in Christian iconography. In this image, Christ points his finger at his heart, which is surrounded by flames and radiates light; often the heart is surrounded by a crown of thorns, symbolic of overcoming difficulties. In ethnopsychology and iconography, warmth stands for love and affection and has far-reaching positive symbolic meanings (see Hinton, 2000).

■ Related trauma Exposition with Meditations

The culturally adapted trauma exposure also differs according to the respective cultural group. The indexed trauma protocol begins with an exercise on acceptance, in which one remembers having experienced the trauma, followed by an exercise on compassion related to oneself and others, continues with an exercise on loving-kindness and ends with mindfulness meditation. Then a technique is used in which flexibility is again the focus, this time a “multi-channel embodying of flexibility”. This exercise combines a physical representation of flexibility through stretching and turning movements, self-expressions of flexibility (see

above: the bending lotus flower) and musical analogies or acoustic images of flexibility.

18.2.3.3 Psychological Flexibility in Therapy

Example of a Multi-level Flexibility Protocol

1. **Stretching:** Patients stretch every tense area.
2. **Arm stretching,** which symbolizes flexibility: Patients stretch their arms and joints by stretching out their arms and rotating them with their wrists bent backwards, while stretching and moving their fingers.
3. **Acoustic symbolic image of flexibility:** In addition, the arm extension movements have a dancing character, especially the circular movement of the wrists and the movement of the fingers. This is intended to entice patients to think of music that is appropriate for their cultural background. Patients of Southeast Asian origin are instructed to imagine moving their arms to the songs of a meditative singer; the dancing movements can take place at the level of the whole arm, forearm, wrist or fingers (this underlines the high flexibility of the human body). Patients from the Caribbean, for example, are recommended to imagine Salsa or Bachata. In the Salsa example, patients are instructed to imagine the rhythm of the singer's voice and that of the conga drum, bongos, timbales, horns, cowbells, piano and maracas.
4. **Embodiment of the acoustic symbolic image of flexibility:** Each melody or sound level is described in a commenting dialogue between patient and therapist and it is discussed that patients themselves choose which melody or sound level they could

dance to and that the movements can be flexibly adapted.

5. **Perceive yourself as flexible in the context of music:** The exercise is concluded with the remark that different types of music are a reminder to stay flexible and thus to feel how one can adjust oneself anew each time.

A side-effect of the flexibility protocol presented is that it can incorporate or rebuild cultural pride because music that is culturally familiar to patients is presented. It is also important that the music of this exercise can act as a positive trigger that reminds patients to be flexible - a challenge that can often be useful in everyday life.

18.2.4 Inclusion of Cultural or Religious Healing Traditions of the Patients

In order to adapt the treatment culturally and to improve its effectiveness, we try to use other emotion regulation techniques from the respective culture and to modify common techniques in relation to these locally known emotion regulation techniques. In the CA-CBT, the techniques for emotion regulation in the corresponding cultural group are determined which can be used in the treatment: For example, in a ritual called "dhikr", some **Islamic** cultural groups repeatedly recite the name of Allah in order to bring about a peaceful state of mind.

The treatment includes the application of many **Buddhist** exercises, so that in the case of Buddhist patients the treatment already includes an important aspect of their religious tradition. The treatment includes loving kindness ("metta") and many meditation techniques, with a new mindfulness exercise at the end of each ses-

sion (■ Table 18.1). The essential Buddhist principle “equanimity” (“upekkha”) is also part of the treatment and stands for the practice of distancing oneself from emotions and spiritual content and viewing them like clouds in the sky. For Buddhist patients, these practices can be described with the terms used in its tradition, emphasizing that the performance of these practices is “meritorious” and that this “merit” can be shared with oneself and others. This understanding of merit can enhance the sense of action competence and can significantly reduce suicidal tendencies and depression. When patients feel a sense of guilt for survival, they can be reminded of the culturally determined duty to commit themselves to the person for whom they feel guilty at least once a year to ensure the good rebirth and mental health of the deceased.

In order to promote psychological flexibility among **Christian patients from Latin America**, the image of the flame of a sacrificial candle in the breeze is used and it is emphasized that this movement is a reminder to remain flexible. As indicated above, Christian images are used in the Loving-Kindness meditation. It is also recommended that Christian patients from Latin America use other religious techniques of emotion regulation, such as opening the Bible at random to read a passage or reciting a rosary (if the patients are Catholic). For patients from so-called Pentecostal churches, speaking in tongues with its different voice ranges can serve as a reminder and show that there are many ways to God and thus many ways to act and feel.

The **use of culturally influenced proverbs** can make it easier to cope with negative emotions. In the anger exposure part of the treatment (3rd phase, ■ Table 18.1), a Cambodian proverb can be used to teach how to control anger outbursts: “If you control your anger once, you gain a hundred days of happiness”. It specifically asks how patients deal with fear, anger and stressful

trauma flashbacks in order to determine the typical way patients deal with suffering.

Healing rituals from the respective culture can also serve to improve the regulation of emotions: for Buddhist patients, for example, rubbing lustral water into the skin or listening to Buddhist music; for American indigenous groups, participation in traditional ceremonies such as the sweat lodge can be helpful. Ideally, therapeutic metaphors, causal explanations (e.g. “historical trauma”), understanding of healing and ideas about ontology (i.e. the nature of being) from the relevant cultural tradition should be integrated into the treatment. For further discussion on the inclusion of traditional healing in treatments, see Gone (2009, 2010).

18.2.5 Interoceptive Exposure as a Culturally Adapted CBT Technique


During the interoceptive exposure of a CA-CBT, positive reassociations of body perceptions to culturally appropriate images are made.

Cambodian patients can be instructed to imagine various traditional “games” during a circular head movement exercise: for example, an exercise in which a person is asked to walk in a circle while holding a scarf (“lea geunsaeng”), or another exercise in which the person hums and runs after a stick that has been thrown into the distance, making it impossible to breathe. Latin American patients are asked to imagine traditional exercises that cause dizziness: the “piñata” game, in which the eyes are blindfolded, or the “galliñita ciega” game. In these exercises, the person is turned around until he or she becomes dizzy. In these exercises, the dizziness negatively perceived by the trauma is reassociated with the newly connoted positive memories of the traditional game.

18.2.6 Worries and Generalized Anxiety Disorder

The reduction of uncontrollable worries is a central treatment goal for patients from different cultures. Refugees and people from ethnic minorities often worry about their living conditions (they live in dangerous areas and are often confronted with financial problems and other burdens). Trauma victims often have a tendency to be difficult to detach from their worries and tend to over-excite, which often turns into panic attacks. This tendency can be described as “arousal inducibility”, which corresponds to the generally increased sensitivity to stress that is often present in trauma patients (Harkness et al., 2015). Arousal induced by anxiety can lead to catastrophic assumptions and the re-experience of the trauma. Concern also causes a state of excessive vigilance against all possible threats. The CA-CBT addresses issues of concern, makes catastrophic assumptions about the negative effects of the concerns, and determines whether the concern triggers a re-experience of the trauma or a panic attack. Getting to know the patient’s worrying issues strengthens the empathic connection between patient and therapist and thus improves the therapeutic relationship. Within the framework of CA-CBT, other special techniques for reducing anxiety can be applied, such as meditation, which has proven to be effective in generalised anxiety disorder (Roemer et al., 2008) and in PTSD (Follette et al., 2006).

18.2.7 Coping with Catastrophic Beliefs

In  Fig. 18.1 on the multiplex model, the role of catastrophic beliefs of patients in the development of PTSD, general excitability and somatic symptoms is shown. In the CA-CBT, patients are asked about their understanding of what causes the anxiety

symptoms, including their ideas about how the symptoms are physically produced. On the other hand, patients are asked about their fears about the danger emanating from these symptoms.

Patients with a Cambodian background often fear that dizziness indicates the onset of a “khyâl” attack (culture-bound stress syndrome, literally “wind attack”) (Hinton et al., 2010). Latin American patients report that shakiness of limbs or racing thoughts could indicate a problem of their “nervios” or a threatening “ataque de nervios” (culture-bound stress syndrome with psychophysical decompensation).

Any PTSD symptom, such as nightmares or startle, can lead to such catastrophic assumptions. People from many cultures fear that the re-experiencing of trauma is accompanied by the threat of “insanity”. Others fear that the re-experience of trauma is the result of persecution by dangerous spirits of the dead.

■ Startle

People from some cultures see frightfulness as a power to drive out souls and cause death or serious illness (e.g. Latin American and Southeast Asian populations; for a review see Hinton & Lewis-Fernández, 2010a, b). Again, other cultures believe that frightfulness indicates a dangerous “weakness” of the heart, which causes general cardiac hyperreactivity leading to death.

18.2.8 Consideration of Culture-Bound Syndromes

Usually the last therapy session is dedicated to the assessment and treatment of anxiety and PTSD-related “culture-bound syndromes” (a concept from transcultural psychiatry). Patients often attribute their PTSD and anxiety symptoms to a culture-bound syndrome, such as the khyâl or nervios

attacks mentioned in the previous section, before entering therapy.

The consideration of culture-bound syndromes allows therapists to gain a better understanding of the experience of anxiety and PTSD from the patient's perspective, as well as its impact on the patient's living environment and relationships. It also enables therapists to classify important catastrophic assumptions and work specifically with them. In addition, consideration of culture-bound syndromes increases participation and adherence to therapy by addressing some of the patients' key concerns.

In the treatment of Cambodian-speaking patients, for example, it can be asked whether the patients fear having a Khyâl attack, how episodes of these culture-bound syndromes are usually treated, and what fears they have in this regard (see Hinton & Lewis-Fernández, 2010a, b).

18.2.9 Somatic Symptoms

Clinical experience and many studies show that somatic complaints are particularly pronounced in many traumatised non-English speaking patients. The multiplex model of PTSD development illustrates how somatic symptoms can develop and worsen PTSD. According to this multiplex model, several triggers - anger, worry, fear, agitation, orthostatic dizziness and even an agoraphobic reaction - can cause somatic symptoms. One somatic symptom can thus trigger a vicious circle that causes further somatic symptoms and worsens PTSD (■ Fig. 18.1). The appendix shows in ■ Table 18.2 how somatic symptoms can be treated with a CA-CBT.

18.2.10 Treatment of Sleep-Related Problems

In the CA-CBT, one session deals specifically with sleep-related problems, including

nightmares, sleep paralysis and night-time panic. Sleep paralysis occurs when falling asleep or waking up. Despite being awake, the person affected suddenly can neither move nor speak and often sees a black shadow approaching the body. In the case of night-time panic, the person wakes up in a panicky mood, but can move and cannot remember a nightmare.

The significance of nightmares is assessed differently depending on the patient. In many cultural contexts, nightmares are understood as visits to deceased persons or as an indication that the dreaming person is in a physically and mentally vulnerable state (Hinton et al., 2009a). In therapy, sleep paralysis and its meaning is specifically asked about, as it is often caused by anxiety and PTSD and can intensify both. In certain cultures, sleep paralysis is described in detail and is widespread (Hinton et al. 2005b). Needy Cambodian refugees often report sleep paralysis, which subjectively is mostly due to the visit of a malevolent spirit or to dangerous physiological problems. Persons from African-American cultures also often suffer from sleep paralysis and often assess it as a catastrophic situation (Hinton et al. 2005b). Night-time panic and its interpretation is also discussed. To improve sleep, patients are encouraged to perform a yoga-like stretching before bedtime to avoid cramps and reduce arousal (Patra & Telles, 2009). Therefore, the yoga-like stretching methods are practiced at the end of each session (■ Table 18.1).

18.2.11 Culturally Significant Rites of Passage

Certain cultures practice "purification" or transition rituals, such as the steam bath ritual among Southeast Asians or in certain indigenous cultures (Silver & Wilson, 1988). At the end of a CA-CBT, patients from the respective cultures can be encouraged to perform these rituals, if they identify with

Table 18.2 How the CA-CBT reduces somatic symptoms

Treatment target	Techniques to achieve the treatment target
Reduce triggers of somatic sensations	Reduce disorders that cause somatic sensations: worry/GAS (e.g., through meditation), anxiety (the anxiety protocol), anger (the anger protocol), and PTSD (e.g., through trauma exposure coupled with emotion regulation exercise)
	Teaching various techniques to fundamentally lower the general level of arousal: muscle relaxation, stretching exercises, meditation, and exercises to name and distance emotions
	Teaching various techniques that can be applied in an excited state
Addressing the arousal triad	Several interventions are used to treat anxiety and panic attacks, as each increases arousal and causes somatic symptoms. These disorders interact with PTSD, creating the arousal triad (Fig. 18.3)
Teach how to directly relieve somatic symptoms	Directly relieve certain symptoms: Muscle tension, headaches and cold extremities through applied muscle relaxation and stretching, as well as chest tightness, dizziness and cold extremities through diaphragmatic breathing training
Modify catastrophic assumptions about somatic sensations	Addressing the ethnophysiological and ethnopsychological understanding of the symptoms and the cultural syndromes to which the somatic symptoms are supposed to point
	Educate patients on how arousal causes somatic symptoms, which is normal and safe
Address trauma associations with somatic sensations	Educate patients about trauma associations with somatic sensations
	Trauma exposure, followed by the application of an indexed trauma protocol. This is done at the beginning of several sessions (sessions 5–10).
	Interoceptive exposure and positive reassociation of somatic sensations
Responding to triggers to somatic sensations	Collect and discuss metaphorical associations and conditioned fear reactions to somatic sensations
	Interoceptive exposure of somatic sensations (e.g. circular head movement to induce dizziness, hyperventilation etc.) and positive reassociation of somatic sensations
Responding specifically to disturbing somatic sensations	For example, headache: determination of triggers and associated thoughts (e.g. disastrous assumptions and trauma associations) and other somatic symptoms (e.g. to determine if the headache is part of a panic attack)
	Teaching methods (mainly the use of techniques from previous sessions, e.g. stretching) to prevent the symptom and alleviate it when it occurs

them. This can create a feeling of closure and positive transformation. For example, the steam bath ritual induces a somatic state similar to an anxiety state: shortness of breath and a feeling of intense heat. The

ritual acts as an exposure to these sensations and can facilitate a positive reinterpretation. The steam bath ritual often uses scents and symbolic objects that are associated with the somatic sensations. This type of healing

mediates certain sensations, i.e. creates new positive associations of sensations.

18.3 Conclusion

This chapter has illustrated how CBT can be adapted for patients from different cultures and has provided many examples. The different guiding ideas for the culture-sensitive treatment of these traumatized populations were presented and several basic models were described that can be used to design treatment. From these materials, the concrete treatment manuals for refugees and ethnic minorities from very different cultures described at the beginning were then put together in concrete terms, which - as reported above - made it possible to achieve good effectiveness and low therapy discontinuation rates.

Annex

Node Network Model

Figure 18.2: This node-network model (i.e. all linguistically marked fields on the lines are considered nodes) from Cambodian culture shows that if one node shifts to a different mood, all other nodes tend to change. The network can be activated by any of the nodes. The cultural images associated with the flexibility of Cambodian culture are described in detail; these images and the actions associated with them also activate the entire network.

Arousal Triad

Figure 18.3 shows three central disorders in traumatised patients, all of which trigger arousal, panic and somatic symptoms. Because of the catastrophic beliefs about the negative physical and psychological effects

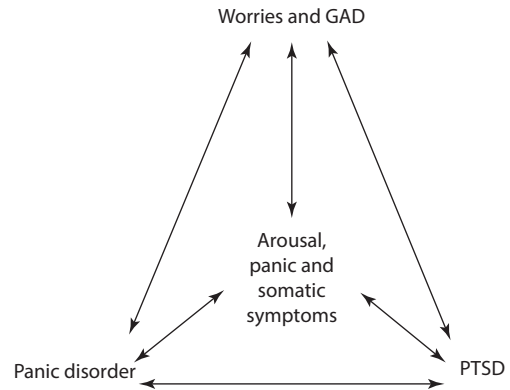


Fig. 18.3 Arousal triad

of anxiety and the dangers of somatic and psychological anxiety symptoms, the arousal triad seems to be particularly pronounced in fugitives and ethnic minorities. Often these symptoms are caused by culture-bound syndromes (e.g. Khyâl attacks in Cambodian populations; neurasthenia in Chinese populations; nervios and ataque de nervios in Latin American populations).

Table 18.2 shows in the overview how CA-CBT reduces somatic symptoms.

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Psychopharmacotherapy of Trauma Sequelae

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19.1 The Role of Psychopharmacotherapy in PTSD

Psychopharmacotherapy has a subordinate role compared to psychotherapeutic procedures in the treatment of posttraumatic stress disorder (PTSD), the most clinically relevant trauma sequelae in the literature and clinical practice. Compared to the relatively large number of publications on posttraumatic disorders and their psychotherapeutic treatment, there are comparatively few studies on the therapeutic use of psychotropic substances (Ebbinghaus et al., 1996; Ipser & Stein, 2012; Hoskins et al., 2015).

Under the Magnifying Glass

In Germany, the antidepressant paroxetine from the group of selective serotonin reuptake inhibitors (SSRI) is currently the only active substance approved for the treatment of posttraumatic stress disorder. However, the current study situation also shows indications for the efficacy of other drugs, especially those from the SSRI group. In the USA, sertraline from the same group is also approved for the treatment of PTSD.

Although the diagnosis of posttraumatic stress disorder (PTSD) was included as a separate diagnostic category in the “Diagnostic and Statistical Manual of Mental Disorders” (DSM-III; American Psychiatric Association, 1980) as early as 1980 (Gersons & Denis, 1996), the first controlled studies on the use of psychotropic drugs in PTSD did not appear until the late 1980s. One reason for the hesitant use of psychotropic drugs to date may be that only in recent years biological models of the etiology of posttraumatic disorders have been increasingly developed (Bonne et al., 2004; Charney et al., 1993).

However, progress has been made in the past 15 years in establishing more efficient pharmacotherapeutic treatments for PTSD with the help of placebo-controlled studies (Hageman et al., 2001; Berger et al., 2009; Ipser & Stein, 2012; Watts et al., 2013; Villarreal et al., 2016). Thus, paroxetine has now been approved in Germany and paroxetine and sertraline in the USA for the treatment of PTSD, and numerous randomised placebo-controlled studies have also been published for other active substances from the group of SSRIs that have shown efficacy (Stein et al., 2006; Ipser & Stein, 2012). However, more recent meta-analyses have concluded that the effect sizes (extent of the effect) for antidepressants in this indication are rather small (Hoskins et al., 2015; Cipriani et al., 2017). Nevertheless, pharmacological therapy in PTSD may be effective and considered as part of the treatment.

19.2 Indications and Practical Guidelines for Psychopharmacotherapy

More recent findings suggest that pharmacotherapy could prevent or reverse the development of dysfunctions in PTSD (Bonne et al., 2004; Charney et al., 1993). First of all, the question arises at which symptomatology and at which point in time of treatment of a patient with PTSD pharmacotherapy should be considered:

- The use of psychotropic drugs should be considered especially for PTSD syndromes with pronounced clinical symptoms.
- Pharmacotherapy carried out initially at the beginning of treatment could be advantageous in order to enable or facilitate access to psychotherapy for the patient.
- An indication for drug therapy may also exist if psychotherapeutic efforts have been unsuccessful or if patients are par-

ticularly open-minded about treatment with psychotropic drugs, while they tend to reject other approaches.

Before starting drug therapy, a careful diagnostic assessment of the patient is necessary. Possible concomitant mental illnesses (comorbidity) must be identified (► Chap. 11). If other significant mental disorders are present at the same time, these must be taken into account in psychopharmacotherapy – as a rule direct and, if necessary, primary treatment of these concomitant disorders should be considered.

In addition, it must always be checked whether and with what effect the patient has already taken or is currently taking medication for PTSD symptoms. Both over-the-counter as well as prescription sedatives and sleeping pills are often taken as S (► Sect. 19.3.2), often in combination with or as an alternative to alcohol (Brady et al., 2000).

In principle a drug-free interval should be established for patients with PTSD who are taking psychotropic substances before starting any psychopharmacotherapy in order to better assess the initial symptoms and later effects and side effects. Primary combination treatments, which experience has shown to be common in patients with PTSD, are not recommended in individual cases.

- Although patients with PTSD often have a wide range of symptoms, any drug treatment should preferably be started as monotherapy. In the later course of treatment and if the response to monotherapy is inadequate, simultaneous treatment with several psychotropic drugs should be considered.

19.2.1 Target Symptomatology

The literature available today suggests that pharmacotherapy is effective against the 3 symptom groups of PTSD. These include:

- Pressure to remember (intrusions, nightmares, reverberations, stress caused by triggers, physiological reactions to memory);
- Avoidance/emotional deafness (avoidance of thoughts and feelings, avoidance of activities or situations, amnesia, reduction of interests, feeling of alienation, limited scope of affect, limited future);
- Chronic excessive arousal (difficulty falling asleep and staying asleep, increased irritability, concentration difficulties, hypervigilance, excessive startle response).

In addition, pharmacotherapy shows good efficacy in the following common comorbid disorders:

- Depression,
- Panic attacks, anxiety,
- Psychotic experiences (delusions, perceptual disorders, hallucinations).

19.2.2 Practical Implementation

For patients who do not have specific psychiatric comorbidity (e.g. psychotic illness), a therapeutic trial with the active substance paroxetine, which is approved for the treatment of PTSD in Germany, is initially indicated. If there is a contraindication to the administration of paroxetine, another antidepressant from the SSRI group should be selected. Which drug is chosen from the large group of antidepressants may depend on numerous factors in individual cases, including the experience of the responsible physician in the treatment with the respective substances and possibly specific previous experiences of the patient.

- Antidepressants of the SSRI type are the most suitable, as the effectiveness of this group of antidepressants in PTSD is best proven (Ipser & Stein, 2012; Cipriani et al., 2017). Moreover, SSRIs have a more favourable side effect profile than tricyclic and tetracyclic antidepressants.

For treatment with antidepressants, the general rule is that a therapy trial should last at least 8–12 weeks before the success of the treatment can be assessed. A low starting dose should always be chosen and slowly titrated up to the required maximum dose to minimize the risk of side effects. If the therapy is successful, the medication should be continued for at least 1 year to prevent a recurrence of the symptoms (Davidson, 2006). Some important guidelines for pharmacotherapy in posttraumatic disorders are summarized in [Table 19.1](#).

Benzodiazepines should be used with extreme restraint because of the risk of developing a dependence and should be used only for short periods of time (4–8 weeks), if at all. Neuroleptics have a place in pharmacotherapy when patients complain of severe sleep disorders that cannot be controlled in any other way, are externally or autoaggressive and have psychotic experiences.

19.3 Empirical Evidence

There are a number of open uncontrolled studies on the use of various psychotropic substances in patients with PTSD that report mostly good therapeutic success (Davidson, 2006; van der Kolk & Greenberg, 1987). However, the number of systematic, controlled pharmacological studies is comparatively small, given the relatively high prevalence of this pathology (Stein et al., 2006). In the controlled trials, antidepressants of different substance groups (SSRIs, norepinephrine reuptake inhibitors, tricyclic antidepressants, MAO inhibitors) were tested almost exclusively. The best data are available for the SSRI group. Here, efficacy for the substances sertraline, paroxetine and fluoxetine could be proven in both short

term studies (6–12 weeks) and long term studies (6–12 months) (Asnis et al., 2004). For antidepressants of other substance classes such as venlafaxine, mirtazapine and duloxetine, there are only a few controlled trials, but these also show good results with regard to their efficacy. Conflicting results are found for nefazodone, tricyclic antidepressants and MAO inhibitors. The partly negative results of the trials might be due to the fact that the doses were too low and the duration of the trials too short, because the trials with longer trial periods had better results.

Common to all placebo-controlled studies was that the symptoms in the patients of the placebo group did not improve in practice; this can be evaluated as an indication of the involvement of biological processes in PTSD.

19.3.1 Antidepressants

The group of antidepressants is useful for treating many different psychiatric disorders. However, the treatment of depressive disorders is the main indication for antidepressants, which have been tried and tested for over 40 years. Other indications for the use of antidepressants include anxiety and panic syndromes, obsessive compulsive disorders and pain syndromes.

19.3.1.1 SSRI and Other Serotonergic Antidepressants

SSRIs are a group of antidepressants that have gained great importance in the treatment of depressive disorders in recent years and are now the most frequently prescribed antidepressants worldwide (Bauer et al., 2013). In addition, SSRIs are also suc-

■ **Table 19.1** Guidelines for the use of psychotropic drugs in posttraumatic disorders

Substance group	Examples (generics)	Daily dose, therapy duration	Special indications
Antidepressants			
SSRI	Paroxetine	20–40 mg	PTSD, depression, panic attacks, anxiety
	Sertraline	50–200 mg at least 8–12 weeks	
	Citalopram	10–40 mg	Depression, panic attacks, anxiety
	Fluoxetine	20–80 mg at least 8–12 weeks	
SSNRI	Venlafaxine	75–225 mg	Depression, panic attacks, anxiety
	Duloxetine	30–120 mg at least 8–12 weeks	
NaSSa	Mirtazapine	30–60 mg at least 8–12 weeks	Depression, panic attacks, anxiety
Tricyclic Letter	Amitriptyline, clomipramine, doxepin	100–250 mg at least 8–12 weeks	Depression
MAO inhibitors	Moclobemide, tranylcypromine	10–40 mg at least 8–12 weeks	Depression, panic attacks, anxiety
Anticonvulsants			
	Lamotrigine	200–400 mg	Depression, panic attacks, anxiety
	Topiramate	25–500 mg at least 8–12 weeks	
	Valproate, carbamazepine	Dosage according to serum level at least 8–12 weeks	Depression, panic attacks, anxiety
Tranquillizers/anxiolytics			
Benzodiazepines	Alprazolam, lorazepam	1–4 mg short-term use only, 4–8 weeks	Panic attacks, sleep disorders
Azapirone	Buspirone	15–60 mg at least 6–8 weeks	Panic attacks, anxiety
Atypical antipsychotics			
	Risperidone	1–4 mg	Psychotic symptoms
	Olanzapine	2.5–20 mg at least 6–8 weeks	

cessfully used in obsessive compulsive and anxiety disorders, especially when there is a comorbidity of depression and anxiety or compulsion. SSRIs also owe their widespread use to the fact that they cause fewer side effects than tricyclic antidepressants and MAO inhibitors (Bauer et al., 2013). As far as the indication spectrum and tolerability are concerned, other antidepressants with a primarily serotonergic effect, such as mirtazapine and nefazodone and the combined selective serotonin and norepinephrine reuptake inhibitors (SSNRIs) venlafaxine and duloxetine, should be mentioned.

Today, SSRIs and other serotonergic antidepressants are therefore primarily used to treat PTSD (Steckler & Risbrough, 2012). A survey of 57 American pharmacotherapy experts, who also have experience in the treatment of PTSD, confirmed that SSRI and other serotonergic antidepressants are among the most frequently prescribed drugs in the treatment of PTSD (Foa et al., 1999). In fact, the efficacy of SSRIs (fluoxetine, paroxetine, sertraline) in PTSD has been successfully tested repeatedly in large, placebo-controlled double-blind studies in recent years (Stein et al., 2006). In these studies, PTSD symptoms improved in all symptom categories; the tolerability of SSRIs was good in these studies. In the USA, the two drugs sertraline and paroxetine are approved for the treatment of PTSD, in Germany the drug paroxetine.

19.3.1.2 Tricyclic Antidepressants

Tricyclic antidepressants (■ Table 19.1) are among the most proven drugs in the treatment of depression. The general principle of adequate dosage (daily dose 150 mg) and adequate duration of therapy (8–12 weeks) should also be maintained in the treatment of PTSD before the success of therapy can be assessed. If there is no improvement, an attempt can be made to increase the dosage (daily dose up to 300 mg). In this case, an increase in the typical side effects of tricyclic antidepressants can be expected (e.g.

dry mouth, constipation, bladder emptying disorders, blurred vision). For further procedures in the presence of accompanying severe depression or treatment resistance, please refer to the literature (Bauer & Berghöfer, 1997; Bauer et al., 2013).

In patients with PTSD, 2 randomized placebo-controlled double-blind studies with tricyclic antidepressants were published. In a 4-week study, Reist et al. (1989) compared desipramine (mean daily dose 165 mg) with placebo in 18 Vietnam war veterans. In the desipramine group, only some depression symptoms showed a slight improvement; otherwise the antidepressant had no effect on PTSD symptoms. Patients in the placebo group also showed no improvement. Davidson et al. (1990) found in their 8-week study of 46 American war veterans (World War II, Korea, Vietnam) that the values on the Hamilton-depression and anxiety-scales were significantly reduced after only 4 weeks in the amitriptyline group (dose up to 300 mg/day depending on individual tolerance). In addition, after 8 weeks, PTSD symptoms were also improved, which serve the sustained avoidance of stimuli associated with the trauma (avoidance symptoms; ► Chap. 2). However, amitriptyline had no effect on the symptoms of trauma re-experience (intrusive symptoms). Again, there was no improvement in symptoms for patients in the placebo group on any scale.

19.3.1.3 MAO Inhibitors

The MAO inhibitors (monoamine oxidase inhibitors) belong to the group of antidepressants which have proved particularly effective in the case of so-called atypical (subgroup of depressive disorders) and therapy-refractory depression, but also in panic disorders. They are characterised by relatively good tolerability, provided that the relevant dietary requirements are observed. The efficacy of an MAO inhibitor in PTSD was tested in the first placebo-controlled study in 13 Israeli patients (Shestatzky et al., 1988). They used phenelzine – an

MAO inhibitor not currently on the market in Germany, which has an efficacy comparable to that of tranylcypromine available in Germany – in a daily dose of 45–75 mg. Patients who had very different traumas (e.g. war experiences, bomb attacks, plane crashes) showed only a slight improvement in symptoms in both groups during the 4-week study period. Kosten et al. (1991) compared the effect of phenelzine (mean daily dose 68 mg) with the tricyclic antidepressant imipramine (mean daily dose 225 mg) and with placebo in 60 Vietnam war veterans. Both groups improved significantly in PTSD symptoms during the 8-week study period. This was especially true for the so-called “imposing memories”; however, the avoidance symptoms did not improve. In this study, too, there was no reduction in symptoms in the placebo group. In a recent meta-analysis, phenelzine showed the highest efficacy effects in the antidepressant group (Cipriani et al., 2017).

The newer, reversible monoamine oxidase A inhibitors (RIMA) have the advantage over the older MAO inhibitors that no dietary restrictions have to be followed. However, in clinical practice of drug-based depression therapy, this group of substances is considered to be less effective than the irreversible MAO inhibitors such as tranylcypromine. In an open study with moclobemide, a clear efficacy in the treatment of PTSD was shown (Neal et al., 1997). In a multicentre double-blind study in the USA, however, no efficacy of the RIMA antidepressant brofaromine, which is not on the market in Germany, was found in comparison with placebo (Baker et al., 1995).

19.3.2 Tranquillizers/Anxiolytics

19.3.2.1 Benzodiazepines

Benzodiazepines are among the most commonly used psychotropic drugs. Their main indications are the treatment of anxiety, tension and agitation, and the treatment of

sleep disorders. The advantages of this class of substances are (Hollweg & Soyka, 1996)

- relatively large therapeutic range,
- good tolerance,
- lack of drug interactions.

A disadvantage is a relatively high potential for dependency, which is why the number of regulations has fallen significantly in recent years.

Because of the risk of developing dependence, benzodiazepines should not normally be prescribed for more than 4–8 weeks. Some authors warn or even advise against the use of benzodiazepines in PTSD (Friedman, 1988). The reason for this is not only the risks of developing dependence but also the negative results of controlled trials. For example, in a randomised double-blind study in patients with chronic PTSD no significant difference between alprazolam and placebo could be found (Braun et al., 1990). In another prospective study neither alprazolam nor clonazepam were better than placebo immediately after trauma (Gelpin et al., 1996). Other authors do not generally oppose benzodiazepines and recommend the addition of benzodiazepines to an antidepressant e.g. when free-floating anxiety persists (Davidson, 1992; van der Kolk & Greenberg, 1987) or treatment with antidepressants has not been successful (Foa et al., 1999).

- Under no circumstances should benzodiazepines be used in patients who have a history of substance abuse or dependence or who are at risk of developing dependence (e.g. family history of alcohol or drug dependence).

Before starting benzodiazepine therapy, it is essential that the patient is informed by a doctor about the risks of dependence and withdrawal symptoms if the drugs are taken over a long period of time. Some patients with benzodiazepine abuse or dependence report this spontaneously in a reluctant

manner or not at all. Targeted exploration and consideration of possible benzodiazepine effects (especially strong sedation) is therefore essential. It should be borne in mind that, although benzodiazepines are available only on prescription, some doctors still prescribe them relatively lighthearted and they are therefore easy to obtain. If pharmacological treatment is indicated for patients with PTSD at risk of dependence, antidepressants should be prescribed.

19.3.2.2 Buspirone

Buspirone, an anxiolytic from the group of substances known as azapirones with serotonin agonistic properties, is primarily used for the treatment of generalized anxiety disorder and is now the most commonly prescribed anxiolytic in North America. It is also frequently used in patients with PTSD, e.g. as a supplementary medication to an antidepressant (Foa et al., 1999). Since buspirone has not been shown to cause dependence, it can be used in PTSD without fear of a possible addiction, unlike benzodiazepines. However, there are few empirical studies on buspirone in the treatment of patients with PTSD: In a small 8-week placebo-controlled study it showed no significant improvement in PTSD symptoms compared to placebo (Becker et al., 2007).

19.3.3 Anticonvulsants and Lithium

Anticonvulsants are drugs that have their main indication in the treatment of epilepsy. From this group, 3 substances (carbamazepine, valproate and lamotrigine) have become increasingly important in recent years (Müller-Oerlinghausen et al., 2002):

- in the prophylactic treatment of affective disorders – in particular manic-depressive (bipolar) disorders and recurrent depressive disorders – and
- in the treatment of acute mania – besides the proven lithium salts.

Anticonvulsants and lithium are today preferably referred to as the group of “mood stabilizers” in the international literature. With the exception of lamotrigine, these substances are not dosed according to a fixed regime, but as a function of the drug level in the blood. Therefore, this level must be determined regularly and, in the case of lithium, particularly closely because of its narrow therapeutic range. Serum levels of 0.6–0.8 mmol/l for lithium, 5–12 mg/l for carbamazepine and 50–100 mg/l for valproate should be aimed for. According to Bauer et al. (2015), possible side effects may occur:

- for lithium mainly tremor, frequent urination and weight gain,
- with carbamazepine most often nausea, rashes and dizziness,
- with valproate mainly nausea, and weight gain,
- and with lamotrigine, especially rashes, dizziness and headaches.

The use of anticonvulsants has been derived from theoretical considerations that the so-called “Kindling” as a pathophysiological process may underlie PTSD symptoms (van der Kolk & Greenberg, 1987). The model of “Kindling” includes the hypothesis that the repeated presentation of subliminal stimuli sensitizes the limbic system, resulting in decreased neuronal activity. According to this hypothesis, substances with known anti-kindling effects such as carbamazepine and valproate would attenuate abnormal activity of limbic neurons caused by repeated stressors (Post & Weiss, 1989).

Anticonvulsant substances such as lamotrigine, topiramate and tiagabine have so far been tested in placebo-controlled studies with varying degrees of success. Other anticonvulsant drugs (carbamazepine, gabapentin, vigabatrin, phenytoin, levetiracetam and valproate) as well as lithium have so far only been tested in open, uncontrolled studies in patients with PTSD. Lamotrigine and topiramate have been successfully tested as monotherapy in PTSD in relatively small

placebo-controlled studies. Lamotrigine was significantly superior to placebo in the main symptom groups “memory pressure” and “avoidance/emotional numbness”, while topiramate was only superior in the main symptom group “memory pressure” (Berlin, 2007; Berger et al., 2009). Some studies also show promising results with other substances in this class, but all studies published to date with anticonvulsants have very small patient numbers, very heterogeneous patient groups and high comorbidity rates. Despite this low evidence of efficacy, recent data in US war veterans with PTSD show that anticonvulsants are used very frequently in this patient group (Shiner et al., 2017). The authors assume that this widespread use (>50%) is due to the high rates of comorbidity (especially headache and other pain syndromes).

19.3.4 Antipsychotics

The use of antipsychotics (group of antipsychotic agents, also known as neuroleptics) in patients with PTSD has traditionally been judged rather cautiously in the literature due to the study situation (Davidson, 1992; Friedman, 1988). The current wide distribution of this group of substances, especially of the so-called atypical antipsychotics, also outside the traditional antipsychotic indications (justified due to relatively good tolerability compared to classical neuroleptics and effectiveness in depressive and anxiety syndromes as well as sleep disorders), has led to their use among war veterans with PTSD being relatively widespread, especially in the USA (Nobles et al., 2017). A new 12-week placebo-controlled study in US war veterans with PTSD showed statistically significant effects of quetiapine (monotherapy; mean study dose approx. 250 mg) on the core symptoms of the disorder (Villarreal et al., 2016). Placebo-controlled studies were also published with the atypical drugs risperidone and olanzapine, only some of which

used the active ingredients in monotherapy. Both drugs showed significant improvements in the specific scales compared to the placebo groups, which was mainly due to the improvement of the symptoms intrusions and hypervigilance (Pae et al., 2008; Berger et al., 2009; Ahearn et al., 2011). For other drugs from the group of atypical neuroleptics such as aripiprazole and ziprasidone, there are only open studies and individual case reports to date.

Indications for the prescription of antipsychotics are mainly given when psychotic symptoms (e.g. paranoia, visual and auditory hallucinations from the traumatic experiences) or aggressive behaviour occur. Due to the side effect profile, the newer, relatively well-tolerated atypical antipsychotics (e.g. aripiprazole, olanzapine, risperidone, quetiapine) are suitable for this purpose. However, the monitoring of potential side effects is particularly important for this class of drugs, especially with regard to metabolic effects (including weight gain).

19.3.5 Alternatives

Prazosin, propranolol, guanfacine and clonidine are active ingredients that have been investigated in a few small studies in patients with PTSD due to their antiadrenergic effect. Prazosin in particular showed good effects with regard to an improvement of sleep disorders and nightmares (Berger et al., 2009; Steckler & Risbrough, 2012). The theoretical background is the assumption of noradrenergic hyperstimulation in PTSD as a cause of symptoms. However, a large randomized, placebo-controlled study ($n = 304$) showed no significant effects for prazosin in the main target symptoms nightmares and sleep disturbances in US war veterans with PTSD (Raskind et al., 2018).

The use of opioid antagonists such as nalmefene and naltrexone has shown contradictory results so far (Berger et al., 2009).

To some extent, primary/prospective (before trauma) and secondary/retrospective (after trauma, but before manifestation of PTSD) preventive pharmacological approaches are also pursued. Up to now, the administration of hydrocortisone has mainly been investigated in high-risk populations (e.g. patients in intensive care units; Steckler & Risbrough, 2012).

19.4 Psychopharmacotherapy of Further Trauma Sequelae

In addition to post-traumatic stress disorder (PTSD), the current diagnostic criteria (ICD-10, DSM-5) include other disorders that can follow trauma more or less directly. The “acute stress reaction” is particularly worth mentioning here as a direct trauma sequelae disorder, which differs from PTSD in that the pattern of symptoms, which is comparable to that of PTSD, usually occurs directly after the trauma, lasts at least 3 days and must be remitted within 1 month of the trauma – otherwise the diagnosis of an acute stress reaction must be changed to that of PTSD – provided that, in addition to the time criterion, its other criteria are also met.

Against the background of the data available, the WHO’s “Guidelines for the Management of Conditions Specifically Related to Stress” of 2013 recommend that neither benzodiazepines nor antidepressants should be offered to children, adolescents or adults during the first month after a potentially traumatic event in order to relieve the symptoms of an acute stress response, (even) if they are associated with significant impairment in daily life (WHO, 2013). Despite the low quality of evidence, the WHO recommendation on benzodiazepines is clear (“Strength of recommendation: strong”) and also applies to trauma-related insomnia. This recommendation is consistent with a Cochrane analysis (Amos et al., 2014) which found no benefit of proprano-

lol, escitalopram, temazepam or gabapentin in preventing PTSD, but which, like another meta-analysis (Sijbrandij et al., 2015), found evidence for the efficacy of hydrocortisone in the development of PTSD. A recent randomised controlled trial also found evidence for the efficacy of intranasally administered oxytocin in preventing PTSD in the subgroup of patients with a high PTSD symptom burden in the Clinician-Administered PTSD Scale (CAPS), whereas no significant difference was found in the overall patient population (van Zuiden et al., 2017).

In view of the (narrow) data situation described above, what should be done in everyday clinical practice if symptoms of an acute stress reaction such as sleep disturbance with recurring stressful trauma-associated dreams are present and associated with significant impairment, and if the person affected requests medical help? One possibility could be to use atypical antipsychotics such as olanzapine (Carey et al., 2012), which have proven successful in PTSD treatment with regard to these symptoms, off-label and then, depending on the clinical symptoms, to gradually reduce them again in a timely manner, before the often encountered adverse side effects such as weight gain become clinically relevant. It is also worth discussing whether approved treatment options such as sertraline or paroxetine should be used during the acute stress response when it is foreseeable that the symptoms will not remit within 1 month after the trauma. Such a procedure could also be discussed in cases in which the symptoms of the acute stress response partly persist over the period of 1 month after the trauma and are significantly impairing, but the complete criteria of PTSD are not fulfilled, so that the diagnosis of an adaptation disorder must be assigned here. In such a case, however, the use of the drugs sertraline and paroxetine, which are approved for PTSD, would then be off-label – unless the criteria for a depressive episode, with trauma as a risk factor for this, were simultaneously met.

In addition to the acute stress reaction and PTSD, the “persistent personality disorder after extreme stress” in the context of direct trauma sequelae must also be mentioned (ICD-10: F62.0). According to the ICD-10 there is a “persistent personality change lasting at least 2 years” after “a stress of catastrophic extent”. Here it is demanded that the stress “must be extreme”, so that “the vulnerability of the person concerned need not be considered as an explanation for the profound effect on the personality”. The disorder is characterized “by a hostile or distrustful attitude towards the world, social withdrawal, feelings of emptiness or hopelessness, a chronic feeling of tension as in the case of constant threat and feelings of alienation”. PTSD (ICD-10: F43.1) can precede the personality change. In the ICD-11, however, this disorder no longer appears, but is transferred to the concept of “complex post-traumatic stress disorder” (Giourou et al., 2018). In order to be diagnosed, the diagnostic criteria of PTSD must have been present at some point in the course of the disease; in addition, however, the disorder is characterised by severe and profound problems of affect regulation, a profound conviction that one’s own self is inferior, damaged or worthless, and persistent difficulties in maintaining relationships and feeling close to others (Maercker & Augsburger, 2017). Evidence-based recommendations based on clinical studies do not or not yet exist with regard to psychopharmacotherapy for both the persistent personality disorder after extreme stress and the complex post-traumatic stress disorder. Currently, however, a symptom-oriented approach based on the treatment of PTSD is recommended.

19.5 Concluding Considerations

PTSD as well as the other trauma sequelae described above are diseases that are difficult to treat with psychotropic medications. Further studies on the etiology and patho-

physiology of these disorders may provide new insights for treatment. According to the current state of knowledge, however, psychopharmacotherapy represents a useful addition to the overall treatment plan for posttraumatic disorders, which is particularly indicated in severe PTSD syndromes with hyperexcitability, panic attacks and depressive symptoms, if possible in combination with psychotherapy. First choice drugs for posttraumatic stress disorder are antidepressants from the SSRI group (e.g. sertraline, paroxetine) or pharmacologically similar substances (e.g. mirtazapine, venlafaxine, duloxetine). They show good efficacy with regard to all 3 symptom clusters with good tolerability. If these drugs are ineffective or intolerable, the use of other antidepressant classes (tricyclic antidepressants or MAO inhibitors) should be considered. “Mood stabilizers (lithium, anticonvulsants) are another alternative, which can also be prescribed in combination with an antidepressant in the sense of augmentation. In the case of particularly severe courses or the occurrence of psychotic symptoms, the use of an atypical neuroleptic should also be considered. A pharmacotherapeutic treatment attempt should last at least 8–12 weeks (■ Table 19.1) and, if the therapy is successful, should be continued for at least 1 year.

► Finally, it should be pointed out that, precisely because of the still limited knowledge about the possible effects of different psychopharmacotherapies on patients with PTSD, such treatment should always be carried out by a physician who is both generally well acquainted with psychopharmacotherapy and has specific experience with the medication used.

If psychopharmacological (co-)treatment is given, it will lead in individual cases to several practitioners being responsible for the same patient (e.g. family doctor, psychotherapist and psychiatric specialist). Such a constellation may have to be accepted in order

to be able to offer the patient a competent therapy; however, it requires clear agreements and corresponding feedback from the therapists/physicians involved.

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Therapy of Prolonged Grief Disorder

R. Rosner and H. Comtesse

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20.1 Systematics

Psychotherapeutic interventions for prolonged grief disorder (PGD) must be distinguished from non-specific interventions for normal grief. Non-specific interventions are directed at all bereaved (universal prevention) or high-risk groups (e.g. bereaved parents) for the development of PGD (indicated prevention) and take place in the first weeks and months, but occasionally also several years after loss. However, meta-analyses of grief interventions show that non-specific interventions for bereaved persons without a corresponding indication achieve at most small effects or even have negative effects on the normal grief process (Currier et al., 2008; Wittouck et al., 2011). Accordingly, psychotherapeutic interventions are only indicated in the presence of PGD.

In particular, cognitive-behavioural approaches for the treatment of PGD have been developed in recent years. These approaches aim to reduce grief-related dysfunctional thoughts, intrusions and avoidance behaviour (e.g. Boelen et al., 2007). Accordingly, the approaches achieve a reduction

of grief symptoms particularly when they include techniques for confronting avoided loss-related memories or situations and for cognitive work on grief-related dysfunctional cognitions or feelings of guilt. As a starting point, it is useful to classify these treatment approaches on the basis of the therapeutic methods used in each case (Table 20.1). At the same time, there is a current development of therapeutic methods that adapt proven therapeutic approaches to grief (e.g., behavioural activation to reduce social withdrawal; Papa et al., 2013; metacognitive approaches; Wenn et al., 2015; Present Centered Therapy; Nocon & Rosner, 2017).

Furthermore, some therapeutic approaches for the treatment of post-traumatic stress disorders were also able to achieve a small to moderate reduction of comorbid grief symptoms in the sense of a secondary outcome variable. Since a detailed description of such trauma-focused approaches would go beyond the scope of this chapter, only specific approaches to the treatment of PGD will be presented here that focus on the grief symptoms as the primary outcome variable and presuppose the presence of PGD as an entry criterion for treatment.

Table 20.1 Schematic classification of cognitive-behavioural therapy approaches in cases of persistent grief disorder

Therapeutic approach	Therapy methods		
	confrontation of grief	Cognitive restructuring	Other therapeutic methods
Complicated Grief Treatment (Shear et al., 2001)	+	–	Techniques of interpersonal therapy
Cognitive behavioural therapy (Boelen et al., 2007)	+	+	Behaviour activation
Cognitive therapy with confrontation (Bryant et al., 2014)	+	+	–
Integrative cognitive behavioural therapy (Rosner, Pfoh, et al., 2015)	+	+	Techniques of systemic therapy and Gestalt therapy
Internet-based cognitive behavioural therapy (Wagner et al., 2005)	+	+	Social sharing

20.2 Therapeutic Approaches

In principle, therapy for PGD should be based on a detailed diagnosis using structured interviews, because therapy is only indicated in the presence of PGD, i.e. **at the earliest 6 months** after loss. Furthermore, it should be known which conditions maintain the grief symptoms. At the beginning of grief therapy, the focus is on relationship building and psychoeducation. Many patients have the fear of forgetting the deceased person through the therapy or of not being able to appreciate the significance of the deceased person. Therefore, sufficient time should be given at the beginning to introduce and appreciate the deceased person and the loss experienced. Following attachment theory (Bowlby, 1980) and the dual process model (Stroebe & Schut, 1999), grief interventions aim to change the relationship with the deceased (“continuing bonds”), but not to break it off. It is thus a matter of both the emotional processing of grief and the adaptation of the bereaved to their new life situation. Subsequently, the difference between normal and prolonged grief is explained, and specific treatment goals are defined on the basis of an individual disorder model. In addition, it must be taken into account that comorbid mental disorders are often present. Cognitive interventions serve to modify dysfunctional grief-related cognitions (e.g. “*If I grieve less than I do now, I give it away*”, “*I can never be happy again*”) or feelings of guilt (e.g. “*If I had done that, she/he would still be here*”). During exposure, previously avoided painful aspects of loss (e.g. receiving the death notice) or loss-related situations or activities related to the deceased person or the circumstances of death are identified and cognitively processed. At the end of the therapy, the focus is on building positive and comforting memories of the deceased person, developing new life goals or starting new activities and relapse prevention.

Principles of treatment

- Before an intervention begins, a structured interview should be carried out. With unstructured clinical interviews, there is a risk of overestimating grief symptoms.
- Intervention is only indicated if there are persistent symptoms of PGD - and thus no earlier than 6 months after death.
- Pharmacotherapy has little effect on grief symptoms and is only indicated in case of comorbid depressive symptoms (► Sect. 20.3).
- Explicit appreciation of the deceased and the loss experienced is the basis for the necessary motivation for change.
- In psychoeducation, a plausible individual disorder model is developed.
- The disorder model results in cognitive interventions (restructuring) to achieve more flexible coping.
- During exposure (usually in sensu), avoided aspects of the loss are worked out and cognitively processed.
- Establishing or resuming goals and activities promotes adaptation to the new life situation.

20.2.1 Complicated Grief Treatment

The “Complicated Grief Treatment“ (CGT) approach is based on attachment theory and the dual process model (Stroebe & Schut, 1999) and pursues 3 objectives (Shear et al., 2001):

- Acceptance of the loss,
- reorganization of the bond with the deceased person,
- new goals in life.

To this end, techniques of cognitive-behavioural therapy treatment of post-traumatic stress disorder according to Foa and Rothbaum (2001) are combined with elements of interpersonal therapy (IPT). CGT consists of 4 therapy phases with a total of 14–18 double sessions (Shear et al., 2001, 2005).

In **phase 1**, the relationship to the deceased person, circumstances of death and grief symptoms are first described in detail. Furthermore, individual treatment goals and ways to achieve them are developed together with the patient. The authors (Shear et al., 2011) emphasize that some bereaved are reluctant to undergo therapy and therefore do not follow the treatment rationale. For this reason, aspects of motivational interviewing are used to uncover and resolve possible ambivalence. This approach is maintained throughout the entire therapy. Since patients with PGD often isolate themselves from friends and relatives, a close person is included in one of the sessions who also participates in some of the exposure exercises. This procedure is used to strengthen or restore the social support system.

The **second phase** of CGT lasts about 6 sessions and contains the actual active treatment of the core symptoms of PGD. Exposure in sensu is used here (based on Foa & Rothbaum, 2001), which usually refers to the actual loss (e.g. ideas about how the accident might have happened, how the deceased suffered shortly before death) or the circumstances of death (e.g. receipt of the death notice, funeral). The individual exposures are repeated again and again within a short period of time until the emotional intensity of the experience diminishes (see Foa & Rothbaum, 2001). While the first exposures may be stressful for the patient, the stress usually decreases relatively quickly and the exposure is repeated only for the most intensively experienced thoughts and memories. Furthermore, this exposure is combined with a behavioural change intervention, similar to a confrontation in vivo,

which focuses on avoidance behaviour with regard to loss-related situations or activities. Successful exposure leads to a more coherent and complete narration of the loss event. This in turn leads to a reduction in confusion about death and ultimately to acceptance of the event. Guilt, shame and other emotions and cognitions that are unpleasant for the patient and that appear during the exposure are thus reassessed.

Another problem is the excessive preoccupation with the circumstances of the loss and memories of the deceased person. While this behaviour protects against painful feelings of grief, it prevents patients from engaging in social activities and relationships again. In this case, the exposure exercises aim to acknowledge the reality of loss, separation anxieties and feelings of guilt. Another aim of the treatment is to build up positive and comforting memories of the deceased person in order to achieve a reassessment of the loss. Sometimes these positive memories develop spontaneously after the exposure exercises, sometimes they need to be therapeutically stimulated. In the latter case, the therapist asks the patient to bring pictures of the deceased. Memories are discussed and the therapist emphasizes positive and comforting aspects.

In **phase 3**, the therapeutic goals achieved so far will be recapitulated, and in **phase 4**, exposure will be continued or IPT interventions related to role transitions will be used.

In a first efficacy study, Shear et al. (2005) used IPT as a control condition. 95 patients were randomized to the CGT or IPT condition. The comparison of the two treatments showed high drop-out rates (around 26% in both conditions). The completer analysis showed a superiority of CGT. However, only 51% of the participants benefited from the intervention. CGT for bereaved seniors was evaluated using the same design (Shear et al., 2014). The results also showed a significant reduction in grief symptoms in this specific bereavement group. In another controlled study, the efficacy of CGT in

combination with pharmacological treatment was evaluated (Shear et al., 2016). 395 patients were randomized in 4 conditions: Citalopram, placebo, CGT + citalopram and CGT + placebo. CGT + placebo was superior to the placebo only condition. The combination CGT and citalopram was not superior to the CGT only condition. Citalopram was not superior to placebo. Only comorbid depressive symptoms improved significantly when psychotherapy was combined with citalopram. Supiano and Luptak (2013) adapted CGT for a group setting. 39 persons were randomized to either the CGT group (CGGT) or a supportive group therapy. CGGT was superior in the controlled comparison ($d = 1.34$). The CGGT drop-out rate was 51% and that in the supportive group 25%. As possible mediators of the treatment success of CGT, the reduction of feelings of guilt, negative thoughts about the future and avoidance behaviour are discussed, whereby the reduction of the latter could be identified as a mediator (Glickman et al., 2017). All in all, CGT is currently the most investigated therapeutic method. However, in most of the studies of this working group, an interview measure that differs from the other studies was used (Clinical Global Impressions Scale), so that comparability with the effectiveness of other interventions is difficult.

20.2.2 Cognitive Behavioural Therapy

Boelen et al. (2006) proposed a cognitive model of PGD, according to which 3 processes are assumed to be central to the development and maintenance of PGD:

- low elaboration and integration of the loss into autobiographical memory;
- negative misinterpretations of one's own grief reaction or dysfunctional global beliefs (e.g. a negative picture of the future without the deceased person);

- anxious (e.g. in relation to situations that remind one of loss) and depressive avoidance styles (e.g. social isolation).

From this, Boelen et al. (2007) derived the goals for their cognitive behavioural therapy of PGD. Central to this are the three processes mentioned above, which have to be dealt with in the therapy: Elaboration and integration of the loss, dysfunctional beliefs and/or interpretations, and anxious and/or depressive avoidance behavior.

At the beginning of the therapy a number of grief specific information is collected, such as whether the loss is perceived as temporary or permanent, what characteristics the intrusions have, or what maladaptive cognitions are present. In addition, psychoeducation and normalisation of the grief symptoms are carried out. It is important for the treatment to determine which of the three processes are how pronounced and how they maintain the grief symptoms. The process that makes the greatest contribution to maintaining the symptoms is chosen as the focus of treatment. To address a lack of integration into autobiographical memory, the authors choose exposure in sensu (similar to Foa & Rothbaum, 2001). In order to avoid emotional overload, the therapists proceed in a gradual manner and also use writing tasks. In the case of anxious avoidance behaviour, exposure is carried out in vivo. If there is an excessive preoccupation with the loss (e.g. pronounced rumination about the reasons or circumstances of the loss), which prevents acceptance of the reality of the loss, exposure with reaction prevention is used. A behavioural activation is used to reduce depressive avoidance behaviour. If dysfunctional beliefs are paramount, the usual methods of cognitive restructuring according to Beck (1979) are used.

Boelen et al. (2007) investigated their intervention in a randomized controlled trial involving 54 bereaved persons. They were assigned to either cognitive behavioural therapy (CBT) or supportive therapy.

Within the CBT, there were again two different treatment sequences: one group received 6 hours of cognitive restructuring followed by 6 hours of exposure, and a second group received first the exposure and then the restructuring. Both CBT interventions were superior to supportive therapy - both in terms of grief symptoms and general psychological distress. Within CBT, the combination of exposure and restructuring ($d = 1.29$) was superior to the reverse order ($d = 0.59$). Also in the follow-up period of 6 months the combination of exposure and restructuring performed better ($d = 1.25$) than restructuring and exposure ($d = 0.87$). In addition, the drop-out rate of the combination of exposure and restructuring was 20% and that of the combination of restructuring and exposure was about 30%.

20.2.3 Cognitive Therapy with Confrontation

Bryant et al. (2014) also developed cognitive behavioural therapy with confrontational components. With the exception of 4 confrontation sessions in individual settings, this is carried out over 10 weeks in two-hour group sessions.

In the first two group sessions, the patients are given information on grief and a model for change. This is followed by four individual confrontation sessions for exposure in sensu with regard to the most painful aspects of the loss. In group sessions 3–7, dysfunctional thoughts and rumination are the focus of treatment, which is dealt with using methods of cognitive restructuring and writing tasks. From group session 8 onwards, the focus is on reassessing what happened and building positive memories. In group session 9 new life goals are worked out. The last group session serves to prevent relapse.

In a first efficacy study, 80 patients were randomized in 2 conditions: CBT and

CBT + exposure (Bryant et al., 2014). In the completer analysis, CBT + exposure was found to be superior to CBT. At the end of treatment, 19% of patients with the CBT + exposure and 43% with the CBT condition still had PGD. Drop-out rates were similar in both conditions (about 23% in each condition). Even 2 years after treatment end, CBT + exposure was still superior to CBT only ($d = 1.15$; Bryant et al., 2017).

20.2.4 Integrative Cognitive Behavioural Therapy

The integrative cognitive behavioural therapy of PGD (PG-CBT; Rosner, Pfoh, et al., 2015) is available both as outpatient individual therapy and as inpatient group therapy, in some cases with different focuses. While comorbidities are treated in other groups or individual interventions under inpatient conditions, the outpatient manual explicitly takes comorbidity into account during PG-CBT. The inpatient manual contains art-therapeutic elements in addition to CBT and corresponds to a total of 9 double sessions, whereby the exposure exercises are carried out in individual sessions. The outpatient manual integrates systemic and gestalt therapeutic interventions and comprises 20 sessions, which can be supplemented by 5 optional sessions (e.g. a couple's session, anniversaries). Both manuals can be divided into 3 phases.

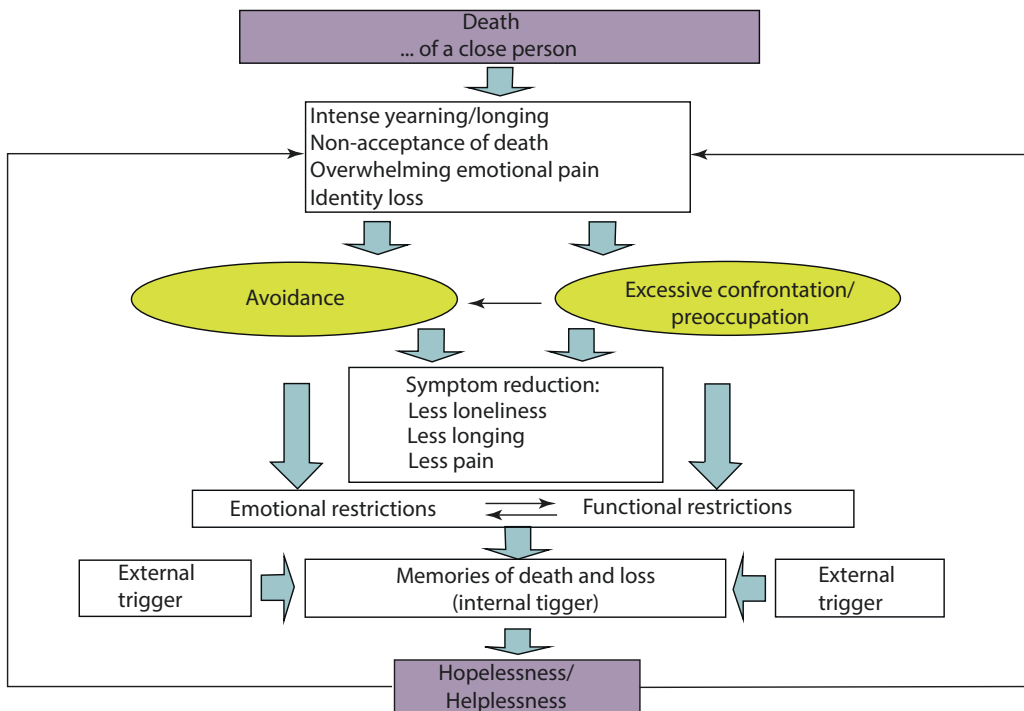
In **phase 1**, intensive work is done on relationship building or group cohesion and the significance of a possible ambivalence towards change is clarified. In order to improve the relationship, images and objects that remind of the deceased person are viewed together in addition to the known methods. At the same time, the loss is updated by talking about the deceased person in the past from the very beginning. Similar to Shear et al. (2011), the authors also found that the motivation for change

is low in many patients. Various fears can arise. For example, they fear that the relationship with the deceased person will be devalued, or it is expected that the pain of loss will only really be felt through therapy. A possible ambivalence can be uncovered and dealt with here using interview methods that promote motivation. Genograms can also be used here if there are family traditions to deal with grief. Individual symptoms of PGD are classified using the control loop model and appropriate interventions are derived from the model. The control loop model (■ Fig. 20.1) describes the amplification of initial symptoms through the way they are coped with - on the one hand through avoidance, but also through the ongoing involvement with the deceased; the latter also serves the purpose of avoidance: The bereaved avoids remembering that the loved one has died. Both avoidance and excessive involvement lead in the short term to feeling less lonely and experienc-

ing pain and longing less intensively. In the long term, however, this leads to a number of emotional and functional limitations. Ultimately, however, it is impossible to completely fade out the loss: external (e.g. the empty apartment, TV reports) or internal triggers (e.g. memories of the circumstances of death) trigger feelings of hopelessness and helplessness, which in turn ultimately lead to the symptoms of ongoing grief being experienced again.

Depending on which aspects contribute most to the maintenance of the grief symptoms and which goals have been agreed upon, different treatment priorities can be set **in phase 2**. There are 4 possible focal points:

- Processing of guilt,
- Adaptation to changing living conditions,
- Function of grief as a means of maintaining the bond with the deceased,
- Explanation and treatment of the avoidance symptoms.



■ Fig. 20.1 Model of prolonged grief. (From Rosner, Pfoh, et al., 2015; courtesy of Hogrefe Publishers)

Depending on the focus, different interventions are used. For example, feelings of guilt are dealt with using common cognitive methods (e.g. creating a “guilt pie”; Ehlers, 1999). In each case, an exposure in sensu (similar to Ehlers, 1999) is carried out with regard to the most painful aspects of the loss. These are often aspects related to the circumstances of death (e.g. absence of the patient at death, funeral).

The cognitive reassessment of the loss aims to replace stressful memory scenes with positive or comforting memories. Further topics can be active farewell, time with the dead or other behaviour at the funeral. Alternatively or in addition, structured writing tasks can also be carried out, which can then have as their content what one still wanted to tell the deceased or what advice one would formulate for fictitious persons who experienced exactly the same thing. With the help of a Gestalt therapeutic chair work, a conversation can be held with the deceased in which messages can be exchanged and a conclusion can be found. Exposure in vivo with regard to memory triggers such as situations related to death events is carried out analogously to the recommendations of Shear et al. (2005).

In the **third phase** the focus is on the changed relationship with the deceased person and a reorientation towards a life without the deceased person. Topics here are how the relationship can be maintained (e.g. planting a tree, lighting candles at certain times) and which characteristics or messages of the deceased the patient would like to be carried on (e.g. paying more attention to his or her own interests, developing compassion for difficult people). Such rituals and symbols continue to assign the deceased person a place in the patient’s life. If necessary, booster sessions can be arranged, for example shortly before the day of death.

In the outpatient setting, the efficacy of PG-CBT was tested with 51 persons randomly assigned to PG-CBT or a waiting list

condition (Rosner et al., 2014). In the intent-to-treat analysis, a controlled comparison revealed a large effect of PG-CBT ($d = 1.32$). The drop-out rate of PG-CBT was 21% and that of the waiting list condition was about 11%. PG-CBT also had a large effect in the follow-up period of 1.5 years ($d = 1.24$; Rosner, Bartl, et al., 2015).

► Case study: Loss of husband

Mrs. A., 54 years old, mourns the loss of her husband, who died of cancer 3 years ago. Her value in the Inventory of Complicated Grief (ICG) is 45, and in the interview she meets all PGD criteria. The couple had been married for 30 years and have 3 adult children. Mrs. A.’s husband died about half a year after the diagnosis. In the time between the diagnosis of cancer and the death of her husband, both had focused on treatment and also tried alternative treatment methods. She and her husband did not notice the doctor’s cautious hints that this was a very aggressive cancer. In the last 2 weeks before his death, Mrs. A. spent day and night in hospital at her husband’s side. After a brief recovery, Mrs. A. went home one evening tired and slept all night for the first time in weeks. When she came to the hospital in the morning, her husband had passed away.

Mrs. A. comes into therapy at the urging of her children. She herself is highly ambivalent about psychotherapy, since she is “not crazy, but sad”. At the first interview she already takes out a small photo album and shows pictures of her husband and their past life together. She cries almost continuously. In psychoeducation she can see that her state of mind is more like PGD than normal grief. This makes her curious, but also critical. In the motivation phase of therapy her ambivalence becomes very clear. She is very worried that the inner closeness she feels to her husband will evaporate during therapy. On the other hand, she is aware that she has become socially isolated, often has arguments with her children and has probably not laughed

with all her heart since the death of her husband. After a long period of consideration, however, Mrs. A. decides to take an active part in the therapy.

During the cognitive restructuring a number of issues become clear: Ms. A. believes that she is complicit in the death of her very pleasure seeking husband because she did not prevent him from smoking and being overweight. Nor did she manage to persuade him to see a doctor. Furthermore, she was not present at his death but was sleeping, which she takes as an indication that she was a bad partner. She should have felt that he was dying. Furthermore, she is extremely angry with the hospital, which did not notify her that night and is sure that the hospital is the main culprit for her husband's death. In the course of the restructuring, Mrs. A. could see that she had tried to convince her husband of better health behaviour sufficiently often, but that he simply refused to do so as an autonomous adult. Her other dysfunctional thoughts and behaviours could also be dealt with sufficiently. In a highly emotional gestalt therapeutic chair work for the patient, the patient was able to say goodbye to her husband and was clearly calmer and more optimistic afterwards. In the final diagnostic assessment, Mrs. A. no longer fulfilled the PGD diagnosis and the ICG value had dropped to 12. ◀

20.2.5 Internet-Based Cognitive Behavioural Therapy

In recent years, there has been an increase in internet-based psychotherapeutic interventions. For post-traumatic stress disorder, Lange et al. (2003) developed "Interapy" based on a cognitive-behavioural therapeutic approach, which has a good treatment effectiveness. Based on this, Wagner et al. (2005) designed the internet-based therapy for PGD. Communication between patient and therapist is exclusively via e-mail. The therapy manual consists of 3 phases.

- Phase 1 includes self-confrontation exercises with loss-related aspects.
- In phase 2 a cognitive restructuring takes place. Feelings of guilt are processed and the patients write a supportive letter to a friend who has experienced exactly the same thing as they did. A further content is the establishment of rituals to remember the deceased person.
- Phase 3 (social sharing) focuses on the distance from the loss experience and the development of a perspective for future life.

In a randomized controlled study, Wagner et al. (2005) examined 55 persons with PGD after an average loss of about 5 years ago. The patients were assigned to internet-based therapy or to the waiting list condition. The results showed a significant reduction in the grief symptoms, which was also maintained in a follow-up measurement after 1.5 years (Wagner & Maercker, 2007). In another study, internet-based therapy for PGD was evaluated for parents after prenatal loss (Kersting et al., 2013). 228 persons were randomly assigned to the internet-based therapy and waiting list condition. In the intent-to-treat analysis, the controlled comparison showed a moderate effect of internet-based therapy ($d = 0.56$). The improvement in grief symptoms was stable in the pre-post comparison even 1 year after the internet-based treatment ($d = 1.63$).

Eisma et al. (2015) reviewed the effectiveness of internet-based treatment methods for PGD. For this purpose, 47 elderly persons were randomized in 3 conditions:

- Exposure (after Boelen et al., 2007),
- Behavioural activation (see Lejuez et al., 2011) and
- Waiting list condition.

Exposure and behavioural activation included a total of 6 homework assignments, which were carried out over a period of 6–8 weeks. Therapists provided individual feedback on these homework assignments by e-mail. Both

active therapy conditions were superior to the waiting list in terms of grief symptoms and general psychological distress. The intent-to-treat analysis showed no differences between the two active therapy conditions. Also for the follow-up measurement after 3 months, the two therapy conditions achieved comparable effects: In the follow-up comparison, exposure ($d = 0.6$) and behavioural activation ($d = 0.9$) achieved moderate to large effects. However, the drop-out rate of behavioural activation was 59%, whereas that of exposure was 33% and that of the waiting list condition 17%.

The offer of internet-based therapy is largely independent of time and place. In addition, the findings suggest that confrontational interventions can also be used effectively via the Internet (Eisma et al., 2015; Kersting et al., 2013; Wagner et al., 2006). In contrast, the use of Internet-based behavioural activation appears to be more difficult (see drop-out rate in Eisma et al., 2015).

20.2.6 Further Therapeutic Approaches for Prolonged Grief Disorder

Recently, cognitive-behavioural therapy methods that have proven effective in the treatment of post-traumatic stress disorder and depression have also been adapted for patients with PGD.

In their controlled study, Papa et al. (2013) examined whether non-specific behavioural activation is an effective treatment for PGD. People with PGD often lack positive experiences in social or professional life (loss of reinforcement). The persons experience an excess of negative, stressful experiences. For this reason, the reconstruction of positive activities should provide feelings of success, which have a behaviour-enhancing effect and lead to mood improvement, as well as enabling a reassessment of negative cognitions. The treatment consists of 12–14 sessions and lasts for a period of 12 weeks.

Similar to depression, the treatment consists of 5 phases (see Martell et al., 2001):

- Psychoeducation,
- protocollingactivities,
- functional assessment,
- signals for recognizing activity and practicing the activity,
- reflection of the therapy and relapse prevention.

In the study, 25 persons were randomly assigned to the behavioral activation or waiting list condition. In the intent-to-treat analysis, the controlled comparison of behavioural activation achieved large effects with regard to the reduction of grief symptoms as well as depressive and post-traumatic stress symptoms. The drop-out rate of the behavioral activation was 20%.

A grief-focused narrative exposure was evaluated by Barbosa et al. (2014) in older widowed persons. The therapy is based on cognitive narrative therapy (Gonçalves, 1994) and comprises 4 sessions conducted over a period of 4 weeks. In the first session, the most stressful memory scene during death or loss is determined. In the next session, the patient as the narrator, including activated feelings and thoughts, describes this scene in detail. Then a metaphor is chosen for the scene and alternative action events are generated to build up positive memories. In the efficacy study, 40 people were randomly assigned to narrative exposure and a waiting list condition. In the controlled comparison, narrative exposure achieved a large effect in terms of the grief symptoms. The drop-out rate of narrative exposure was 5%; there were no drop-outs in the waiting list condition.

20.3 Effectiveness

In recent years, there has been an increase in the number of efficacy studies for grief interventions. The two most recent meta-

analyses have examined the effectiveness of grief interventions using controlled studies (Currier et al., 2008; Wittouck et al., 2011). In the area of grief, controlled studies are indispensable because the intensity of grief continuously decreases in the first year after loss. The studies included in the meta-analyses included psychotherapeutic interventions as well as non-specific intervention approaches. Overall, universal and indicated prevention approaches, family programmes, internet-based therapies and cognitive behavioural therapies were considered.

The meta-analysis by Currier et al. (2008) included 61 controlled studies that examined both persons with prolonged grief and normal grief. Across all studies, only a small effect size was found ($d = 0.16$). The authors identified the bereavement group as a moderator variable that had an influence on the effectiveness of the intervention. Thus, for interventions with a corresponding indication, moderate effect sizes were found after the end of treatment ($d = 0.53$, $k = 5$) and during the follow-up period ($d = 0.58$, $k = 2$), whereas non-specific interventions had no or even negative effects on bereaved persons without PGD. Intervention programmes for at-risk groups achieved small or no effects at post ($d = 0.14$) and follow-up ($d = 0.03$).

In their meta-analysis, Wittouck et al. (2011) only considered interventions addressing prolonged grief symptoms. The authors included 14 controlled studies and differentiated between psychotherapeutic interventions ($k = 5$) and prevention programmes ($k = 9$). Again, non-specific interventions had no effect ($d = 0.03$). Therapeutic interventions also showed a moderate effect after the end of treatment ($d = 0.53$). Four of the 5 treatment studies achieved a significant reduction in prolonged grief symptoms. All 4 studies were based on a cognitive-behavioural approach.

Taken together, the meta-analyses present a uniform picture: the presence of prolonged grief symptoms is decisive for the success of treatment. Thus, more recent randomised controlled trials on the effec-

tiveness of cognitive-behavioural therapy interventions even achieved large effects (Boelen et al., 2007; Bryant et al., 2014; Papa et al., 2013; Rosner et al., 2014; Shear et al., 2005, 2014), which are also sustained over the longer term (Boelen et al., 2007; Bryant et al., 2017; Rosner, Bartl, et al., 2015). Since PGD is often comorbid (Simon et al., 2007), most studies consider depressive, post-traumatic stress or anxiety symptoms as secondary outcome variables (e.g. Boelen et al., 2007; Bryant et al., 2014; Kersting et al., 2013). However, the effects sizes considering comorbid symptoms are usually lower (e.g. Boelen et al., 2007; Bryant et al., 2014; Rosner et al., 2014; Shear et al., 2005).

The evidence base for pharmacological treatment of PGD is low and not very promising (reviewed in Bui et al., 2012). Available studies suggest that antidepressants may have little effect on grief symptoms, but a small effect on comorbid depressive symptoms (O'Connor, 2012). The latter was confirmed in a new study by Shear et al. (2016), which tested citalopram in a four-arm design in combination with placebo and psychotherapy (details of this study can be found in ► Sect. 20.2.1).

In general, research on the effectiveness of PGD suffers from the previous diversity of terms and the lack of differentiation between normal and prolonged grief. The use of the same diagnostic criteria and structured clinical interviews (Prigerson et al., 2009) is indispensable for establishing indications and evaluating the success of treatment. To date, however, only a few efficacy studies have considered the presence of PGD as an inclusion criterion.

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Therapy of the Adjustment Disorder

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Adjustment disorder is among the most frequently diagnosed mental disorders worldwide (Evans et al., 2013; Reed et al., 2011). Adjustment disorder alone as well as together with other trauma- and stress-related disorders is associated with considerable personal burden of disease and health economic costs (Arends et al., 2012; Carta et al., 2009). As described in ► Chap. 5, the scientific recognition and discussion of the diagnostic entity of adjustment disorder has been limited, nonetheless. The new diagnostic conceptualization of adjustment disorder within the ICD-11 might lead to an amplification of research efforts and subsequently to an enhanced evidence base.

21.1 Nosology of Adjustment Disorder

By definition, an adjustment disorder is associated with a critical life event or a series of stressful or potentially traumatic experiences. Although the stressors associated with adjustment disorder are thought to be of lesser intensity than those preceding post-traumatic stress disorders (PTSD), there is some evidence that traumatic events can also trigger adjustment disorder instead of PTSD (Casey, 2009, 2014). It is assumed that the relationship between a stressor (triggering critical events such as loss of employment, marital row or burglary) and the severity of the symptomatology is not linear, since different moderators such as vulnerability, individual factors, genetic predispositions or subjective evaluations can impact this relationship (Baumeister et al., 2009). Accordingly, the occurrence of symptoms as a consequence of a triggering stressor can be considered as an interaction of stressor-related variables with personal, environmental and biological factors in the sense of a diathesis-stress model (Baumeister et al., 2009; Casey & Bailey, 2011) (► Chap. 5).

The diagnostic criteria of an adjustment disorder according to the DSM-5 differ considerably from the proposals of the diagnostic criteria for the upcoming ICD-11, since they are based on different etiological and nosological models (► Chap. 5). Consequently, the diagnostic instruments and the therapeutic approaches vary considerably depending on the respective model and, if applicable, the subtype of adjustment disorder.

21.2 Indication

In clinical practice, adjustment disorders are usually diagnosed based on the clinical judgement of the (mental) health practitioner. According to the diagnostic operationalization of the ICD-11, an adjustment disorder can be diagnosed, when a critical life event is identified, to which the mental health symptoms are causally related, and when symptoms in the domains of preoccupation and maladjustment are present (► Chap. 5).

21.3 Overarching Therapeutic Strategies

Most psychological and psychotherapeutic interventions for adjustment disorder share three main commonalities (Casey, 2009; Strain & Diefenbacher, 2008):

- Elimination or mitigation of (the sources of) stress,
 - Improvement of coping and adaptation,
 - Symptom reduction and behavioral change.
- **Elimination or Mitigation of Stress**

Psychosocial interventions aim to support patients in reducing the effects of the stressor or, if possible, to comprehensively eliminate the triggering event and its consequences.

For example, the negative effects of job loss might disappear, when the person is able to find a new job. If, however, a stressor is persistent and not modifiable (e.g., progressive cancer), measures should be targeted that can mitigate the effects of the stressor and improve the level of functioning and quality of life (e.g., ensuring social support).

■ Improvement of Coping Strategies and Adaptation

Psychosocial interventions also aim to improve coping of patients and improve adaptation. For instance, cognitive methods include the identification of dysfunctional thoughts and the development of functional cognitions and strategies. At the behavioral level, patients can be guided to take up (positive) activities and be supported in experiencing self-efficacy.

■ Symptom Reduction and Behavioral Change

In order to reduce the level of stress and improve the level of functioning in the long term, a reduction of symptoms and the development of functional behaviors should be considered as additional important therapeutic objectives. The required therapeutic strategies in this area will vary depending on the underlying nosological model. In conceptualizing adjustment disorder in terms of a subclinical form of PTSD, exposure and coping procedures will play a role, for example, in order to be able to process intrusive thoughts and images (see ► Chap. 13). In the case of an adjustment disorder mixed with depression and anxiety (APA, 2013), corresponding evidence-based treatment approaches for depressive and anxiety disorders should be part of the intervention.

21.4 Stepped Care Approach

There is a broad consensus that the first-line treatment of adjustment disorders should be a (short-term) psychological or psycho-

therapeutic intervention (Carta et al., 2009; Casey, 2014; Domhardt & Baumeister, 2018; Strain & Diefenbacher, 2008). This rather clinical recommendation refers to the potentially volatile nature of the disorder and to cost-benefit considerations of more invasive treatments for mental disorders that often remit over time without intervention. Accordingly, Bower and Gilbody (2005) have proposed a stepped care approach for (sub)clinical disorders on the continuum between a normal stress response and a mental disorder. Such a stepped care approach may ensure that affected individuals receive the least invasive, but sufficient supportive intervention to relieve distress and improve levels of functioning.

As a potentially transient disorder – the DSM-5 describes a resolution of symptoms within 6 months after the elimination of the stressor or its consequences (APA, 2013) – watchful waiting may be sufficient as the sole strategy for some patients (**step 1**). However, considering the complexity of the course of mental disorders, it is clear that further intervention options are required in such a stepped care approach (► Fig. 21.1). This becomes obvious when considering the risk of chronicity and progression once adjustment disorder symptoms are present as well as the fact that stressors and its consequences might not terminate completely.

In **step 2**, low-intensity psychosocial interventions with a favorable risk-benefit ratio such as bibliotherapy, behavioral activation or Internet-based interventions are proposed (Baumeister, 2012; van Straten et al., 2015). “Low intensity” can refer here to both the limited resources of the health care system and expertise in mental health needed (i.e. limited time and effort for health care providers; interventions may also be provided by less qualified or even trained lay people) as well as limited costs for patients (in terms of time, financial resources, side effects or adverse events).

For patients who do not adequately respond to the interventions offered in the

could be particularly important in relation to adjustment disorder, as in some developing countries these stress-related disorders are most often associated with completed suicides (Manoranjitham et al., 2010).

21.5.1 Self-Help and Bibliotherapy

A self-help intervention for adjustment disorders based on the trauma sequelae concept for the ICD-11 has been developed by Maercker and colleagues, which can be implemented both as bibliotherapy (Bachem & Maercker, 2016) and as an Internet-based intervention (Maercker et al., 2015). The CBT oriented self-help manual was designed specifically for victims of domestic burglary and comprises various modules (screening, psychoeducation, optional referral to on-site psychotherapy, self-perception, coping, activation and recovery), which are designed after evidence-based interventions for PTSD, anxiety disorders and depression (Moser et al., 2019). The effectiveness of this 4-week self-help intervention was successfully evaluated against a waiting list control group in a randomized controlled trial (RCT) with home invasion victims with clinical or subclinical symptoms of adjustment disorder (Bachem & Maercker, 2016). As such, this study is in line with the evidence on bibliotherapy and self-help in other mental disorders (Gregory et al., 2004) and points to the potential of bibliotherapy and other self-help interventions as a first active intervention step after watchful waiting for patients with adjustment disorders.

21.5.2 Group Therapy and Self-Help Groups

A meta-analytical review has shown that the prevalence rate of adjustment disorder among patients with cancer is close to 20%

(Mitchell et al., 2011). Since the benefit of self-help groups and group therapy for cancer patients is well documented (Spiegel et al., 2007; Spiegel, 2012), these interventions could possibly also be of help for patients with somatic diseases and comorbid adjustment disorder. Indeed, Rüscher et al. (2017) revealed that a specific cognitive-behavioral group therapy for patients with somatic disease and comorbid depressive or adjustment disorder resulted in fewer symptoms of depression and a higher quality of life. Furthermore, the positive impact of peer support and support groups on mental health and well-being of patients with somatic diseases can be considered as well documented (Davidson et al., 2012; Mahlke et al., 2014).

21.5.3 Mindfulness, Meditation and Relaxation

As a generic and transdiagnostic approach, relaxation techniques can be applied equally to the different subtypes of adjustment disorders according to DSM-5, although they may be more relevant for the subtype of adjustment disorder with depressive symptoms, as indicated by a systematic review (Shah et al., 2014). Bos et al. (2014) were able to show that individual mindfulness training was associated with symptom improvement and increased quality of life in patients with adjustment disorders. Positive effects of mindfulness training could also be found in group format (Sundquist et al., 2015). Similarly, Srivastava et al. (2011) showed that yoga meditation techniques can effectively reduce symptoms of adjustment disorder with anxiety or depression. In addition, Jojic and Leposavic (2005a, b) evaluated the effectiveness of autogenic training in adolescents and adults with adjustment disorder and found that this relaxation technique could positively influence physiological measures, both at the end of the intervention and at a 6-month follow-up.

21.5.4 Internet-Based Interventions

The effectiveness of Internet- and mobile-based interventions for various mental disorders is well documented (Domhardt et al., 2018). In addition, these Internet-based interventions are considered to have various advantages, like potential cost-effectiveness (Paganini et al., 2018) and high accessibility (Domhardt et al., 2018). Internet-based interventions might prove particularly useful in the treatment of adjustment disorder due to the clear life event linkage, the potentially transient nature and the subthreshold definition of adjustment disorder (Maercker et al., 2015).

The first Internet-based intervention developed specifically for adjustment disorders is based on the virtual reality program “EMMA’s world” (Botella et al., 2006). In this blended therapy approach, virtual reality components from PTSD therapy and positive psychology were combined with on-site psychotherapy sessions. First results of a case study indicate the applicability and usefulness of this intervention (Andreu-Mateu et al., 2012). The same research group has further developed virtual reality interventions to include Internet-based personalized homework materials specifically for adjustment disorder (Quero et al., 2012). Skruibis et al. (2016) have developed an Internet-based intervention for adjustment disorder based on the trauma sequelae concept, which is divided into four modules: relaxation, time management, mindfulness and relationships. The intervention called BADI (Brief Adjustment Disorder Intervention) has been successfully validated in a first RCT (Eimontas et al., 2017).

The Internet-based interventions implemented so far vary considerably with regard to their target population, technical implementation and accompanying therapeutic support. Hereby, the question of how much guidance is required will be an important

research question for future studies. A systematic review indicates that Internet-based interventions with human support are more effective than unguided interventions (Baumeister et al., 2014). However, from a health economic and health policy perspective, unguided “pure” self-help interventions may possess a relevant role – especially in the situation of limited health care resources – as a significant cost-effective second treatment option within a stepped care approach, given lower intervention costs (Baumeister et al., 2014).

21.5.5 Behavioral Activation

Behavioral activation has been shown to be an effective treatment for depressive disorders (Ekers et al., 2014), with a potential for advantageous cost-effectiveness in direct comparison to CBT (Richards et al., 2016). With some symptomatic overlap between adjustment and depressive disorders (Casey, 2001), behavioral activation approaches may also be a promising treatment option for adjustment disorder, breaking through dysfunctional coping strategies and social withdrawal and gaining positive environmental reinforcements. In a Cochrane Review (Arends et al., 2012), it was shown that almost half of the treatment approaches targeting return to work in adjustment disorder patients have behavioral activation components. Van der Klink et al. (2003), for example, successfully integrated behavioral activation components alongside behavior therapy techniques in their treatment approach to reduce sick day leaves due to adjustment disorder.

In summary, there is some evidence for the effectiveness of low-intensity psychosocial interventions for adjustment disorder. However, further research needs to show whether the assumed advantages in terms of cost-effectiveness and greater reach of these low-threshold interventions for adjust-

ment disorder actually proves to be true (Baumeister, 2014; Proctor et al., 2009).

21.6 Psychotherapeutic Interventions

Psychotherapeutic interventions ought to be based on the underlying nosological model of adjustment disorders, since the respective symptomatology can vary considerably between subtypes. In a modular treatment approach, elements from evidence-based psychotherapeutic procedures for depression, anxiety disorders or PTSD can be a central component of these interventions (Bengel & Hubert, 2010), which can additionally incorporate stress-related interventions. For adjustment disorder with depressive mood, relevant therapeutic strategies can be derived from CBT or interpersonal therapy, as recommended in the respective national guidelines for unipolar depression (e.g. DGPPN et al., 2015). Behavioral activation, establishing supportive social contacts and cognitive restructuring of dysfunctional beliefs can also be important in adjustment disorder with depressive symptoms. Exposure therapy (Olatunji et al., 2010) and relaxation therapy (Manzoni et al., 2008) have been shown to be effective for various anxiety disorders. Therefore, given the symptomatic overlap, it seems appropriate to integrate behavioral exposure and relaxation techniques as a central component of psychotherapeutic interventions for adjustment disorder with anxiety. These can be supplemented by strategies aimed at achieving therapeutic changes in cognitive and behavioral patterns (such as tackling of avoidance behavior). When conceptualized as a subclinical form of PTSD (Maercker et al., 2007, 2013), psychotherapeutic interventions should address key symptoms such as intrusive preoccupation with the stressor and inability to adapt. Intrusions can be treated by imaginative exposure; adaptation

difficulties can be addressed with treatment strategies that are specifically adapted to the problem at hand (such as sleep and concentration difficulties or reduced self-esteem) (Bachem & Maercker, 2016). In adjustment disorder with disturbance of emotions and conduct, which is diagnosed primarily in children and adolescents, parental and problem-solving training can be important components of treatment, analogous to evidence-based interventions for conduct disorder in childhood and adolescence (Kazdin, 2016).

Depending on the indication, further generic therapeutic strategies for adjustment disorders may address suicidal ideation and behavior as well as self-harm behavior, resorting to individual resources of patients, developing improved emotional regulation strategies and problem-solving skills (Bengel & Hubert, 2010; Casey, 2009; Strain & Diefenbacher, 2008). In addition, in all idiosyncratic manifestations of adjustment disorder, as mentioned above, the elimination or – if this is not possible – mitigation of the stressor can be a central component of psychotherapy. Furthermore, the discussion of the subjective assessment of the stressor can play an important role in the psychotherapeutic process of adjustment disorders, especially when the stressors are permanent (or even progressive) as in chronic medical conditions.

21.6.1 Cognitive Behavioral Therapy

In various mental disorders and indications, CBT has the overarching therapeutic goals of improving the level of functioning, as well as the reduction or remission of symptoms (Hofmann et al., 2012). Hereby, CBT uses a range of different cognitive, behavioral and emotion-focused techniques, all of which are intended to support the patient (in terms of self-management) in modifying

dysfunctional cognitions and maladaptive behavioral patterns (Hofmann et al., 2012). Currently, CBT-oriented approaches for the treatment of adjustment disorder were specifically developed to address a range of different stressors, such as cancer (Cluver et al., 2005; Schuyler, 2004) or domestic burglary (Bachem & Maercker, 2016) and have been successfully evaluated in different populations such as military service candidates (Nardi et al., 1994) or geriatric patients (Frankel, 2001). The modular design of various CBT manuals, which were developed specifically for adjustment disorder, is often equally suited for the implementation in individual or group settings (e.g. Reschke, 2011).

In the above mentioned Cochrane Review by Arends et al. (2012), a total of nine RCTs were included (Bakker et al., 2007; Blonk et al., 2006; Brouwers et al., 2006; Rebergen et al., 2009; Stenlund et al., 2009; van der Klink et al., 2003; van Oostrom et al., 2010; de Vente et al., 2008; Willert et al., 2011), which evaluated the effectiveness of interventions targeting return to work in the event of maladjustment. The authors of this systematic review concluded that the specific cognitive-behavioral interventions did not significantly reduce the time to return to work (Arends et al., 2012). In contrast, problem-solving therapeutic approaches significantly reduced the time to return to work part-time, but not full-time at the time of the one-year follow-up (Arends et al., 2012). Three of these problem-solving therapies were extended by behavioral activation components (Brouwers et al., 2006; Rebergen et al., 2009; van der Klink et al., 2003) and additionally enriched by CBT components (Rebergen et al., 2009), so that it seems justified to group these problem-solving approaches together with CBT as a more intensive psychotherapeutic intervention. Nevertheless, in other contexts, stand-alone problem-solving approaches are mostly conceived as low-intensity interventions (e.g. van Straten et al., 2015).

To date, the evidence on the effectiveness of cognitive-behavioral psychotherapy specifically for adjustment disorder cannot keep pace with the strong empirical evidence base of CBT for other mental disorders (e.g. Hofmann et al., 2012). However, ongoing RCTs will contribute to improve the evidence base for CBT-oriented psychotherapeutic approaches for adjustment disorder (Maercker et al., 2015; Skruibis et al., 2016).

21.6.2 Psychodynamic Psychotherapies

Psychodynamic approaches operate on a continuum of interpretation and support, and comprise a number of manualized psychotherapies (Leichsenring et al., 2015). Interpretative interventions aim to improve patient insight into desires, affects, object relationships and defense mechanisms (Leichsenring et al., 2015). Supportive interventions primarily aim to strengthen the therapeutic relationship, reach agreement on therapeutic goals and improve psychosocial skills - among other therapeutic aspects (Leichsenring et al., 2015). In total, psychodynamic short-term therapies have proven their effectiveness in four different studies with patients with adjustment disorders (Ben-Itzhak et al., 2012; Kramer et al., 2010, 2015; Maina et al., 2005).

21.6.3 Client-Centered Therapy

Altenhöfer et al. (2007) examined the effectiveness of client-centered short-term therapy (12 sessions) for adjustment disorder in an outpatient setting with 50 patients who had either lost a close person or had experienced serious negative experiences at work or university. The results of this non-randomized study indicated that there was a significant improvement both at the end of treatment (Altenhöfer et al., 2007) and at a 2-year follow-up (Gorschenek et al., 2008).

21.6.4 Eye Movement Desensitization and Reprocessing (EMDR)

Given the current conceptualization of adjustment disorder as a stress-related sequelae disorder, it appears promising to approach the symptomatology of adjustment disorder (especially intrusive preoccupation with the stressor) in a similar way as it is pursued in posttraumatic stress disorder, for example in the form of Eye Movement Desensitization and Reprocessing (EMDR; ► Chap. 14). Mihelich (2000), for instance, examined the effects of two treatment sessions of EMDR in a serial case study compared with two exposure sessions in nine patients with adjustment disorder. This study showed that patients with adjustment disorder (and anxiety or mixed anxiety and depression) benefited from EMDR, whereas patients with adjustment disorder and depressed mood did not benefit from EMDR treatment (Mihelich, 2000). In a randomized controlled trial with 90 students without mental disorders, Cvetek (2008) showed that three hours of treatment of an EMDR intervention led to significantly lower values on the Impact of Event Scale compared to both active listening and waiting control conditions.

21.6.5 Other Psychotherapeutic Interventions

Adjustment disorder often occurs in patients with (chronic) medical conditions (Mitchell et al., 2011). Treatment approaches that aim to cure the medical condition or alleviate its symptoms (and thus simultaneously address the stressor that causes the adjustment disorder) should also have a positive impact on the symptomatology associated with the adjustment disorder. Thus, González-Jaimes and Turnbull-Plaza (2003) evaluated

in a quasi-experimental design an intervention called “mirror therapy”, which was especially developed for patients with a heart attack and adjustment disorder. This intervention seeks to integrate various techniques (psychosomatic introspection and mindfulness, acceptance and self-esteem, neurolinguistic techniques as well as mirror confrontation exercises and self-care) in a holistic way. In this study, patients in the intervention group showed significantly fewer symptoms of adjustment disorder compared to three different control conditions at the end of treatment. After half a year, patients in the “mirror therapy” group had fewer adjustment disorder symptoms than patients on the waiting list, but did not show improved values compared to the two active control conditions. A psychotherapeutic approach (“body-mind-spirit therapy”, BMS) by Chan (2001) integrated approaches of Western medicine with concepts and procedures of traditional Chinese medicine and Far Eastern philosophy. In a study, Hsiao et al. (2014) were able to show that this “BMS” therapy led to a positive change in cortisol levels as well as a decrease in suicidal ideations in patients with adjustment disorder and depressed mood.

Overall, the evidence base for psychosocial and psychotherapeutic interventions for adjustment disorder appears limited, especially when compared to the empirical state of knowledge for other common mental disorders (Fonagy, 2015; e.g. Hofmann et al., 2012). To date, CBT, problem-solving therapy, relaxation techniques and psychodynamic short-term therapy have evinced the most comprehensive empirical support. The effectiveness of EMDR and “BMS” therapy has been supported by an RCT. As a limitation, it must be mentioned that some of the presented studies have considerable methodological weaknesses (including heterogeneous patient groups, no randomization or small sample sizes) and can therefore only be interpreted in a limited way.

21.7 Psychopharmacological Interventions

Psychotherapy is the method of choice for the treatment of adjustment disorder (Strain & Friedman, 2015). Nevertheless, psychotropic drugs are used in clinical practice with increasing frequency. A study conducted in the US found that while 22% of patients with adjustment disorder were prescribed antidepressants in 1996, this figure had risen to 39% in 2005 (Olfson & Marcus, 2009).

This is in stark contrast to the fact that randomized controlled trials on the effectiveness of psychotropic drugs in adjustment disorder treatment are extremely rare. For example, there are no recommendations regarding the dosage or duration of use of psychotropic drugs (Casey et al., 2013). This may be related to the fact that the triggers of adjustment disorders are very heterogeneous, both in terms of the type and in terms of the severity and duration. It is therefore difficult to define homogeneous target groups and at the same time make general statements on the effectiveness of psychotropic drugs.

Little is known about the psychobiology of adjustment disorder and thus the rationale for using psychopharmacological interventions is unclear (Casey et al., 2013). However, on the syndromal level of adjustment disorder, for example when symptoms of depression or anxiety are present, there may be potential benefits with various substances. Psychopharmacological treatment may be useful if the psychotherapeutic intervention was not able to reduce symptoms (Bachem & Casey, 2018).

21.7.1 Herbal Remedies

Various studies have investigated the effectiveness of herbal tranquilizers in the treatment of adjustment disorder. For example, it was shown that the use of kava kava (Volz

& Kieser, 1997), ginkgo biloba (Woelk et al., 2007) and valerian (Bourin et al., 1997) were superior to placebo treatment in patients with pronounced anxiety symptoms.

21.7.2 Benzodiazepine and Anxiolytics

Among psychotropic drugs, the best empirical evidence has been found for the use of etifoxine, a non-benzodiazepine anxiolytic, to be equivalent to the benzodiazepines lorazepam and alprazolam in two double-blind randomized controlled trials with patients with adjustment disorder and anxiety symptoms (Nguyen et al., 2006; Stein, 2015). Etifoxine also revealed the important clinical advantage of fewer side effects.

An older study showed that the benzodiazepine lormetazepam was superior to a placebo control condition (de Leo, 1989). Alprazolam (Anseau et al., 1996) and lorazepam (Nguyen et al., 2006) also proved to be effective. Finally, two further studies with randomised controlled design showed that trazodone was more effective than clorazepam in patients with adjustment disorder with a cancer diagnosis (Razavi et al., 1999) and HIV-positive patients with adjustment disorder (de Wit et al., 1999). However, due to the high addictive potential the usage of benzodiazepines is not recommended for patients with adjustment disorder.

21.7.3 Antidepressants

Interestingly, there are currently no studies that explicitly investigated the effectiveness of antidepressants in adjustment disorders with depressive symptoms (Casey et al., 2013). In a retrospective case study with patients with either depression or adjustment disorder treated by general practitioners, SSRIs were shown to lead to a clinically significant reduction of symp-

toms (Hameed et al., 2005). No particular antidepressant was superior to the others. According to the study, patients with adjustment disorder responded twice as often to the drug compared to depressive patients, although it should be noted that spontaneous remissions are also more frequent in adjustment disorder and that this might be a misdirected causal attribution of the observed improvement in symptoms.

21.8 Perspectives

In view of the limited empirical evidence, there is a need for further efficacy and replication studies on psychological and psychotherapeutic interventions specifically designed for adjustment disorder and evaluated using homogeneous patient cohorts. Future studies should also focus on interventions for children and adolescents, given the high incidence of adjustment disorder in this age group (Casey & Bailey, 2011) and only one published study so far (Jojic & Leposavic, 2005a). Longitudinal study designs could also help to identify patterns of change in individual stressors, to uncover resilience and remission rates and transitions to other mental disorders over time (Domhardt et al., 2015), since adjustment disorders are known to be a significant risk factor for the development of other mental disorders, especially in children and adolescents (Andreasen & Hoenk, 1982).

Psychotherapy research of adjustment disorder as a transient disorder is particularly challenging, since positive changes in intervention studies without a control group might be merely due to spontaneous remission or the expected disease course, especially when the stressor is no longer present. Consequently, process research in this field should pay particular attention for evaluating a direct and immediate link between an intervention component and symptom change, since a deeper understanding of the underlying mechanisms of change is essen-

tial for the further development of future treatment approaches (Kazdin, 2007). Future studies should take into account recommendations for research on change mechanisms (e.g., Lemmens et al., 2016) and investigate theoretically derived therapeutic techniques that are central to the respective therapeutic approach.

Research efforts in this field have long suffered from the lack of a concise model of adjustment disorder and the respective diagnostic instruments based on it. The conceptualizations of the ICD-11 will most probably lead to a higher discriminant validity of the disorder category, especially in the differentiation from depressive disorders (Maercker et al., 2015). Newer diagnostic tools for adjustment disorder such as the “Adjustment Disorder – New Module” (ADNM; Einsle et al., 2010; Lorenz et al., 2016) for self-disclosure will allow future research to create more homogeneous patient samples with adjustment disorder, which may contribute to increase the reliability of epidemiological studies (Baumeister et al., 2009).

With regard to current clinical practice in the treatment of adjustment disorder, information from the health care system would be urgently needed to assess the extent to which there is underuse, overuse or misuse of health care services for patients with adjustment disorder. For example, the frequent prescription of psychotropic drugs as initial treatment practice for patients with subclinical or mild mental disorders is disputed (Baumeister, 2012). In a study, Fernández et al. (2012) were able to show that this question is probably also relevant in the area of adjustment disorder, as in 37% of cases patients with adjustment disorder were prescribed psychopharmacological drugs by their general practitioner. However, given the limited availability and accessibility of evidence-based treatment options in most countries worldwide, the question of how to improve the overall situation of (mental) health care is likely

to be more pressing. As shown above, low-threshold psychosocial interventions such as bibliotherapy or Internet-based interventions, with their potential for scalability, could play an important role in reducing the gap between treatment demand and supply. Future research should evaluate the (cost) effectiveness of stepped care approaches and take cultural and ethnic considerations into account.

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Specific Aspects

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Post-traumatic Stress Disorder in Children and Adolescents

R. Steil and R. Rosner

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22.1 Specifics of the Symptoms of PTSD in Children and Adolescents

Post-traumatic stress disorder (PTSD) is a serious psychological disorder that can occur in children and adolescents after particularly stressful experiences such as natural disasters, accidents and the experience of sexual or non-sexual violence (Steil & Rosner, 2008). The verbal communication of such an event also appears to be able to trigger PTSD in adolescents and children (e.g. the message/photographs of the violent death of a family member; Giaconia et al., 1995). It is suspected that children from the age of 3 can be affected by PTSD (Drell et al., 1993; Scheeringa et al., 1995). For the basic dimensions of the symptomatology and the individual symptoms, please refer to the corresponding chapters of this book.

Particularities of PTSD Symptoms in Children and Adolescents

Symptoms manifest themselves in children

- in a repetitive re-enactment of the traumatic situations,
- with physical symptoms or arousal,
- with clinging, regressive (loss of pre-traumatic skills already acquired in the areas of language or continence) or aggressive behaviour
- with a new fear of the dark, monsters or being alone,
- with self-damaging behaviour such as drug abuse or automutilation to achieve a reduction in tension similar to borderline personality disorder
- possibly with a shortened future perspective (“I will never finish school anyway, never have a partnership, never get married, never have children ... “etc.).

The post-traumatic symptoms may lead to considerable impairment in social contacts, family and school. PTSD in children and adolescents is often followed or accompanied by secondary and persistent stressors (such as loss of relatives, painful medical treatment, physical disfigurement, moving and loss of familiar surroundings).

22.1.1 Adequacy of the Diagnostic Criteria of PTSD for Children

The PTSD criteria were developed on the basis of adult symptoms – do they adequately reflect the complex reactions in childhood and adolescence? In the Diagnostic and Statistical Manual of Mental Disorders (DSM-5; American Psychiatric Association, APA, 2013), published in 2013, the special features of PTSD symptoms in children and adolescents are taken into account for the first time by including age-specific characteristics. The new edition of the DSM also specifically names separate diagnostic criteria for pre-school children, i.e. at the age of 6 years and younger. The following changes compared to the diagnosis of PTSD in older patients have been introduced here: Trauma experienced by a primary caregiver is also considered to be a trigger for the disorder. In young children, posttraumatic stress can manifest itself, among other things, in playful re-staging, in a dysregulation of eating, sleeping or social behaviour, and in a permanently reduced expression of positive emotions (APA, 2015; see also Bingham & Harmon, 1996). In the symptom cluster “negative changes in cognition and mood”, externally observable behaviours are described, such as reduced interest in things or social withdrawal. The number of criteria that have to be fulfilled in order to make the diagnosis is 4 instead of 6 criteria.

Due to the new DSM-5 criteria for children under 6 years of age, the problem of the inadequate fit of the criteria for this age group is solved – but it remains for the age group of 6–14 years. In this age group, PTSD may still remain underdiagnosed. In psychotherapy studies for the treatment of PTSD in youth, this is usually compensated for by giving greater weight to the functional impairment and by the fact that one of the symptom clusters does not have to be completely fulfilled for the young people to be included into the studies.

Under the Magnifying Glass

It is assumed that the ICD-10 criteria have so far led to overdiagnosis of the disorder. First studies comparing the prevalence rates suggest that the more restrictively formulated criteria of the ICD-11 will lead to a significantly lower number of PTSD diagnoses in children and adolescents compared to an assessment according to the revised DSM-IV or ICD-10 criteria (Sachser & Goldbeck, 2016).

22.1.2 Course of PTSD in Childhood and Adolescence

Longitudinal studies on the untreated course of PTSD are rare, but at least for a subgroup they indicate a high stability of symptoms. Recent studies formulate trajectories that characterize different courses of PTSD: For example, Osofsky et al. (2015) found four trajectories in the course of 4 years following natural disasters (hurricane, oil spill): 52% of the more than 4000 children examined (3–12 years) showed stable low symptoms, a second group showed a strong regression of symptoms (21%), a third group showed increasingly more symptoms (18%) and a fourth group showed stable high symptoms

(9%). While the overall symptom severity of the complete sample remained stable, 39% of the respondents changed their course, with a total of 27% showing high PTSD symptoms after 4 years. These different progressions illustrate the need to observe traumatized children, even if they are inconspicuous with regard to PTSD symptoms shortly after the trauma.

22.1.3 Differential Diagnostics

PTSD must be distinguished from other disorders that can also occur as a result of trauma (► Chap. 8). Examples are

- affective disorders,
- other anxiety disorders (such as separation anxiety),
- psychotic disorders,
- the borderline personality disorder.

They must also be distinguished from adjustment disorder and the consequences of head injuries (according to this, however, long-lasting symptoms such as irritability, anxiety, etc. should be checked for psychological causes). A distinction must also be made between PTSD and persistent grief, for which, however, no defined criteria for childhood are yet available (► Chap. 20).

Some of the overarousal symptoms, such as irritability, outbursts of rage and difficulties concentrating, may erroneously lead to the diagnosis of a disorder from the group of hyperkinetic or aggressive disorders, strong trauma-related intrusions or severe dissociations may erroneously be considered to be psychotic symptoms, avoidance of certain foods caused by strong trauma-related feelings of disgust may be considered an eating disorder.

- It is essential to prove whether symptoms which appear to be related to comorbid disorders might be trauma-related and therefore understood as symptom of PTSD.

22.1.4 Prevalence of PTSD in Childhood and Adolescence

First, it should be noted that there is little reliable epidemiological data on children under 12 years of age. The probability of experiencing a potentially traumatising event as a child or adolescent varies from region to region and is particularly high in regions with frequent natural disasters and social or political conflicts (► Chaps. 1 and 2).

In a meta-analysis, which also included non-representative studies ($n = 3563$), the incidence rate for PTSD after trauma in children and adolescents aged 2–18 years was 15.9%. The highest prevalence rates were found after interpersonal traumatic events (25.2%), with 9.7% of respondents developing PTSD after non-interpersonal trauma (Alisic et al., 2014). The incidence rate was highest among interpersonally traumatised girls (32.9%). A representative survey of US adolescents aged 13–17 years showed that 62% of the adolescents had experienced a traumatic event and found a lifetime prevalence of PTSD of 4.7% (McLaughlin et al., 2013). In a Swiss study (Landolt et al., 2013), 56% of the surveyed students aged 14–16 years reported having experienced traumatic events. The criteria for current PTSD according to DSM-IV criteria were met by 4.2% of all respondents. In all 3 studies, girls were affected by PTSD more than twice as often as boys.

► The prevalence of trauma seems to be particularly high among psychiatric inpatients and adolescents.

Lipschitz et al. (1999) found that 93% of 74 adolescents hospitalized in a psychiatric clinic reported at least one traumatic event. About 32% fulfilled the criteria of PTSD according to DSM-III-R. PTSD in adolescence is quite common as compared to other mental disorders.

Under the Magnifying Glass

Children with a certain pre-traumatic psychopathology have an increased risk of trauma: For example, it can be assumed that children with ADHD (attention deficit/hyperactivity disorder), conduct disorder, or substance abuse disorder are more likely to experience a potentially traumatic event than children and adolescents without this disorder. This is consistent with the very high lifetime prevalence of PTSD (30%) in a group of 15–19 year olds with substance dependence (Deykin & Buka, 1997).

22.1.5 Significance of Gender, Age and Type of Trauma

■ Gender

The risk of experiencing a potentially traumatic event is increased for girls, especially in the area of sexualised violence, as is the risk of developing PTSD. A meta-analysis of traumatised children and adolescents aged 2–18 years showed that 20.8% of traumatised girls developed PTSD symptoms, compared to 11.1% of boys (Alisic et al., 2014). Girls who had experienced interpersonal trauma had the highest risk of developing PTSD (32.9%), whereas boys had the lowest risk after non-interpersonal trauma (8.4%) (Alisic et al., 2014).

Under the Magnifying Glass

There are clear gender differences in both the lifetime prevalence and incidence of PTSD. Representative epidemiological studies found that girls are more likely to develop PTSD as a result of a traumatic event than boys. Significantly more girls than boys and more women than men had a lifetime diagnosis of PTSD (e.g. Landolt et al., 2013).

■ Age

The risk of developing PTSD decreased both in studies in adults and in studies in adolescents and children with increasing age at trauma (Ellis et al., 1998; Essau et al., 1999; Kessler et al., 1995; Trickey et al., 2012). A younger age when experiencing trauma is generally cited as a risk factor for the development of PTSD, although systematic studies in children under 6 years of age are still pending (Trickey et al., 2012).

■ Type of Traumatization

Experiencing sexual violence generally carries a 6–7 times higher risk of PTSD compared to other forms of traumatization: 80% and 50% of all affected older adolescents or young adults developed PTSD after experiencing sexual violence (Cuffe et al., 1998; Giaconia et al., 1995; ► Chap. 7). Corresponding findings are reported by Alisic et al. (2014) in their meta-analysis: The lowest risk of developing PTSD was shown by boys after non-interpersonal trauma (8.4%), the highest by girls who were exposed to interpersonal trauma (32.9%). A relatively low probability of developing PTSD is shown after accidents or deaths in the family (Elklit, 2002).

Physical assault or seeing someone killed or injured (23% and 24% of those affected developed PTSD in this case; Giaconia et al., 1995) also carried a high risk of disease.

- Multiple trauma increases the risk of developing PTSD in children (Deykin & Buka, 1997). The risk of developing PTSD also increases with the intensity of the trauma.

22.1.6 Comorbid Disorders

Comorbid PTSD occurs in children with (Essau et al., 1999; Giaconia et al., 1995; Goenjian et al., 1995)

- internalizing and externalizing behavioral problems,
- poorer academic performance,
- thoughts of suicide and suicide attempts,
- interpersonal difficulties,
- physical complaints.

Depression, drug abuse and somatoform disorders are comorbid to PTSD in about 20–30% of affected children and adolescents and cause considerable distress to them (Essau et al., 1999).

Giaconia et al. (1995) found retrospectively that 30% of adolescents with the lifetime diagnosis of PTSD suffered from major depression and 38% from alcohol dependence in the last year before the survey.

Under the Magnifying Glass

The findings imply that drug abuse is both a risk variable for trauma and development of PTSD and also occurs as a self-medication as a result of trauma.

In a longitudinal study of child earthquake victims, major depression developed in most cases (70%) simultaneously with or following PTSD (Giaconia et al., 1995).

- PTSD has been identified as a risk factor for the onset of secondary depression (Goenjian et al., 1995).

An increased incidence of physical illness can also occur as a result of trauma or comorbid PTSD (see, for example, the review by Mellon et al., 2018). However, findings on somatic correlates of PTSD in children and adolescents are still rare. There are no large and representative studies on somatic comorbidity patterns in children under 12 years of age.

22.2 Psychological Models and Hypotheses on the Particularities of Traumatism in Early Life

General models of the psychopathology of PTSD are described in other chapters of this book: In **behavioral models**, PTSD is considered a classically conditioned emotional response that is sustained by negative reinforcement (avoidance). **Cognitive models focus on** the meaning and interpretation of the traumatic events. Dysfunctional schemata are formed by the trauma, pre-traumatically existing inappropriate schemata are consolidated.

Under the Magnifying Glass

In children and adolescents, traumatism may have particularly malignant consequences in the phase of formation of important cognitive schemata (about personal safety, interpersonal trust, etc.) (Pynoos et al., 1995; Pynoos et al., 1996). This could explain the high vulnerability in childhood and adolescence for the development of PTSD.

Patients usually respond to the stress associated with the intrusions by using strategies to end or control the memories, such as thought suppression or rumination, which in turn contribute to the maintenance of symptoms in a kind of vicious circle (► Chap. 13). These cognitive factors also predetermine the severity of PTSD symptoms in children (Pynoos et al., 1987; Schwartz & Kowalski, 1991; Yule & Williams, 1990). Steil et al. (2001) found, for example, in a prospective study of 24 children who had been involved in a traffic accident, that the extent of cognitive avoidance in the child and the extent of dysfunctional assessment of what had happened could well predict the child's later PTSD symptoms.

22.2.1 The Cognitive Model According to Ehlers and Clark

Ehlers and Clark (2000) suggest that persistent PTSD develops when traumatic memory is insufficiently elaborated and placed in an autobiographical context. Inadequate processing is all the more likely the less the affected person is able to conceptualise and understand what is happening (see Usher & Neisser, 1993; Brewin et al., 1993). This may explain the negative association between age and risk of developing PTSD after trauma. The ability to provide complete and accurate narrations of positive or negative events, which will be based on appropriate concept-driven data processing, will only grow with the development of language, causal and temporal understanding, perception and self-perception (see Pillemer, 1998).

Although the model was formulated for adults, it can be transferred to children with few changes in content. In addition to the importance of parental assessment already mentioned, the assessment of the child itself is also of central importance. However, based on the child's cognitive level of development, the assessment may be significantly more "illogical" from an adult's point of view (e.g. a dysfunctional "magic" link). For example, a 6-year-old boy may believe that his mother died of headaches because he had a violent argument with his mother the week before and he was a "bad" child.

Under the Magnifying Glass

In summary, it can be said that children, due to the lack of a long-term perspective, catalyse possible consequences of the trauma even more and misinterpret their own symptoms as permanent damage. Some traumatised children no longer expect to live long enough to reach adulthood at all.

In turn, fewer strategies are available to cope with the feeling of persistent threat than in adults, as well as to modulate the arousal associated with it.

22.2.2 Psychobiological and Neuroendocrinological Models

A wealth of psychobiological, neuroendocrinological and structural correlates has been found for PTSD in adults (► Chap. 6). Psychobiological and neuroendocrinological models (Southwick et al., 1997) are based on findings on dysregulation in glutamatergic, noradrenergic, serotonergic and neuroendocrine systems. These biological changes lead to permanent structural and functional abnormalities in the biological stress system, which manifest themselves in the symptoms of PTSD. The way in which the particular neuroendocrinological situation during and as a result of traumatisation can affect the biological development of children has been investigated in comparatively few studies – De Bellis and Zisk (2014) provide a very good overview of the state of research. The developing brain is more vulnerable to environmental influences. Although the brain reaches 90% of its final size at the age of 3 years, most of its differentiation (= the formation, stabilization or even elimination of synapses) takes place in childhood and adolescence. Traumatisation in childhood and adolescence has a lasting unfavourable influence on cognitive development and brain development.

22.2.3 The Developmental Psychopathological Model According to Pynoos

Pynoos et al. (1995, 1996) rightly criticized that the interaction between development and traumatization has so far not received sufficient attention in general models of PTSD. In a developmental psychological

model (Pynoos et al., 1995, 1999), they consider a wealth of vulnerability and protective factors with regard to post-traumatic symptoms in adolescents. It considers

- the interaction between intrinsic factors (age, gender, personality) and extrinsic factors (parental psychopathology, parental trauma and post-traumatic symptoms, parenting style, family climate, peers, socioeconomic status, etc.), which at different stages of development can cause a high or low risk of trauma for the child and can influence the adolescent's adaptation after single trauma (Rind et al., 1998, for example, come to the conclusion in a much-discussed meta-analysis of the consequences of sexual child abuse among college students, that the respective family climate explains a large part of the variance in psychological symptoms as a result of the abuse);
- the interaction between different stages of cognitive and emotional development, the development of morality and the adolescent's interpersonal relationships, and the perception and interpretation of traumatic events
- secondary stressors of a social, family or individual nature resulting from traumatisation.

The importance of these factors is explained in detail at various stages of development. Again, however, the authors do not integrate the general hypotheses and findings on PTSD – comprehensive developmental psychopathological models are still pending.

22.3 Role of Parents

Under the Magnifying Glass

Parents and caregivers play a crucial role as important interaction partners and models for adaptive or dysfunctional coping in the post-traumatic adaptation of adolescents (Alisic et al., 2011).

For example, children derive their interpretation of the traumatic event and its consequences from the reactions of their close caregivers. The parents provide the child with emotional security and structural stability. If, for example, the parents of a child who has experienced sexual abuse are not able to communicate with the child about it, the child may feel rejected and degraded. On the other hand, if the parents compensate for their own feelings of guilt after a traffic accident by spoiling the child, the child may feel incompetent and “sick”, even though he or she is well after the trauma.

Under the Magnifying Glass

Parents can systematically reinforce helpful and harmful strategies of the child in dealing with the traumatic memory. In a recent meta-analysis by Williamson et al. (2017) of 9 to 16-year-olds, parental behaviour towards the child (overprotection; hostility; support; warmth) contributed significantly to the variance in the severity of PTSD symptoms.

Unfavourable model learning or other unfavourable learning strategies emanating from the parents can be used to explain (in addition to genetic hypotheses) findings on the association of parental and child psychopathology after trauma. Deblinger, Taub, et al. (1997) and Deblinger et al. (1999b) found, for example, that in children who had experienced sexual abuse, maternal ratings of externalising symptoms of the child and the child's PTSD symptoms were higher the more the mothers experienced their own general psychopathological symptoms (especially depression). Maternal rejection experienced by the child was linked to the severity of the child's depressive symptoms.

Generally significant are current and previous psychological illnesses of the parents. Steil et al. (2001) found, for example, in a prospective study of 7 to 16-year-old victims of traffic accidents, that a psychological disorder of the parent who spent most time with the child prior to the trauma predicted the diagnostic status of the child 2 months after the trauma.

Under the Magnifying Glass

There is sufficient empirical evidence that the use of strategies to control intrusions such as rumination or thought suppression (Ehlers & Steil, 1995; Steil, 1997; Steil & Ehlers, 2000) can directly aggravate the symptoms of PTSD (thought suppression, for example, increases the likelihood of the unwanted thoughts occurring) or prevent the patient from dealing with the trauma.

It is expected that parents' dysfunctional cognitions about the trauma, its consequences and how to cope with it will be important for the development of post-traumatic symptoms in adolescents. Ellis et al. (1998) found that 40% of the 45-year-old children they examined after a traffic accident showed increased parental protectiveness towards the child. For example, if the parents want to protect the child from the stressful memories or in an excessive way from renewed danger, they may contribute to maintaining the dysfunctional avoidance of trauma-relevant stimuli (Williamson et al., 2017). In various studies, parental symptoms of avoidance behaviour and dysfunctional cognitions regarding trauma have been associated with increased PTSD symptoms in children (see e.g. Deblinger et al., 1999b; Laor et al., 1997).

Under the Magnifying Glass

When parents and children have experienced trauma together, parents who develop PTSD themselves appear to be less successful in helping their children cope with the consequences (Laor et al., 1997; Rossman et al., 1997). A meta-analysis by Alisic et al. (2011) found that PTSD of a parent was a major risk factor for developing PTSD in children.

The age of the child may moderate the connection between maternal and infantile psychopathology as a result of traumatization. Wolmer et al. (2000) found in a prospective study on the consequences of SCUD missile attacks on the Israeli population during the Gulf War an association between infantile PTSD symptoms and maternal psychopathology, which was particularly high in 6-year-old children, lower in 7-year-olds and no longer statistically significant in 8-year-olds.

It is possible that the parents' style of communication with the child influences the child's autobiographical memory (Tessler & Nelson, 1994): Thus (as soon as the child has acquired the necessary linguistic skills) a parental elaborate communication style and active efforts to make the traumatic events understandable for the child could promote the embedding of stressful events in the autobiographical memory or concept-controlled data processing.

22.4 Risk Factors

Steil and Rosner (2008) give an overview of risk factors and groups. Kultalahti and Rosner (2008) summarized in a literature review about 60 studies that examined risk factors in children after single traumatic events. The following risk factors were found to be particularly significant

- pre-traumatic mental morbidity,
- severity of stress,
- perceived danger to life,
- loss of resources in the family (such as the destruction of the house),
- development of acute stress disorder (ASD),
- dysfunctional coping strategies,
- lack of social support,
- further stressful life events following traumatisation.

Younger age at trauma and female gender are also considered risk factors. As explanations for the gender difference, biological differences, different role expectations, different cognitive assessments of trauma and possibly differences in the reporting of symptoms are discussed (Gavranidou & Rosner, 2003; Kruczek & Salsman, 2006).

When assessing the particularly stable and consistent risk factor of pre-traumatic mental morbidity, it must be borne in mind that this may also be associated with a higher risk of trauma: children with ADHD, conduct disorder or substance abuse may experience trauma more frequently than healthy children.

In a meta-analysis ($N = 64$ studies) of a total of 32,238 subjects, risk factors for the development of PTSD after trauma were investigated in adolescents aged 6–18 years (Trickey et al., 2012). The following risk factors for the development of PTSD were identified:

- female sex,
- younger age,
- membership of an ethnic minority,
- low intelligence and a low socio-economic status,
- comorbid anxiety disorder, comorbid depression.

Likewise, critical life events and problems prior to the traumatic event, parental problems, low social support, a low level of functioning in the family and social withdrawal increased the risk of PTSD.

22.5 Diagnosis of PTSD in Childhood and Adolescence

When diagnosing the consequences of traumatisation in a child, 3 areas must be considered:

- pre-traumatic functional level of the child,
- the traumatic event itself,
- and its consequences for the child and its environment.

All available sources of information should be used for this purpose: Child and parents, teachers, observation of behaviour at school or in the home, medical records and information, and reports from witnesses (Thornton, 2000). To clarify the diagnosis of PTSD in children, the use of structured interviews is generally recommended (Steil & Rosner, 2008). Symptoms such as intrusions can only be assessed from the child's subjective viewpoint. Symptoms that can be better objectified, such as increased irritability or aggressiveness, anxiety or regressive behaviour, are also open to outside assessment by parents, teachers or the diagnostician.

- In empirical studies, parents and teachers tended to grossly underestimate the burden on children compared to their own statements (Korol et al., 1999; Sack et al., 1994).

Children seem to report more internalizing problems than their parents, the parents more externalizing problems than the child.

In the case of sexual violence, the credibility of the child as assessed by the parents obviously also plays a role: mothers stated that the more credible the child's PTSD symptoms were, the more credible they found the child's statements (Deblinger, Taub, et al., 1997). This shows the importance of a comprehensive case history of the

child and parents and of interviewing the child itself (▶ Chap. 7). It is also problematic that children may find it very difficult to talk about what they have experienced and their psychological symptoms – they do not want to make the parents or the family feel worried (Perrin et al., 2000; Deblinger, Helfin, & Clark, 1997).

Under the Magnifying Glass

The diagnosis of traumatisation in early childhood poses problems. Although there is empirical evidence of non-verbal memory in relation to traumatic events before the age of 2, the earliest verbally accessible autobiographical memories are found on average only at around 3 years of age and only in fragmented form (Pillemer, 1998).

The autobiographical memory of children seems to be prone to distortion and suggestion (Eisen et al., 2007). Even specially trained psychologists could not reliably distinguish between children's narratives based on true experiences and those based on previous suggestion (Ceci et al., 1994).

- Cautious restraint and responsible interview techniques (open questions instead of suggestive questions that provide information) are urgently required in the diagnosis of traumatisation in childhood.

It is advisable to ask parents and children separately and to collect information from both. Steil and Rosner (2008) provide a comprehensive overview of commonly used diagnostic tools. For children from 6 years of age and adolescents, disorder-specific German-language self-assessment and third-party assessment instruments are available that can be used to determine the presence of PTSD and its severity. An overview is provided by ■ Table 22.1.

Table 22.1 German-language diagnostic instruments for PTSD in childhood and adolescence

Authors	Name of the instrument	Applicable from [in years]	Psychometric characteristics	Remarks
<i>Structured interviews with the child/youth</i>				
Landolt et al. (2003) (original by Nader et al., 1990) To be used as interview and questionnaire, i.e. version investigated as interview	Child Post-traumatic Stress Disorder Reaction Index (CPTSD-RI)	6	Reliability of the English version: Cronbach's $\alpha = 0.83$, agreement with the diagnosis PTSD: $r = 0.91$	Not related to ICD or DSM, some of the symptoms described there are not recorded
Steil and Fühchel (2006) (original by Nader et al., 1994)	Interviews on stress disorders in children and adolescents (IBS-KJ) (American original: Clinician Administered PTSD Scale for Children and Adolescents (CAPS-CA))	8	Reliability of the scales of the German version: Cronbach's $\alpha = 0.92$ or 0.91 for the total degrees of severity	Oriented towards DSM-IV, diagnosis and severity of the frequency and intensity of symptoms, assessment of the influence of the symptoms on different areas of development
Sachser, Berliner, et al. (2016)	Child and Adolescent Trauma Screen (CATS)	7–17	Reliability: Cronbach's $\alpha = 0.88$ – 0.94	Self- and external assessment
<i>Structured interviews with the child/youth and parents</i>				
Schneider et al. (2009)	Diagnostic interview for mental disorders in childhood and adolescence (child DIPS)	6	No quality criteria for PTB diagnostics	Based on DSM-IV and ICD-10; 2 parallel versions for child and parent

<i>Questionnaire for the child/youth</i>					
Dyregrov et al. (1996) Available in German translation at http://www.childrenandwar.org	Children's Impact of Event Scale	6–15	No information on the German version	Neither ICD nor DSM oriented, detection of the severity of intrusion, avoidance and overexcitation	
Briere (1996); German version by Spranz et al. (2018)	Trauma Symptom Checklist for Children and Adolescents (TSC-C)	8–21	Reliability: Cronbach's $\alpha = 0.80$ or 0.86 in normative samples Cronbach's $\alpha = 0.72–0.87$ for clinical sample	Detects a wide range of symptoms after trauma exposure	
Steinberg et al. (2004, 2013); Elhai et al. (2013); German version of Landolt, 2012	University of California at Los Angeles Child/Adolescent PTSD Reaction Index for DSM-5 (UCLA-PTSD-RI)	7–12 13–18	Reliability: Cronbach's $\alpha = 0.90$	Separate versions for children, teenagers and parents	

Following Thornton (2000), the following diagnostic guideline results:

– **Diagnostic guide**

– **Survey only with the child**

– **Central aspects**

- Current and previous diagnosis(s) of the child after DSM or ICD (including PTSD)
- Present general psychopathological symptomatology
- Determination of the degree of severity by self-assessment of the child
- Objectives/subjective characteristics of the trauma
- Grief over family members/friends
- Cognitive performance level

– **Peripheral aspects**

- Self-image
- Interest
- Social skills

– **Survey only with parents/carers**

– **Central aspects**

- Current and previous diagnosis(s) of the child and parents according to DSM or ICD
- Present general psychopathological symptomatology
- Determination of the severity level by assessment of the parents
- Demographic information
- Medical case history
- Behaviour and development of the child in the motor, cognitive, social and emotional field

– **Peripheral aspects**

- Parental view of traumatisation

– **Collection exclusively from other sources**

– **Central aspects**

- Medical case history
- Behaviour and development of the child in the motor, cognitive, social and emotional field

– **Peripheral aspects**

- Social support that the child receives
- Social skills of the child

– **Surveys of children and parents/carers**

– **Central aspects**

- Changes in motor, cognitive and other performance with traumatisation
- Functional level of the child (school, family, social contacts)
- Previous traumatisation of child and parents/carers
- Stimuli that may trigger memories of the trauma
- Secondary emotions and dysfunctional cognitions associated with the trauma and its consequences
- Strategies of cognitive avoidance of traumatic memories
- Self-damaging behaviour in the child, drug use, suicidal tendencies
- Parental reactions to the child's symptoms

– **Peripheral aspects**

- Important life events before and after traumatisation
- Parental style of upbringing and social support the child receives

– **Surveys parents/carers and other sources**

– **Central aspects:**

- Objective characteristics of the trauma (sequence of events, injuries etc.)

The interviews on stress disorders in childhood and adolescence can be considered an international standard (IBS-KJ; Steil & Füchsel, 2006), a modified German translation of the "Clinician Administered PTSD Scale for Children and Adolescents" (CAPS-CA). This instrument provides

- Information on the presence of the diagnoses PTSD and ASD,
- Summary scores on the frequency and intensity of post-traumatic symptoms,
- Calculations of frequency and intensity for the individual symptom clusters.

The diagnosis of possible comorbid disorders can be carried out with relevant instru-

ments. A German-language version of this interview adapted to the criteria of DSM-5 is being prepared by a working group led by Cedric Sachser.

- When presenting the traumatic events, the child should first have the opportunity to tell the story himself before the therapist asks detailed questions about the events.

In younger children, the traumatic experiences can be recorded by asking the child to draw a picture to which he or she can tell a story, or by re-enacting the events with dolls (Perrin et al., 2000; Thornton, 2000). Diagrams, plans or drawings can be helpful (e.g. in the case of trauma in the classroom a plan of who sat where etc.). While the child is talking, the therapist should use verbal prompts (“*What happened next?* “, “*How did you feel about this?* “, “*What happened next?* “). Relevant for therapy is not only the recording of the psychopathology but also of possible dysfunctional cognitions and cognitive avoidance. Instruments and procedures for this are presented in ► Sect. 22.6.

22.6 Interventions

22.6.1 Effectiveness

Recommendations for treatment were derived from the etiological models of PTSD. These contain as two important parts:

- **Exposure in sensu** (► Chap. 13) with the traumatic memories (with the aim of improving the elaboration of the traumatic events and the integration of new, corrective experiences),
- **Cognitive intervention techniques** (► Chap. 13) with the aim of identifying and specifically changing negative cognitions about trauma and its consequences (Steil, 2000).

Cognitive behavioural therapy (CBT) is internationally considered the treatment of choice for adults – together with treatment with “Eye Movement Desensitization and Reprocessing” (EMDR; ► Chap. 14) – and its effectiveness is considered empirically proven (see the corresponding chapters in this book). In controlled and randomized studies, it also achieved very promising results in children and adolescents and can be considered the method of choice according to the current state of knowledge. There is an impressive number of controlled and randomised studies on CBT in the consequences of traumatisation in childhood. ■ Table 22.2 provides an overview of the abundance and breadth of studies on the treatment of children with a mean age of less than 14 years – however, it does not claim to be complete (for an overview of effectiveness, see the meta-analyses by Gutermann et al., 2016, Gutermann et al., 2017, and Morina et al., 2016).

In most of these studies, victims of what epidemiological studies show to be the most severe form of traumatisation, namely sexual abuse, were treated. Not all of the children treated suffered from full-blown PTSD, and this was not always an entry criterion. In addition to PTSD symptoms, measures of other psychopathology were also chosen as measures of success. The long-term effectiveness of the interventions seems to be assured, with follow-up assessments of up to 24 months (e.g. Deblinger et al., 1999a).

The most influential manual of trauma-focused cognitive behavioural therapy (Tf-CBT) of the working group around Cohen, Deblinger and Mannarino (Deblinger & Helfin, 1996; (Cohen et al., 2009) shows excellent efficacy in the review with more than 13 randomized controlled trials carried out by several research groups (Sachser, Rassenhofer, & Goldbeck, 2016). One of these studies was conducted in eight German health care facilities and compared TF-KVT with a waiting

Table 22.2 Overview of effectiveness studies on CPT in childhood PTSD

Study	Trauma	Sample	Treatment conditions Number of meetings	Variables examined	Results
Berliner and Saunders (1996)	Sexual abuse; time since the trauma not reported	<i>N</i> = 80 9 boys, 71 girls Age: 4–13 years <i>M</i> = 8.0 years	Group therapy with specific treatment elements targeting anxiety and fear: stress inoculation training + graduated exposure vs. standard group therapy 10 sessions over 10 weeks	General strain, depression PTSD symptoms	Improvement in both groups; no difference between the groups
Celano et al. (1996)	Sexual abuse; Abuse was is between 1 and 26 months ago	<i>N</i> = 32 girls Age: 8–13 years <i>M</i> = 10.5 years	Individual supportive therapy in combination with treatment of the female caregiver vs. cognitive intervention (based on the Finkelhor model) in combination with treatment of the female caregiver 8 sessions over 8 weeks	Child: General distress, PTSD symptoms Mother: support and attribution	Improvement in both groups; no difference between the groups
Chemtob et al. (2002)	Natural disaster; 2 years later	<i>N</i> = 214 152 girls, 97 boys Age: 6–12 years <i>M</i> = 8.2 years	CBT group intervention vs. CBT-individual intervention vs. Wait list 4 sessions in 4 weeks	PTSD symptoms	Individual CBT = Group intervention CBT > Wait list
Cohen et al. (2004); Deblinger et al. (2006)	Sexual abuse plus other trauma; on average 12 months after last abuse	<i>N</i> = 203 children <i>N</i> = 189 reference persons Age: 8–14 years <i>M</i> = 10.8 years	Trauma-focused CBT (Tf-CBT) vs. child-centred therapy 12 double lessons (one for child, one for reference person)	Children: PTSD symptoms, depression, general distress Parents: depression, emotional reaction, parenting style	Tf-CBT > Child-centred therapy

Cohen and Mannarino (1996a, 1997)	Sexual abuse, not longer than 6 months since end of trauma	N = 67 42% boys, 58% girls Age: 2-7 years M = 4.7 years	Tf-CBT for child and parent vs. non-directive supportive care 12 sessions	General distress, PTSD symptoms	Tf-CBT > nondirective supportive treatment
Cohen and Mannarino (1998)	Sexual abuse; within 6 months of the last event	N = 49 15 boys, 34 girls Age: 7-14 years M = 11.1 years	Tf-CBT child and parents vs. non-directive supportive care 12 sessions	General distress, PTSD symptoms	Tf-CBT > nondirective supportive treatment
Cohen et al. (2005)	Sexual abuse; Time since trauma not reported	N = 82 56 girls, 26 boys Age: 8-15 years M = 11.4 years	Tf-CBT vs. child-centred supportive therapy 12 sessions	PTSD symptoms, depression, anxiety, sexualised behaviour	Tf-CBT > Child-centred supportive intervention
Deblinger et al. (1996); Deblinger et al. (1999a)	Sexual abuse	N = 90 17% boys, 83% girls Age: 7-13 years M = 9.84 years	Tf-CBT with parents vs. Tf-CBT in child vs. Tf-CBT with parents and child vs. Standard advice	PTSD symptoms, depression, general distress	Tf-CBT with parents = Tf-CBT with child = Tf-CBT with parents and child > Standard advice
King et al. (2000)	Sexual abuse; 54 months since end of trauma	N = 36 31% boys, 69% girls Age: 5-17 years M = 11.5 years	CBT in child vs. CBT in child and mother vs. Wait list 20 sessions	PTSD symptoms, anxiety	CBT with child = CBT with parents and child > Wait list
Stein et al. (2003)	Violence; time since trauma not reported	N = 126 71 girls, 55 boys Age: M = 11 years	CBT in group vs. Wait list 10 sessions school based	PTSD symptoms, depression Parents: psychosocial problems Teachers: School problems	CBT > Wait list

(continued)

Table 22.2 (continued)

Study	Trauma	Sample	Treatment conditions Number of meetings	Variables examined	Results
Smith et al. (2007)	Singular traumatisation (accidents, experience of violence); 8.6 months since trauma	<i>N</i> = 24 12 boys, 12 girls Age: <i>M</i> = 13.89 years	CBT (according to Ehlers & Clark, 2000) vs. Wait list	PTSD symptoms, depression	CBT > Wait list
Gilboa-Schechtman et al. (2010)	Singular traumatisation (accidents, sexual or physical experience of violence); 18.5 months since trauma	<i>N</i> = 38 24 girls, 14 boys Age: <i>M</i> = 14.05 years	Developmentally Adapted Prolonged Exposure (PE) vs. Psychodynamic Therapy (PT)	PTSD symptoms, depression, global functional level	PE > PT
Cohen et al. (2011)	Violence of partner against mother; time since trauma not reported	<i>N</i> = 124 61 boys, 63 girls Age: <i>M</i> = 9.6 years	Tf-CBT vs. Treatment as usual 8 sessions	PTSD symptoms, anxiety, depression	Tf-CBT > Treatment as usual
de Roos et al. (2011)	Singular trauma (explosion); 6 months since trauma	<i>N</i> = 40 44.23% Girls Age: 14–18 years	CBT vs. EMDR 4 sessions each	PTSD symptoms, anxiety, depression	CBT = EMDR
Scheeringa et al. (2011)	Both multiple and single trauma (accidents, death of a close person, illness, sexual or physical violence); time since trauma not reported	<i>N</i> = 31 33.8% Girls Age: 3–6 years <i>M</i> = 5.3 years	Tf-CBT vs. Wait list 12 sessions	PTSD symptoms, depression, anxiety	CBT > Wait list
Nixon et al. (2012)	Singular trauma; 20 months since trauma	<i>N</i> = 33 Age: <i>M</i> = 11 years	CBT vs. CT without exposure 9 sessions each	PTSD symptoms, depression, anxiety	CBT = CT
Schottelkorb et al. (2012)	War traumatization; time since trauma not reported	<i>N</i> = 31 Age: 6–13 years	CBT vs. Play therapy 17 sessions each	PTSD symptoms	CBT = play therapy

McMullen et al. (2013)	War traumatization; time since trauma not reported	<i>N</i> = 48 Only boys Age: 13–17 years <i>M</i> = 15.8 years	TF-CBT vs. Wait list 17 sessions	PTSD symptoms, depression, anxiety	CBT > Wait list
Jensen et al. (2014)	Both multiple and single trauma (accidents, death of a close person, illness, sexual or physical violence); time since trauma not reported	<i>N</i> = 156 124 girls, 32 boys Age: <i>M</i> = 15 years	TF-CBT vs. Treatment as usual 12–15 sessions	PTSD symptoms, depression, anxiety	Tf-CBT > Treatment as usual
Diehle et al. (2015)	Both multiple and singular traumatization (accidents, illness, sexual or physical experience of violence); time since trauma not reported	<i>N</i> = 48 18 boys, 30 girls Age: 8–18 years <i>M</i> = 12.9 years	TF-CBT vs. EMDR 12 sessions each	PTSD symptoms, depression, anxiety	Tf-CBT = EMDR
O’Callaghan et al. (2015)	War traumatised	<i>N</i> = 50 Age: 8–17 years <i>M</i> = 14 years	CBT vs. Psychosocial intervention 9 sessions each	PTSD	CBT = psychosocial intervention

CBT cognitive behavioral therapy, Tf-CBT trauma-focused cognitive behavioral therapy, PTSD post-traumatic stress disorders, CT cognitive therapy, EMDR Eye Movement Desensitization and Reprocessing

control (Goldbeck et al., 2016). The results showed moderate effect sizes for post-traumatic stress symptoms, dysfunctional cognitions and internal and external behavioural symptoms.

However, proof of effectiveness can also be found for a youth-specific adaptation of the prolonged exposure according to Foa (see Foa et al., 2013) or the cognitive therapy of PTSD according to Ehlers and Clark (2000); see Smith et al., 2007). It seems remarkable that even a cognitive intervention without exposure elements showed very good efficacy (see Nixon et al., 2012).

TF-KVT has been shown to be effective with both child soldiers in Congo (McMullen et al., 2013) and sexually exploited girls in Congo (O'Callaghan et al., 2013). Murray et al. (2006) provide an overview of intercultural aspects. A first study with unaccompanied minor refugees showed promising results for TF-KVT for this target group (Unterhitzberger et al., 2015).

The clinical significance of CBT in PTSD has also been demonstrated by the studies available to date. In a study of CBT with the child alone or with child and family in child patients with PTSD after sexual abuse, 67% of the children in the two treated groups no longer fulfilled the diagnosis of PTSD in the follow-up after 12 weeks vs. only 20% of the children in a wait list control group (King et al., 2000).

It is possible that – similar to the situation in adults – PTSD after sexual violence in childhood is more difficult to treat than PTSD after other forms of traumatisation. Macdonald et al. (2012) found a moderate effect of 0.44 for the cognitive-behavioural treatment of PTSD after childhood sexualised violence in a Cochrane meta-analysis for randomised and controlled treatment studies, based on 6 studies.

Cohen and Mannarino (1998, 2000) found that treatment success in 7–14-year-old children who had experienced sexual abuse was negatively associated with parental unfavorable attribution of why the abuse had happened and positively associated with the level of parental support. In another study by the same authors on pre-school children after sexual abuse, the extent of parental psychopathology predicted the success of treatment: the more depressed and emotionally loaded the parents felt, the lower the success of treatment (Cohen & Mannarino, 1996b).

In addition to the efficacy of CBT, research has also been conducted into forms of treatment that have related elements. EMDR (“Eye Movement Desensitization and Reprocessing”; Greenwald, 1998; Hensel & Meusers, 2006; Muris & Merckelbach, 1999) was investigated in a randomized and controlled trial (Ahmad et al., 2007), with positive results. In recent years, many positive findings have been presented on narrative exposure therapy (NET; Neuner et al., 2008), so that it can be considered a promising procedure. There is little evidence to date for the effectiveness of psychodynamic treatment of PTSD in childhood and adolescence (Trowell et al., 2002).

Reviewed manuals on the procedure for children under 7 years of age are very rare. The procedure according to Lieberman and van Horn (2005) can be regarded as the best examined and described manual at present. This is an eclectic manual that combines the following aspects (pending a randomized controlled trial)

- attachment theory aspects,
- behavioural therapeutic aspects,
- psychodynamic aspects.

Under the Magnifying Glass

Recent meta-analyses show that psychotherapy is generally effective in the treatment of PTSD symptoms in children and adolescents, with effect sizes in the medium to large range (Gutermann et al., 2016; Morina et al., 2016). Psychotherapy can also alleviate frequently comorbid anxiety and depression symptoms. In this context, CBT was found to be the most researched and most effective therapy, which showed medium to large effect sizes in randomised and controlled studies (Gutermann et al., 2016; Hedge's $g = 0.79$; Morina et al., 2016: $g = 0.66$ – 1.44).

Trauma treatment with EMDR showed large effects in uncontrolled studies, but only a small effect on symptoms after the end of therapy in randomized controlled trials (Gutermann et al., 2016; Hedge's $g = 0.49$).

When factors influencing the therapeutic effect were examined, larger treatment effects were found in older subjects. This could indicate that older patients, possibly due to their matured cognitive abilities, may benefit more from therapy than younger patients (Gutermann et al., 2016). In the joint investigation of controlled and uncontrolled studies, treatments in which caregivers were involved in the therapy also proved to be more effective (Gutermann et al., 2016). In the meta-analysis of Morina et al. (2016), however, this influencing factor was not found.

■ Pharmacotherapy

Currently, there are sufficient studies on pharmacotherapy of PTSD only for adults. In general, the treatment of adult patients shows that the effect sizes of pharmacother-

apy are inferior to those of psychotherapy. Only a few controlled and randomised studies on the pharmacotherapeutic treatment of PTSD in children and adolescents are available to date: Cohen et al. (2007) compared a combination treatment of CBT and sertraline with CBT and placebo. Only a marginal superiority of the combination treatment with sertraline compared to CBT alone was shown. Robbs et al. (2010) compared the efficacy of sertraline with placebo in a large randomized controlled trial in 131 children or adolescents aged 6–17 years. Compared to the placebo, no superiority of the SSRI was shown in this large study. Expert guidelines recommend that children and adolescents suffering from PTSD first receive psychotherapeutic treatment. In Germany, antidepressants are only approved for children in an attempt to cure PTSD. When administering them, it must be considered that they can increase the risk of suicidal behaviour (Hammad et al., 2006).

■ Treatment Guidelines

The German Association of Scientific Medical Societies (Arbeitsgemeinschaft der Wissenschaftlichen Medizinischen Fachgesellschaften, AWMF) guidelines, which will be published in revised form in 2018, recommend that every child and adolescent with PTSD should be offered trauma-focused psychotherapy; TF-CBT is recommended as the treatment of choice due to the large amount of empirical evidence and its effectiveness. Parents or caregivers should be involved in the treatment. Due to the lack of empirical evidence, it is recommended that psychotropic drugs should not be used in the treatment of PTSD in children and adolescents.

➤ Trauma-focused psychotherapy is the treatment of choice for childhood and adolescent PTSD.

22.6.2 Overview of Psychotherapeutic Intervention Methods

Only a small proportion of children and adolescents affected by PTSD appear to receive psychological or psychiatric help (e.g. only 24% of adolescents with PTSD in the study by Essau et al., 1999). It is possible that neither they nor their parents perceive the typical symptoms as consequences of the traumatic experience in need of treatment. Therefore, it is suggested (e.g. in the context of the care of the physical injuries or in the context of care provided by other agencies) that children and adolescents and their parents should be actively offered treatment.

- In the case of childhood disorders or behavioural problems, a possible traumatisation should always be considered as a cause of the symptoms.

22.6.2.1 Interventions in the Acute Phase

Under the Magnifying Glass

In the phase immediately following traumatisation, it is recommended that children and adolescents be closely observed in order to be able to initiate appropriate intervention if symptoms do not recede or develop with a delay.

In this observation phase directly after the event, general supportive interventions are quite useful and are well accepted by the affected persons and their families.

- Everything that conveys security is favourable for children and young people, e.g.
 - Establishing contact with caregivers,
 - Resuming everyday routines (e.g. reading a story and cuddling together before bedtime),
 - Considering basic needs for food and sleep.

A traumatic event always activates the attachment system. It is therefore advisable for the practitioner to point out the child's needs to parents and other caregivers and to support them as much as possible. If an ASD is diagnosed, the use of one of the proven CBT manuals is recommended. There is still a research gap in the review of psychotherapeutic interventions for the treatment of ASD in children and adolescents. Therefore, the use of the “Critical Incident Stress Debriefing” or “Psychological Debriefing” in children and adolescents with ASD is not recommended.

22.6.2.2 Interventions for a Diagnosed PTSD

The manual of the working group around Cohen et al. (2009) is described here, which contains all elements of the proven trauma-focused cognitive behavioral therapy. For this manual, a free German-language learning program for child and adolescent psychotherapists is available (► <https://tfkvt.ku.de/>), which is enriched with example videos and worksheets on the respective topics.

The manual focuses on the consequences of child abuse violence and consists of the following components:

- Psychoeducation and promotion of the parents' educational skills,
- Relaxation,
- Affect regulation,
- Identification and processing of dysfunctional cognitions (appropriate interpretation and classification of the event),
- Developing a trauma narrative (imaginative reliving – in-sensu exposure),
- Exposure in vivo with stimuli that trigger the symptoms (trauma triggers),
- Joint parent–child sessions (involvement of the parents as therapists),
- Promoting future safety.

The child and a (non-offending) caregiver initially participate in in separate sessions; joint sessions are planned towards the end of the therapy. Although all components

are directly related to the treatment of post-traumatic symptoms, the trauma narrative and in vivo exposure can be clearly identified as a phase of trauma processing. Cohen et al. (2006) assume that about 12–16 sessions are needed for the entire programme.

- The basis of the intervention is the establishment of a good therapeutic relationship.

Empathy and active listening are as much a part of this as the willingness to listen to very incriminating or even cruel content, and to signal to the child/youth that the therapist can “bear” the whole story. The background to this is that the parents of traumatised children are often traumatised themselves (e.g. by experiencing the event together or by feeling guilty about misjudging a situation), and the child/adolescent feels that the caregiver may be overwhelmed by the disclosure of all the details.

■ Psychoeducation

Under the Magnifying Glass

In psychoeducation, information on the frequency, forms and consequences of childhood abuse is given at the beginning of therapy.

Psychoeducation helps against myth making. The family “learns” that they are not the only family to whom this event has happened. Information about possible symptoms is also given. These serve to normalize the own reactions. The treatment is also described and explained in detail.

Even parents with good parenting skills can have difficulty maintaining them after a traumatic event. A traumatic event interrupts everyday routines and makes it necessary,

- on the one hand to react flexibly to changes and
- on the other hand, to continue to implement a consistent style of education.

If educational skills were already limited beforehand, it is particularly difficult to develop new behaviour patterns, especially when children and adolescents react to the event with aggressive behaviour and tantrums.

The teaching of basic skills for the caregiver in their concrete applications to the affected child has proven to be helpful here. Central to this is the use of:

- praise and reward, but also
- selective attention and time-out.

■ Relaxation

Furthermore, the children and adolescents learn to relax, in particular to reduce the symptoms of overarousal. Possible relaxation techniques are:

- controlled breathing,
- meditation,
- progressive muscle relaxation.

Particularly supportive for the parent–child relationship and for the child to gain competence can be the request that the child teaches the parent the respective relaxation method.

■ Affect Regulation

After a traumatic event, many children and adolescents experience painful feelings and/or affect dysregulation.

- Affect naming and affect regulation techniques can help children deal with strong emotions and thus reduce the use of dysfunctional avoidance strategies.

Depending on their age, children describe feelings in a playful manner, which then

increasingly lead to familiarity with certain feelings and make it clear that there are no “bad/evil” feelings. The feelings in the traumatic situation are not yet the focus of attention early in therapy. Dealing with feelings is also discussed with the parents and in particular their own processing of feelings is supported. Furthermore, the children and adolescents are introduced to:

- strategies of thought interruption,
- positive ideas,
- positive self instruction.

Together with the caregiver, the therapist and child work on feelings of safety in the following sense:

- How can security be established?
- Who can help?

The next step is to practice problem-solving and social skills with the child.

■ Identification and Processing of Dysfunctional Cognitions

In the next treatment step, the identification and processing of dysfunctional cognitions is the main focus. In a first step, the “cognitive triangle” of thoughts, feelings and behaviour is explained using everyday actions. In many small exercises, alternative evaluations of everyday situations are worked on and typical “not-so-helpful” thoughts are identified. This module is also carried out with parents. The experiences from the previous modules are then incorporated into the work with the actual trauma narrative.

■ Developing a Trauma Narrative

Cohen et al. (2009) work out the trauma narrative over several sessions, explaining to the child the purpose of this procedure before the start by using analogies, such as cleaning a wound after a fall from a bicycle or tidying a cupboard. Then the therapist and the child begin to create a booklet containing the “story of the traumatic event”. In this phase, it may also be helpful to read other books together beforehand to famil-

iarise the child with the structure of a story. Appropriate modifications can be made for young people. For example, a 14-year-old girl painted her story in the form of a manga comic. Usually the first chapter begins with a self-description in which the child tells about her hobbies, a positive event or describes school friends and favourite games. The day before the event can also be told. In the next chapter, the event is described and the child and therapist start writing (or the child dictates to the therapist). At the end of each section, what has been written down is read out loud. Once the event is written down, the child should read the whole story again and add thoughts and feelings that he or she had during the event. In the process of writing the booklet, the child is asked about the worst aspects of the event. These are then also elaborated, for example by painting a picture. Cognitive interventions are then used to highlight and correct possible cognitive distortions and misinterpretations. Throughout the process, the child is often praised for his or her courageous approach. If the child is overwhelmed by memories, the previously practiced methods of relaxation or distraction are used.

■ Exposure In Vivo of the Stimuli Causing the Symptoms

After this work, it may become necessary to perform exposure in vivo, especially if there is an intensive avoidance of trauma-related stimuli.

■ Promoting Future Safety

This treatment manual is completed by interventions to prevent relapse and to prevent revictimisation. In particular, strategies for dealing with dreaded situations can be discussed, and these can also be prepared and practiced (e.g. questioning the fire brigade about behaviour when you are the first to discover a fire; list of people who can help you when you are worried; etc.). Children and young people who have experienced chronic interpersonal violence sometimes

do not trust their own “gut feelings” and need to be supported both in recognising these feelings and in translating them into action. The involvement of the caregiver is indispensable here.

22.6.2.3 Interventions in Severe and Complex Trauma Sequelae

For the treatment of complex PTSD according to the ICD-11 (Maercker et al., 2013), the German AWMF guidelines recommend that a focus of treatment should be on techniques for emotion regulation and for improving attachment problems. In cases of severe trauma sequelae, where, in addition to the PTSD symptoms, there are also other symptoms such as self-injury, recurrent suicidal tendencies, severe dissociation or comorbid borderline personality disorder symptoms, therapeutic strategies from Dialectical-Behavioural Therapy (DBT) can be used. There are promising findings for their effectiveness in adolescents (Fleischhaker et al., 2006; Rathus & Miller, 2002). In PTSD with comorbid drug abuse, positive findings have been reported for a manual described by Najavits (“Seeking Safety”) when used in adolescent patients (Najavits, 2002).

Especially for adolescents and young adults with PTSD after experiencing violence in childhood, a treatment manual was developed that not only includes elements of to improve emotion regulation, but in particular also takes into account the developmental tasks of this patient group: Developmentally Adapted Cognitive Processing Therapy (D-CPT; Matulis et al., 2014; Rosner et al., 2019). The efficacy of D-CPT has been proven in studies (Matulis et al., 2014; Rosner et al., 2019). It also showed an amazingly big effect on comorbid problems such as symptoms of borderline personality disorder and dissociation.

The core of D-CPT is an adaptation of Cognitive Processing Therapy (CPT). CPT

is an intervention that has been very successfully evaluated in adults and was originally developed to treat PTSD after rape (Resick & Schnicke, 1992, 1993, German adaptation König et al., 2012). CPT was adapted to the special needs of abused adolescents (Matulis et al., 2014; Rosner et al., 2014). In addition to language adaptations and a simplification of the worksheets, cognitive work (CPT phase) is carried out at high intensity – about 15 sessions in 4 weeks – in order to shorten the duration of therapy and thus increase the motivation of the adolescents. In order to strengthen the therapy motivation, which often fluctuates quite a bit in the beginning, the CPT intensive phase is preceded by a commitment phase, in which the adolescents are given the necessary space to build up a relationship with the therapist and to get involved in the therapy. This is followed by a short emotional regulation training based on DBT techniques, in which the young people learn to recognise and regulate severe stress. After the CPT phase, developmental tasks that are often difficult for abused adolescents to cope with are addressed. Here, for example, the increased risk of dropping out of school or vocational training, finding a helpful and non-abusive partner or preventing to become a victim of violence again is addressed.

22.6.3 Involving Parents in Treatment

Involving the parents or one parent in the treatment is advantageous for the reasons already mentioned above, but must be adapted to the patient’s age. The importance of the participation of one caregiver in treatment was impressively investigated in a large study by Deblinger et al. (1996, 1999a). In new meta-analyses, too, the involvement of parents was found to be a significant factor in the effectiveness of therapy in traumatised children and adolescents (Gutermann

et al., 2016). Intervention studies in which the parents were included in the treatment showed greater treatment effects than those in which only the child was the focus of the treatment (Gutermann et al., 2016).

➤ According to new study results, the involvement of parents or parental training in the treatment appears to be absolutely recommendable.

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Post-traumatic Stress Disorders in Physical Diseases and Medical Interventions

V. Köllner

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23.1 Physical Disease as a Traumatic Event

With the introduction of a revised trauma definition of DSM-IV (APA, 1994; ► Chap. 2), categories of potentially traumatic experiences were expanded and it was explicitly made possible to consider a severe physical illness as a potentially traumatic event. As a result, early research on trauma sequelae was conducted in the second half of the 1990s, particularly in transplantation and intensive care medicine, cardiology and oncology. With some delay, the psychological burden on the relatives of these patients also attracted attention.

In the new DSM-5 and ICD-11 classification systems, physical illness is no longer explicitly mentioned as an example of a traumatic event, but is also not excluded. A significant difference to the DSM-IV definition is the elimination of the A2 criterion in the trauma definition, i.e. the subjective perception of fear, helplessness or horror (► Chap. 2). ICD-11 defines trauma as an event or series of events of exceptional threat or catastrophic extent (WHO, 2018), while DSM-5 calls for “confrontation with actual or threatened death, serious injury or sexual violence” (APA, 2015). This implies that even severe physical illnesses do not always meet the trauma criteria of ICD-11 and DSM-5, but only if dramatic episodes with a real threat of death occur in the course of the disease. However, this is often the case with many diseases, such as cancer or heart disease.

Up to now, studies on the prevalence of PTSD after physical illness have largely been conducted according to DSM-IV criteria. Studies on the prevalence according to the new systems are still largely lacking. A study by Andrykowski et al. (2015), which compared DSM-IV with DSM-5 in patients with bronchial carcinoma, found a higher prevalence according to the DSM-5 criteria (57% vs. 37%). The ICD-11 introduced a new disorder category “Disorders related to stress”,

which describes a continuum of reactions to stressful and traumatic life events from the normal stress response through time-limited disorder patterns such as adjustment disorder to PTSD and complex PTSD. Until recently, studies on physical disease patterns have paid too little attention to this differential diagnostic spectrum, and the focus has usually been on PTSD alone. For cancer patients, it was pointed out that the adjustment disorder in particular has so far received too little attention in research, although this disorder plays a major clinical role here (Mehnert & Koch, 2007; Kangas, 2013).

► The new version of the trauma definition in DSM-IV made it possible to view a serious physical illness as a traumatic event. This is also possible after DSM-5 and ICD-11. In addition, the other clinical presentations from the spectrum of stress-related disorders must be taken into account. Clinically, the adjustment disorder is of particular importance.

In his schematic classification of traumatic events, Maercker (2009) introduced medically caused traumas as a separate category alongside Type I and Type II traumas and formulated further research needs for this trauma category. One concept that highlights the differences between medical and other traumas is the model of the “enduring somatic threat” (EST) by Edmondson (2014). This concept describes the following conceptually and clinically relevant features of medical trauma:

- While in PTSD, the trauma is located outside the affected person, in PTSD caused by illness the traumatic event is usually located inside the body.
- While traumas are usually in the past (and the end of the real threat is a prerequisite for the beginning of a trauma confrontation), the threat usually lasts during a traumatization by a physical illness, because the basic pathophysio-

logical process in the body is still virulent (e.g. arteriosclerosis) or at least cannot be excluded (e.g. the presence of malignant cells in the body). In most cases, the traumatic event represents an acute exacerbation of a chronic disease. The fear of those affected is therefore directed towards the future.

- There are also significant differences in the nature and consequences of avoidance behavior and hyperarousal symptoms. The internal stimuli of the disease (e.g. palpitations) are amplified by hyperarousal and cannot usually be completely avoided. However, treatment measures reminiscent of the disease are often avoided, such as examination appointments or the taking of medication. This, like the physiological effects of hyperarousal, leads in the worst case to an actual increase in mortality, i.e. to a renewed real threat.

The EST model appears to be a promising framework concept to investigate the conditions of onset, course and treatment of stress-related diseases in the course of physical illness. An association between PTSD triggered by heart disease and fear of disease progression has already been demonstrated (Fait et al., 2018).

Under the Magnifying Glass

Physical diseases, when considered as traumas, have some special characteristics described by the concept of “Enduring somatic threat”. For example, the source of the threat is internal rather than external and the fear relates at least partially to events in the future (e.g. upcoming surgery, progression of the disease, relapse). The symptoms of PTSD, especially avoidance and hyperarousal, can worsen the course of the somatic disease - up to increased mortality.

23.2 Differential Diagnosis

The acute stress reaction according to ICD-10 (F43.0) includes intrusions, avoidance behaviour, vegetative overexcitation and anxiety symptoms. The acute stress disorder according to DSM-5 additionally emphasizes dissociative symptoms such as derealisation and depersonalisation. For example, patients often describe themselves as having felt like in a film after receiving a cancer diagnosis: “*That wasn't me who was just told she had cancer.*” The symptoms appear immediately after the traumatic situation and usually subside after hours or days. Because of this transience of symptoms and because it can be seen as a normal reaction to a traumatic event, it is no longer included in the ICD-11. Since an acute stress reaction and especially dissociative symptoms are associated with an increased risk of PTSD (Flatten et al., 2003; Kangas et al., 2005), corresponding symptoms should be recorded and the affected persons should be monitored in order to be able to offer therapy in time if necessary. In the scientific context, acute stress disorder is relevant because a latency of 1 month after the traumatic event must be waited for in order to be able to make a diagnosis of PTSD. Otherwise, there is a risk of incorrectly high PTSD prevalence rates being recorded by counting acute stress reactions (Mehnert & Koch, 2007). However, acute stress reactions are a predictor for the later onset of PTSD, i.e. the affected patients should be monitored in this respect.

The procedure for diagnosing PTSD (F43.1) described in ► Chap. 8 also applies to patients in a medical context. It is not uncommon for PTSD to have a delayed onset, i.e. the symptoms do not become manifest until after completion of acute medical treatment and rehabilitation, when the patient is back in his or her home environment. To confirm the diagnosis, a structured interview (e.g. SCID) is required

(Einsle et al., 2012), while questionnaires are suitable for both screening and follow-up.

In research reports, especially in patients with severe physical diseases, the disturbance pattern of subsyndromal PTSD is increasingly reported (Krauseneck et al., 2005). Here, essential symptoms of PTSD are present, but the diagnostic criteria are not fully met. A negative influence on the quality of life of those affected can also be demonstrated for these subsyndromal disorders (Köllner et al., 2007; Shelby et al., 2008). Diagnostically, they should be classified as adjustment disorders (F43.2) (Schroth & Köllner, 2018).

The reformulation of the concept of adjustment disorder in the ICD-11 (Maercker et al., 2013; Bachem & Casey, 2017) provides the possibility of better diagnosing stress-related symptoms resulting from physical illnesses below the threshold of PTSD, not least because it was developed on a sample of physically ill people (Maercker et al., 2007). Two core symptoms were newly introduced: preoccupation and failure to adapt, both of which are very well suited to describe stress reactions in physical disorders in addition to depressive and anxiety symptoms. For screening for maladaptation after ICD-11, the ADN-20 is now available as a questionnaire, which still needs to be validated in patients with physical disorders (Lorenz et al., 2016).

Under the Magnifying Glass

Especially in a medical context, patients rarely report their PTSD symptoms spontaneously. Even in patients known from the psychosomatic consultation liaison service, sometimes it was only the systematic survey within the framework of a study that revealed clinically relevant PTSD. Patients with potentially traumatic events in the course of their disease should therefore be systematically screened for the presence of an adjustment disorder or PTSD.

23.3 Epidemiology, Predictors and Course

23.3.1 Epidemiology

There are only few studies on the prevalence of acute stress reactions in physical diseases. For tumor patients, prevalences between 2.4% (Mehnert & Koch, 2007) and 25% (Flatten et al., 2003) are given. After acute myocardial infarction, Roberge et al. (2008) found an acute stress reaction in 4% of the affected patients, after acute respiratory failure (ARDS) with long-term ventilation up to 44% were described (Davydow, Desai, et al., 2008a). In a systematic review of 64 original papers, which very carefully distinguished between PTSD and acute exercise response, Mehnert et al. (2013) found an adjusted point prevalence for the acute exercise response of 4.8%.

The problem is that not all studies specify an exact time of data collection and do not make an exact distinction between stress response and PTSD. Such a distinction is not always easy, however, because multiple traumatic situations can occur in the course of a chronic disease. For example, artificial respiration and a stay in an intensive care unit (ITS) can last several months in the case of ARDS, or in the case of a tumor disease, both the notification of the initial diagnosis and the message of metastases can trigger dissociative symptoms or intrusions. It is therefore not always possible to define the beginning and end of the traumatic experience precisely. In addition, during surgery or other medical interventions, the traumatic event usually occurs with advance notice. While a crime or natural disaster usually comes as a surprise, the date of an operation is known several weeks in advance.

- ▶ In follow-up studies, it has been shown that the stress caused by intrusion or hyperarousal before surgery is highest in order to decrease after surgery and remain low in most patients over the long term (Köllner et al., 2002; Köllner, Krauß, et al., 2004b, Jacobs 2015).

■ Table 23.1 shows the frequency of PTSD and (if recorded) adjustment disorder in different diseases or medical procedures. The following relationships become apparent when looking closer at the studies:

- Studies that only used questionnaires reported higher prevalences than studies

that confirmed the diagnosis with a structured interview.

- Studies that distinguished between PTSD related to the underlying somatic disease and PTSD caused by other life events reported low levels of disease-related PTSD.

■ **Table 23.1** Frequency of PTSD and (if recorded) adjustment disorder after different clinical presentations or medical procedures

Illness/medical procedure	Prevalence	Study
Patients after a stay in intensive care unit due to critical illness (especially long-term ventilation)	5–65% PTSD	Jackson et al. (2007)
Patients with heart disease	0–38% PTSD	Spindler and Pedersen (2005)
Patients after infarction event (meta-analysis of 24 studies)	12% (0–32%) PTSD related to heart disease	Edmondson et al. (2012)
Patients 5.5 (1–10) years after surgical replacement of the aortic arch (surgery in deep hypothermia)	14.3% PTSD and 22.2% adjustment disorder in surgery under emergency conditions	Schurig et al. (2008)
	6.2%/7.6% for surgery under elective conditions	
Patients after organ transplantation (Tx, system review of 23 studies)	Total PTSD: Questionnaire survey: 0–46%, clin. interview: 1–16%	Dawydow et al. (2015)
	Tx-related PTSD in the clin. interview: 10–17%	
Patients 3 years after heart transplantation	20.8% adjustment failure	Dew et al. (2001)
	17.0% PTSD (each related to Tx)	
Patients before and after lung transplantation	Waiting list: 25% PTSD	Jacobs et al. (2015)
	After Tx: 6,25% PTSD	
Patients with tumor disease (syst. review of 64 original papers using structured interviews)	Point prevalence: PTSD 2.6	Mehnert et al. (2013)
	Adjustment disorder 12.5%	
Metanalysis of 25 studies (21 of them on breast cancer) on cancer-related PTSD	Questionnaire surveys: 7.3–13.8	Abbey et al. (2015)
	Studies with structured interviews: 12.6% lifetime and 6.4% point prevalence PTSD	
Women 1 year after vaginal delivery	4.2% PTSD	Sentilhes et al. (2017)
	3% PTSD	Söderquist et al. (2006)
Women 3 months after miscarriage, prospective controlled study	38% suspected PTSD after questionnaire survey (PDS) compared to 0% PTSD in the control group without miscarriage.	Farren et al. (2016)

- The time since the disease/intervention is not given in all studies, so that symptoms of an acute stress reaction were sometimes recorded.
- Not all studies differentiate between full-blown and sub-syndromal PTSD.

In order to obtain reliable data on prevalence, studies are necessary that record the diagnostic criteria in a structured interview, separated by symptoms and related to somatic disease and other life events (Einsle et al., 2012). An interval of at least 3 months after the event should be observed, full or subsyndromal PTSD should be documented separately. Adjustment disorders and their course should also be recorded.

23.3.2 Predictors for the Occurrence of PTSD

For patients with breast cancer, low social support, an advanced stage of the disease, a short time since diagnosis and a higher number of traumatic events in the history are predictors for the occurrence of PTSD or a high incidence of stress-related symptoms (Mehnert et al., 2013). Cordova et al. (2017) in their review of patients with cancer describe trauma, PTSD and other mental disorders, low socioeconomic status, low social support or interpersonal stress in the environment as well as young age, advanced disease stage and invasive treatment as risk factors for the onset of PTSD. Posttraumatic growth seems to be able to mitigate the negative impact of PTSD on quality of life (Morrill et al., 2008).

In patients after myocardial infarction, low social support and previous traumatic events and mental disorders also proved to be risk factors for PTSD. Other predictors included younger age, female gender, history of heart attacks or mental illness, sedation, and experiencing fear of death and agonizing pain during the infarction (Spindler &

Pedersen, 2005; Wiedemar et al., 2008). In patients after ITS treatment, previous history of mental illness, sedation with benzodiazepines, anxiety-ridden memories of the stay and organic psychosis (transit syndrome) have a stronger predictive value than female gender and younger age, while disease severity had no predictive value (Davydow, Gifford, et al., 2008b).

Across all diseases, an acute stress response and dissociative symptoms predict the occurrence of PTSD (Spindler & Pedersen, 2005; Kangas et al., 2005). In studies that used both questionnaires and structured interviews, it was found that patients in whom the PTSD diagnosis was confirmed in the interview reported at least one event in which the A1 and A2 trauma criteria were met, while patients who were only conspicuous in questionnaires were more likely to report prolonged stress below the trauma threshold (Einsle et al., 2012).

Under the Magnifying Glass

General predictors for the occurrence of PTSD are traumatic events and mental illness in the past, young age, low socioeconomic status and lack of social support. In addition, there are dramatic situations or situations associated with loss of control during the course of the somatic disease and a subsequent acute stress response or dissociative symptoms. Traumatization in the past should also be inquired in the medical context in order to be able to design certain situations (e.g. gynaecological examination) in such a way as to prevent re-traumatization.

23.3.3 Course

There are few long-term studies that follow the course of PTSD symptoms after medical intervention. Dew et al. (2001)

found PTSD prevalences of 9.6%, 15.5% and 17.0% in 191 patients 7 months, 1 year and 3 years after heart transplantation. In patients after acute lung failure and artificial respiration, the prevalence at discharge was 44%, after 5 years 25% and after 8 years 24% (Davydow, Desai, et al., 2008a). These data show that there is considerable variance in spontaneous course within the first year, possibly due to changes in the course of somatic disease. After that, if no treatment is given, the symptoms are more likely to remain constant. This hypothesis is supported by cross-sectional studies in patients with cardiovascular disease, where up to 10 years of catamneses had no effect on PTSD symptoms after the disease or intervention (Jones et al., 2007; Schurig et al., 2008). Cordova et al. (2017) describe in their review of PTSD in patients with cancer that reliable data on the course of PTSD in this patient group are still lacking and cite a few studies that show either a decrease in symptoms in some patients or an increase.

23.4 Somatic Clinical Presentations

23.4.1 Transplantation and Intensive care Medicine

Transplantations usually take place after a longer waiting period. They have therefore also been called “planned trauma” (Supelana et al., 2016), which offers the special opportunity to develop strategies for prevention and early intervention of PTSD. The studies of the working group of Amanda Dew and Arthur Stukkas from Pittsburgh (Dew et al., 1999, 2001, 2004) were groundbreaking for research into the significance of PTSD in organ medicine.

■ Clinical Study on PTSD after Heart Transplantation

191 patients underwent heart transplantation over the long term were examined for mental comorbidity and its effect on the outcome of the surgery. All diagnoses were confirmed by structured interviews. Already in the first interviews after 2 and 7 months, a comparatively high proportion of patients with PTSD was found. This proved to be the third most common mental disorder after depression and adjustment disorder with a prevalence of 17% after 3 years. Patients with PTSD had a 14-fold increased risk of mortality caused by a rejection reaction. PTSD was thus the strongest predictor of mortality in the first year after transplantation. Noncompliance with check-ups and medication as a consequence of PTSD-related avoidance behaviour was assumed as a possible cause.

PTSD almost always occurred in the first year after transplantation and was usually chronic. Risk factors were female gender, previous mental illnesses and low social support. The traumatic event most commonly reported was a threatening episode during the waiting period for a donor heart, often lasting several years (Dew et al., 1999, 2001). In an examination of patients before and after lung transplantation, the traumatic events also originated mainly from the waiting period and only rarely referred to the transplantation experienced as saving (Jacobs et al., 2015). Only 12% of patients with PTSD had received psychotherapeutic support.

In a more recent study, Favaro et al. (2011) found a prevalence of PTSD of 12%, which is comparable to that of Dew et al. One risk factor for the development of PTSD was the history of depressive episodes. There is less reliable data on the frequency of PTSD after other types of transplantation; at least for lung transplantation, similarly high prevalences can be

assumed. However, the trauma (e.g. attacks of breathlessness and fear of death, false alarms to transplantation) occurred mostly during the waiting period, and patients after transplantation showed a lower burden of PTSD symptoms than waiting list patients (Jacobs et al., 2015). Both fully developed and subsyndromal PTSD have a negative impact on the quality of life of those affected (Köllner et al., 2003).

Under the Magnifying Glass

PTSD occurs in about 15% of patients after heart transplantation. It not only leads to a poorer quality of life but is also associated with a significantly increased mortality rate. Most of the cases found in studies have not been diagnosed and have not been treated. Early detection in the context of psychotherapeutic screening is therefore of particular importance.

In both transplantation and intensive care medicine, temporary psychotic disorders (transitional syndromes) are not uncommon, whereby memories of the real situation and frightening hallucinated images can mix in retrospect. Claussen (1996), for example, gives a field report. Such images can also be the content of intrusive re-experience.

Invasive therapeutic measures such as the implantation of an artificial heart to bridge the waiting period for transplantation do not appear to be experienced as traumatic by patients (Bunzel et al., 2007), if a cognitive assessment as helpful or life-saving is possible. A limitation of cognitive performance due to sedation or passage syndrome seems to limit this ability and thus increase the risk of a traumatizing experience of the situation.

23.4.2 Interactions Between PTSD and Heart Disease

In cardiovascular diseases and PTSD, there is a mutual influence: On the one hand, life-threatening cardiac events, such as a heart attack or shock series from an implanted cardioverter defibrillator (AICD), can trigger PTSD. On the other hand, there is growing evidence that PTSD increases the risk of heart disease (especially coronary heart disease (CHD) and arrhythmias) and leads to increased cardiac mortality (Edmondson & von Känel, 2017). First, it was shown that in Vietnam veterans, PTSD was associated with higher cholesterol levels as a risk factor for CHD (Kagan et al., 1999). Subsequently, a prospective study also showed that veterans with PTSD had a higher incidence of fatal and non-fatal heart attacks (Kubzansky et al., 2007). Felitti et al. (1998) found in the “Adverse Childhood Experiences (ACE) Study” that trauma in childhood was associated with poorer health behaviour in adulthood and an increased prevalence of CHD, chronic obstructive pulmonary disease (COPD), bronchial carcinoma and other chronic diseases on which health behaviour has a strong influence. In a population-based study, it was shown that the risk of heart disease was already slightly increased when traumatised in the past but increased significantly when PTSD was present (Spitzer et al., 2009). In patients with AICD, a prospective study over 5 years showed that disease-related PTSD was associated with significantly increased mortality, the hazard ratio was 3.45, independent of other risk factors (1.57–7.60, $p = 0.002$; Ladwig et al., 2008).

In a meta-analysis of 6 studies involving a total of 402,274 patients, it was shown that the hazard ratio of getting CHD was 1.55 for patients with versus without PTSD (regard-

less of the type of trauma). When adjusted for the effect of comorbid depression, HR decreased to 1.27 (95% CI 1.08–1.49), but still remained significant (Edmondson et al., 2013). When only PTSD related to heart disease was considered, the risk ratio was 2.00 (95% CI 1.69–2.37) (Edmondson et al., 2012). This difference illustrates the mutual influence of CHD and PTSD. While the overall cardiac risk in PTSD probably increases mainly due to psychophysiological activation and poorer health behaviour, in PTSD triggered by heart disease, the risk is increased by specific avoidance behaviour (e.g. drug use; Husain et al., 2018). To this extent, a “cardiac disease-induced PTSD (CDI-PTSD)” should be diagnosed and researched as a separate entity (Vilchinsky et al., 2017).

Under the Magnifying Glass

Traumatic events in the course of a CHD and severe cardiac arrhythmia can trigger PTSD, which in turn has an unfavourable influence on the course of the underlying disease - up to and including increased mortality. The causes are assumed to be both poorer compliance through avoidance behavior and psychophysiological changes as a result of hyperarousal and intrusions. This effect is particularly pronounced in PTSD triggered by the heart disease (CDI-PTSD).

23.4.3 Tumor Diseases

By far the best investigated group of carcinoma patients with regard to PTSD are women with breast cancer. The main findings have already been presented under ► Sects. 23.2 and 23.3. Baider et al. (2006) found a transgenerational connection between traumatisation and the psychological burden of cancer: Israeli breast cancer patients whose parents were Holocaust survivors showed a

greater burden of depression and psychological stress as a result of the cancer than patients without a corresponding family history. Overall, rather low prevalence rates (7.3–13.8%; Cordova et al., 2017) of PTSD are found than in patients with heart disease. One reason for this could be that there are less dramatic and acutely life-threatening events in the course of cancer than in heart disease. Another role could be played over time by resource-oriented coping in the sense of posttraumatic growth (Koutrouli et al., 2012). In contrast to cardiac patients and patients after organ transplantation, increased mortality from comorbid PTSD has not yet been clearly demonstrated in psycho-oncology. In cancer patients, the traumatic event is often the delivery of the diagnosis or a finding that means that the disease is no longer curable. Cordova et al. (2017) therefore also speak of an informational trauma.

In 110 patients after stem cell transplantation for the treatment of leukaemia or lymphoma, significantly higher PTSD prevalences were detected with questionnaires (PTSS-10 23.4%, IES-R 7.2%) than in the structured interview (2.7%). Patients who were only conspicuous in questionnaires seemed to be more likely to suffer from adjustment disorder as a result of non-specific stress (which also had a negative effect on quality of life), while PTSD was only detectable in interviewed patients who reported clearly definable traumatic events (Einsle et al., 2012). These findings correspond to the meta-analysis of Mehnert et al. (2013), who also found a significantly higher prevalence of adjustment disorders and who point out that in pure questionnaire studies, it is difficult to distinguish between adjustment disorders and PTSD.

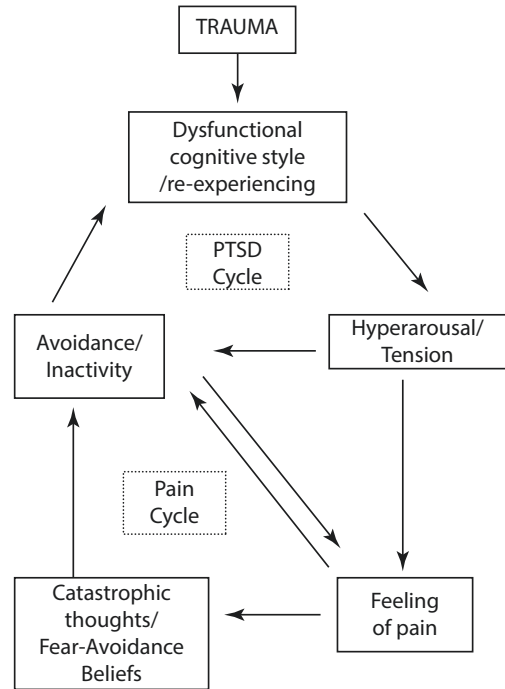
Another well-studied group is adolescents and young adults after childhood cancer. Rourke et al. (2007) were able to detect PTSD in almost 16% of this group by means of structured interviewing. Predictor seemed to be the subjective assessment of the dis-

ease rather than objective factors of the course of the disease. A comparison of adolescents after cancer with a healthy control group showed that stress-related syndromes (adjustment disorder, PTSD) were significantly more frequent at 18.6% compared to 7.3% (Schrag et al., 2008). Predictors here were the type of cancer and treatment, the age of onset of the disease and mental disorders prior to the cancer.

23.4.4 Chronic Pain

Chronic pain is a common symptom in post-traumatic stress disorder. A prevalence of up to 75% has been demonstrated in torture victims with PTSD. The pain may be related to nerve or tissue damage caused by the trauma, but more often it occurs independently. It may occur as whole-body pain (e.g. fibromyalgia syndrome; Häuser et al., 2013) or localised in relation to the trauma. They can occur in the short term - then often in connection with intrusions - or as permanent pain (overview in Bischoff et al., 2016).

The interaction between chronic pain and PTSD is the subject of more intensive research. Liedl and Knaevelsrud (2008) describe the relationship between pain and PTSD using the “perpetual avoidance model” (■ Fig. 23.1), which describes the relationship mainly via avoidance behaviour and hyperarousal. Accordingly, they are developing a behavioral therapeutic treatment concept that includes biofeedback to reduce hyperarousal and physical activation to reduce avoidance behavior. Pain that is reminiscent of the trauma can trigger intrusions, but conversely it can also be a symptom of the intrusive. Stress in the (early) biography can lead to increased pain sensitivity independent of the full-blown presentation of PTSD, which is called pain-induced hyperalgesia and which has also been demonstrated in animal experiments (Egloff et al., 2014). Comorbid PTSD is associated with higher pain impairment and higher



■ Fig. 23.1 The perpetual avoidance model of the link between chronic pain and PTSD. (From Liedl & Knaevelsrud, 2008)

opiate use in chronic pain patients (Phifer et al., 2011).

An example of the importance of PTSD in the chronification of pain and impaired functioning is chronic pain syndromes following acceleration trauma of the cervical spine (especially after rear-end collisions). Stress-related symptoms in the sense of an acute stress response were detectable in 13% of those affected and were associated with chronic pain and poorer occupational rehabilitation over the long term (Kongsted et al., 2008). A close connection was found between a poor rehabilitation outcome and the development of an anxiety disorder or PTSD (Sterling et al., 2011). Dunne et al. (2012) were able to show that PTSD-specific cognitive-behavioural therapy also led to a reduction in the impairment caused by pain and to an improvement in functional ability.

Unfortunately, the comorbidity of pain and PTSD is still often overlooked when

pain therapists do not ask about trauma and/or psychotherapists tend to consider pain as a domain of somatic practitioners. This is unfavourable because PTSD patients with chronic pain benefit better from combined treatment approaches that include activating body-oriented therapy with alternation between activation and relaxation of the muscles and biofeedback in addition to trauma confrontation (Bischoff et al., 2016).

Under the Magnifying Glass

Chronic pain is a common symptom in PTSD and should be considered in an overall treatment plan. In addition to trauma confrontation, sports and exercise therapy, relaxation training and biofeedback are helpful for these patients, as well as psychoeducation on chronic pain and methods of pain psychotherapy, if necessary.

23.4.5 Gynaecology and Obstetrics

Besides breast cancer, a complicated birth was discussed as a possible trigger for PTSD. Söderquist et al. (2006) found in a longitudinal study in 1640 women a birth-related PTSD in 3% of cases, which mostly remained stable over 11 months. Predictors were increased anxiety and intrusive imaginations even before birth, previous mental illness and obstetric complications, vaginal delivery with instrumental support or emergency dissection, and reports of a negative relationship with obstetric staff. Sentilhes et al. (2017) came up with a comparable prevalence of 4.4%, with the question asked on day 2 postpartum about bad memories of the birth having a high predictive value. Even though the prevalence of PTSD after birth is rather low, in view of the considerable negative consequences for the mother

and the relationship with the child, regular screening seems to be advisable in order to be able to offer timely therapeutic support.

Four months after termination of pregnancy due to fetal abnormalities, 44% of 217 mothers and 22% of 169 fathers examined suffered from conspicuously increased exposure to PTSD symptoms. Predictors included pronounced doubt during the decision to terminate the pregnancy, inadequate support from the partner, low age, advanced pregnancy and religiousness (Korenromp et al., 2007).

23.4.6 Relatives of People with Life-Threatening Illnesses

While initially only the patients were the focus of scientific interest, in recent years it has become apparent that, especially after very invasive procedures in the field of high-tech medicine, relatives have shown higher levels of stress and PTSD prevalence than the patients themselves. Dew et al. (2004) found 22.5% PTSD and 34.5% adjustment disorders in relatives (“caregivers”) of the sample of heart transplant patients described above. Also in the long-term course after stem cell transplantation, a higher symptom burden was found in the partners than in the patients (Lautenschläger et al., 2003). Bunzel et al. (2007) found no PTSD in any of the patients examined (male 36, female 2) who had received an artificial heart, but in 27% of the partners (female 26, male 1). A possible explanation for these findings is that the patients are more likely to be men and the relatives women, who have a higher vulnerability to PTSD. Another possible explanation is that images of the intervention and the patient’s situation afterwards are more likely to be perceived by the relatives than by the patient himself, who may be repressing the current threat and more likely to perceive the supportive aspects of

the intervention. In addition, social support is offered primarily to the patient and less to the relatives.

Parents of children with cancer are also highly exposed (Bruce, 2006; Cordova et al., 2017). Yalug et al. (2008) found PTSD confirmed in the SCID in 34.6% of 104 parents examined, with mothers more frequently affected than fathers. Other predictors were the previous loss of a family member, a worse prognosis and more invasive treatment of the child, mental illness in the previous history and a higher level of education. Increased PTSD rates were also found in children of parents and siblings of children with cancer (overview in Cordova et al., 2017).

- Relatives of patients with life-threatening diseases or invasive interventions seem to suffer from PTSD at least as often as the patients themselves. They should be included in appropriate care programmes and offered support when needed.

23.5 Treatment

Although there are now well over 100 studies on the prevalence of PTSD and adjustment disorder in physical diseases and their unfavourable effects on disease progression, mortality and quality of life have been clearly demonstrated, there have been very few studies on treatment in this patient group to date, albeit with a clear upward trend in recent years.

Von Känel et al. (2018) were able to show in a randomized study of 190 patients who experienced high distress during an acute coronary syndrome that early psychosomatic counseling of 1 hour in the first 2 days seems to lead to a reduction in the PTSD rate over the long term. Contrary to the initial hypothesis, however, a trauma-focused approach did not prove superior to a more psychoeducative general “stress counseling”. The authors conclude from this that

psychotherapeutic support and education should be offered analogous to the procedure for acute stress reactions, but advise against a trauma-focused approach. Kangas et al. (2013) found a similar result with a 7-hour CBT in 35 psychologically highly stressed patients shortly after diagnosis of cancer in the ENT area. Again, CBT was not superior to active control, but there was a tendency in the small sample to fewer patients with clinically relevant PTSD after CBT.

Duncan et al. (2007) were able to demonstrate in a small, uncontrolled pilot study a positive effect of guided written disclosure on PTSD symptoms - but not on depression - in parents of children with cancer. In a controlled, randomized study in patients with PTSD 1–3 years after stem cell transplantation, a CBT performed by telephone over 10 sessions resulted in a significant reduction of disease-related intrusions, avoidance behavior and depression compared to standard oncological therapy (DuHamel et al., 2010). In patients with heart disease, therapists are often inhibited from using exposure because of the concern that the associated stress will trigger an acute cardiac event. However, Shemesh et al. (2011) were able to prove in a randomised study (comparison between confrontation in sensu and psychoeducation) that trauma confrontation neither led to relevant pulse or blood pressure increases during the sessions (on average only 0.5 mmHg more than in the control condition, in the 95% confidence interval a maximum difference of 7.1 mmHg, which is also clinically harmless) nor to increased cardiac events or even deaths in the long-term course. However, a significant improvement in PTSD symptoms was found in the subgroup of highly stressed patients.

The results of these studies and clinical experience suggest that the same procedures are effective and should be used to treat patients in the medical context for which there is evidence of efficacy in PTSD overall.

However, there is still an urgent need for research, especially into whether PTSD therapy can reduce its negative effects on the somatic course of the disease. There is also a lack of studies on the effectiveness of the therapy of disease-related adjustment disorders.

As low social support across the disease has been shown to be a strong predictor of the development and maintenance of PTSD, therapeutic groups may be helpful by combining the possibility of social support and disclosure (Köllner, Archonti, et al., 2004a). Many patients find it easier to report traumatic experiences in a group of equally affected people than in their personal environment. It also seems to make sense to include self-help groups, since those affected often know nothing about this disorder and no routine screening is carried out in the clinics. An example of good information for those affected and the establishment of a therapeutic network is the German Federal Association of Organ Transplant Patients (► <http://www.bdo-ev.de>).

► To date, there are only a few studies on the therapy of patients with PTSD in the context of physical diseases. Their results, together with clinical experience, suggest that procedures that are generally proven to be effective in the treatment of PTSD are also effective and safe to use in patients with physical diseases.

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Military

Soldiers on Military Missions

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24.1 Background

24.1.1 Extended Range of Tasks of Armed Forces

This chapter is based mainly on the example of the German military. With the end of the “Cold War” at the end of the 1980s, the world political situation changed fundamentally, and as a result, after German reunification, the political decision was made to assume more international responsibility. This led to considerable changes in foreign and security policy and thus also in the everyday military life of soldiers.

Since the early 1990s, the Federal Armed Forces has been participating in international peacekeeping, military operations and UN observer missions as part of its expanded range of tasks. The foreign missions began with the UN mission in Cambodia in 1992/1993 (**United Nations Transitional Authority in Cambodia, UNTAC**), where a field hospital was operated in the capital Phnom Penh for the total of approximately 20,000 UN soldiers and UN staff deployed in the country as well as the local civilian population. From March 1993 to 1994, this was followed by a mission to support the peace-keeping UN operation **UNOSOM** in Somalia. From 1994 to 2008, the Federal Armed Forces also provided a small contingent for a UN Observer Mission in Georgia (**UNOMIG**). The mission in Bosnia-Herzegovina (**SFOR/EUFOR**) began in December 1996 and ended in 2012. In Kosovo (**KFOR**) – a mission that has been running since June 1999 – 456 soldiers are currently (as of December 2017) deployed. Since December 2001, the main focus of the military commitment abroad has been the Afghanistan mission (**ISAF**), with currently still about 1100 soldiers in the “Resolute Support” mission. Further soldiers are deployed in Mali (**MINUSMA**, 1100 soldiers), in Jordan (Counter **DAESH**), in Sudan (**UNMISS/UNAMID**), at sea off Lebanon (**UNIFIL**), as part of refugee aid

in the Mediterranean (Operation **SOPHIA**) and at the Horn of Africa (**OAE/Atalanta**) to secure sea routes. At the end of 2017, a total of approximately 3700 German soldiers are deployed abroad, of which around 300 are women (BMVg, 2000, 2004).

24.1.2 Challenges for Emergency Medicine

Due to the tasks resulting from the new deployment principles for the Federal Armed Forces in the transformation process of the armed forces, changes in the organisation of the medical service and medical care also became necessary. In modern military medicine of the twenty-first century, there are 3 major subject areas that dominate operational medicine:

- **Emergency medicine and emergency surgery** with the optimization of fast life-saving measures in the “platinum 10 minutes” and the “golden hour” up to the modern developments of “damage-control-surgery” and “medical evacuation” with an optimized rescue chain from the place of action to the home country.
- **Hygiene and infectiology** with research into global health risks using “medical intelligence” and the application of current tropical medicine diagnostic and therapy standards.
- **Psychotraumatology** with preventive, diagnostic and therapeutic strategies to maintain or restore mental health after military operations. While emergency medicine, emergency surgery and infectiology primarily serve the prevention of health damage or the optimal treatment of injuries during the mission, the psychological effects after experiencing extreme stress often only become apparent after the end of the mission, sometimes with months or years of latency.

Physical traumatisation is usually immediately visible and its extent can usually be quickly grasped.

Under the Magnifying Glass

The consequences of psychological injuries are often not registered by those affected, or are not accepted due to stigmatisation fears and are still not sufficiently recognised by superiors, comrades and also by the doctors treating them. This makes it more difficult to register the patients and sometimes prevents timely and adequate therapeutic assistance.

24.2 History of War Traumatizations

24.2.1 An Overview

The history of psychotraumatology is closely linked to the history of military conflicts. For centuries, wars have always brought great suffering to people – civilians and soldiers – and have led to manifold psychological damage.

Although the psychosocial consequences of wartime experiences have been known for centuries, as with other psychosomatic clinical pictures, a change in symptoms or a change in the form of appearance has been observed over the decades. Sometimes even the impression is created that every era, every war produces a new, its own “syndrome”.

24.2.2 Changing Manifestations

24.2.2.1 Da Costa Syndrome

The first medical scientific publications on the psychosocial and health consequences of psychological traumatisation as a result of war experiences in soldiers date from the time of the wars of secession at the

end of the nineteenth century. In 1871, Da Costa described a psychosomatic complex of symptoms including heart pain, palpitations, fatigue, dizziness, and shortness of breath, which he observed in soldiers during the American Civil War and which was later named after him (Da Costa Syndrome). In this context, other terms such as “soldier’s heart”, “irritable heart” and “effort syndrome” were also coined.

24.2.2.2 War Trembler, “Shell Shock”, Trench Neurosis

After an initial enthusiasm for war, the soldiers in World War I quickly experienced a large number of psychological traumas due to their confrontation with the cruel reality of war. There were countless casualties in the trench warfare on the Western Front, and with the use of new weapons such as machine guns and poison gas, the following complaints increasingly occurred:

- Psychogenic movement disorders (“war tremors”),
- Paralysis and amnesia,
- Twilight conditions,
- Confusion,
- Speech disorders,
- Blindness,
- Numbness.

These symptoms were initially attributed to the effect of the grenade bombardment and were referred to as “shell-shock”. However, the “war neurotics” were not recognised as sick people in Germany, but were considered to be hereditary and constitutionally less resilient. The methods of treatment (electric shocks, “Kaufmann cure”, ice water baths, violence, isolation) were in part cruel and served to drive the soldiers back to the front. In England, France and the USA, attempts were made to select suitable men for the front and psychogenic disorders were either treated close to the front or the soldiers were brought back home and treated in special facilities (Shephard, 2000).

24.2.2.3 Psychogenic Somatic Disorders, “Combat Fatigue”

While dissociative clinical pictures dominated in the World War I, the World War II brought about a change in symptoms among German soldiers in reaction to the war experiences. The clinical picture of the war tremblers hardly occurred any more. The mentally traumatised soldiers showed predominantly **somatoform** and **psychosomatic clinical syndromes**, in which gastrointestinal symptoms were particularly noticeable, such as

- Nausea,
- Vomiting,
- Upper abdominal pain.

Because of the high number of sick people, even about 50 “stomach battalions” were set up in the German Armed Forces towards the end of the war. At first, attempts were made to counter **war fatigue**, i.e. states of exhaustion, by early detection and temporary retreat to rest rooms. In the course of the war, “nervous and mental illnesses” increased, and therapy methods from World War I (“galvanic role”) were reintroduced (Zimmermann et al., 2005).

Under the Magnifying Glass

Under the National Socialist regime of the so-called Third Reich, it was practically impossible to openly name a “psychological reaction” to the effects of the war for social and political reasons and would have been regarded as cowardice or betrayal.

For example, there is no reliable data on the prevalence of psychogenic diseases in Germany, on how many of the soldiers desperately deserted, mutilated or committed suicide.

During the World War II, the American armed forces discharged a total of approximately 500,000 soldiers from military service for psychiatric reasons due to combat fatigue. The British armed forces introduced combat breaks and, incidentally, advocated the concept of immediate treatment close to the front, which also showed good results.

24.2.2.4 Post-traumatic Stress Disorder

During the Korean War (1950–1953), 3% of American soldiers had to undergo psychiatric treatment, while during the Vietnam War only 1.2% had to be treated. Attempts were made to reduce the stress factors for the soldiers through limited deployment times and, among other things, through a well-functioning medical system.

The problem of war traumatising only came to light after the end of the war. In 1988, a study was published, which proved that about 500,000 veterans, corresponding to 15% of the American soldiers deployed, suffered from the consequences of the war in the form of PTSD. Later studies by the **National Centre for Post-Traumatic Stress Disorder** (NCPTSD), prepared for the **United States Department of Veterans’ Affairs** (USDVA), indicated that PTSD prevalence rates were significantly higher (30.9% for males, 26.9% for females). The number of chronic cases remained high, and many PTSD patients experienced addiction problems, were prosecuted, or became homeless (Kulka et al., 1990).

As a result of the experience of the Vietnam War, the USDVA has established numerous treatment centres for patients with PTSD, conducts extensive scientific research in its own research facilities, has developed information material for patients, relatives and practitioners, operates internet forums, develops therapy concepts, etc.

24.2.2.5 Combat Stress Reaction

After there were no significant mental health problems in Israel during the 1948, 1956 and 1967 wars, mental illness accounted for 30% of all cases of mental illness during the 1973 Yom Kippur War. According to studies, one clinical picture was described as an **acute combat or stress reaction** (“combat stress reaction”, CSR) and a second as a **delayed combat reaction**. In Israel, too, the initial preference was to treat the acute symptoms as close to the front as possible. If this was not successful, the therapy was continued in a **Combat Fitness Readiness Unit** (CFRU). A follow-up study after 3 years showed that soldiers with a CSR suffered significantly more frequently from chronic PTSD symptoms than the comparison group (Shlosberg & Strous, 2005).

24.2.2.6 Gulf War Syndrome

After the end of the Second Gulf War in 1991 (Kuwait and Iraq), many of the soldiers complained of the occurrence of numerous unspecific physical symptoms such as

- Joint and muscle pain,
- Unusual fatigue and exhaustion,
- Memory problems,
- Depression,
- Disorders of cognitive and emotional functions.

Doctors summarized these symptoms in 1994 under the term “Gulf War Syndrome”. The cause was unclear, and suspected triggers included the numerous preparatory vaccinations, exposure to nerve gas, ingestion of insect repellents, toxic gas releases from burning oil wells or uranium munitions. These hypotheses on the genesis of the disease could only be partially proven, and it is assumed that the disease is partly caused by exogenous factors. However, there is also controversial discussion as to whether and to what extent psychogenic reactions to war experiences with predominantly somato-

form and psychosomatic reaction formation are also present here (King’s Centre for Military Health Research, 2006).

24.2.2.7 Traumatizations in Russian Armed Forces

Not much is officially known about mental illness among Russian participants in the war in Afghanistan (1988) and Chechnya (1994/1995). However, there are reports of **psychosocial adjustment difficulties**, disturbances in reintegration into family and society after return, and alcohol and drug abuse even during the war. As in the Vietnam War, limited public support, unclear war aims, the young age of many fighters and the high intensity of the fighting played a significant role in the lack of processing of war experiences.

24.3 Stress Reactions in the Military Environment

24.3.1 Forms of Deployment: National/International

Today, soldiers in NATO forces are not only deployed in armed military conflicts, but often also in international peace-keeping and combat operations under UN mandate and, for example, under NATO or EU leadership.

However, as recent history has shown, the boundaries between the various military forms of deployment are not sharp and sometimes disappear. In April 2003, after only a few weeks, the American Government declared the war in Iraq to be over, after the invasion was completed, the Iraqi army had capitulated and Saddam Hussein’s regime had been overthrown. However, the US forces suffered the greatest number of wounded and killed soldiers in the “stabilisation phase” of the following years.

Under the Magnifying Glass

Even purely “peacekeeping” operations can become more explosive and lead to extreme psychological stress for the soldiers due to forced passivity, as was shown by the Bosnia-Herzegovina mission of the Netherlands in Srebrenica in July 1995, where the soldiers had to stand idly by and watch the ethnic cleansing of the Muslim population by the Serbian militias because the “rules of engagement” (political guidelines by the United Nations) did not permit intervention. The Canadian General Romeo Dallaire had to experience a similar disaster in Rwanda in 1994, when hundreds of thousands of Tutsi were killed by Hutu militias and he, as commander of the UN protection force, could not/must not intervene (Dallaire, 2003).

In the political scenario, “harmless” peace missions can no longer be sharply separated from clearly armed conflicts. This and the strategy of asymmetric warfare with increasing terrorist actions such as suicide bombings, attacks against local civilians and soldiers, foreign troops and international aid organisations make it more difficult for soldiers and also the civilian population affected to find their way around.

24.3.2 Epidemiology and Pathogenesis

When experiencing short-term or long-term extreme situations, the soldiers’ ability to cope with the stressors and strains and to readapt to the conditions in their home country is often overstretched. Such intensive, overwhelming and disorganizing experiences sometimes destroy orientation and the self- and world views that provide support. As a result, under certain circumstances a mental disorder may develop, which can be

gradual (under constant stress) or acute (in the case of extreme experiences).

- It is not uncommon for a mental disorder to occur with a delay and often only unfold its damaging effect when the mission or damaging event is long over or the people affected may not have been soldiers for a long time (Biesold & Barre, 2002).

According to international research results, the rate of PTSD among soldiers deployed after peacekeeping (UN) missions is between 3% and 8%, depending on the country of deployment and the stress of the mission. It can be considerably higher for specific stresses – e.g. the Dutch UN soldiers who were forced to stand idly by while watching the massacre in Srebrenica, Bosnia-Herzegovina, in July 1995 experienced 8% PTSD and 29% partial PTSD (partial symptoms).

In recent years, the Federal Armed Forces Psychotrauma Center in Berlin and its cooperation partners have created a solid database on mission-related mental disorders of Federal Armed Forces soldiers and their predictors. Epidemiological studies from 2009 to 2013, which were carried out on soldiers deployed in Afghanistan and on a control group without deployment (“dark figure study”), produced the first meaningful results. More than 20% of all soldiers with and without deployment suffered from mental illness (soldiers with foreign deployment: affective disorders 7.8%, PTSD 2.9%, anxiety disorders 10.8%, somatoform disorders 2.5%, alcohol abuse and dependence 3.6%). Compared to soldiers not on mission, they had a significantly higher 12-month prevalence of PTSD (OR: 2.4), anxiety (OR: 1.4) and alcohol consumption (OR: 1.9). Existing mental disorders, lack of social support and difficulties in emotion regulation significantly increased the risk (Wittchen et al., 2012, 2013).

According to current surveys, the German civilian population also suffers from a considerable burden of psychiatric illness. However, the incidence of these diseases differs in comparison to the military (Trautmann et al., 2016). It should also be noted that the demands on soldiers with regard to mental stability must be particularly high in view of the demanding range of tasks. The prevalence in soldiers without deployment is lower than in civilians. Significant differences between military personnel and civilians were found with lower levels of alcohol and nicotine abuse. Mission soldiers with high combat stress had higher rates of panic and agoraphobia and PTSD compared to civilians (Trautmann et al., 2015).

Surveys were also conducted in the outreaches themselves on the use of psychiatrists working there until 2014. This revealed a change in the number of disorders diagnosed between 2009 and 2012. In line with the decrease in combat operations, the proportion of acute stress reactions and post-traumatic stress disorders decreased in favour of adaptation disorders caused by conflicts in the workplace and in private life (Ungerer et al., 2013).

This trend was confirmed in an even more recent prospective study: significant increases in depressive symptoms and sleep disorders, but not in PTSD, were recorded during the course of the operation (Danker-Hopfe et al., 2017).

In addition, personal value orientations and the moral perception of soldiers apparently have an influence on the frequency and severity of mental illness in a military context. In the context of foreign missions, experiences can arise that contradict internalized values and norms. A cross-sectional study of mission returnees showed that certain value orientations of soldiers (especially hedonism, benevolence and universalism) have a significant influence on the frequency and severity of PTSD and other psychological symptoms after a foreign deployment.

These results could have an impact on the further development of therapies in a military context (Zimmermann et al., 2014, 2015a).

Under the Magnifying Glass

Moral violations seem to have a similarly significant effect. Morally questionable mission experiences in connection with the civilian population (e.g. ethnic violence, assaults on women and children etc.) seem to have a particularly strong effect on mental illness among Federal Armed Forces soldiers. The effect is apparently mediated to a considerable extent via the construct of moral violations (Hellenthal et al., 2017).

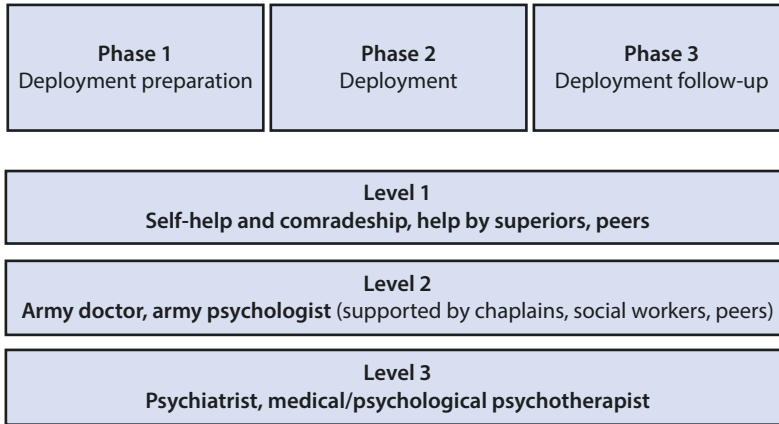
24.4 Prevention

To ensure that soldiers do not have to bear the burden of a chronic mental disorder in addition to the burdens and risks of a mission, the Federal Armed Forces has developed a prevention and treatment concept based on the experience of friendly armed forces:

- the “Framework for coping with mental stress in soldiers”,
- the “Medical-psychological Stress Concept of the German Armed Forces” (MedPsychStressKonBw)

The **framework concept** (BMVg, 2000) states that, in addition to mental and physical requirements and the confident mastery of military operations, the mental stability and resilience of soldiers must be understood as an essential and determining characteristic of operational readiness and performance.

- Prevention is given priority over rehabilitation in measures to maintain mental stability.



■ Fig. 24.1 Three-phase, three-level concept

■ The Three-Phase, Three-Level Concept of Stress Management

The supporting pillars of the concept are the three-phase model and the three-level concept of stress management (■ Fig. 24.1). The three-phase model describes the three stages (= phases) of the assignment: preparation, implementation and follow-up. The three-level concept is divided into the stages (= levels) of psychosocial support, which is applied depending on the type and extent of the stressful events.

Intervention level 1 (especially assistance from comrades and superiors) is more important in the course of the mission than in the preparation and follow-up phases, since the everyday psychosocial support from partners, family, friends and acquaintances is not available there or can only be accessed to a limited extent via remote communication media. However, it also plays an important role in the preparation and follow-up of an assignment in coping with uncertainty about what is to come and in reintegration into the everyday life at home that is no longer familiar.

Various innovative approaches in recent years complement the basic concept of prevention described above. These start at various points in the care landscape: a broad routine screening of psychological symptoms

can contribute to raising the awareness of those potentially affected before a possible strain and can be the starting point for further primary prevention measures. However, screening can also facilitate early detection of diseases after exposure and motivate those potentially affected to take up therapeutic treatment promptly. However, it should not be used to select vulnerable soldiers or exclude them from foreign missions. Otherwise, a high rate of defence and dissimulation could be expected (Wesemann et al., 2018).

In the Federal Armed Forces, the importance of such measures has been increasingly recognized in recent years and implementation has begun under the leadership of the Psychological Service. A psychological screening was designed for a planned start in 2018, which in the long term every soldier should receive when he is recruited and then repeatedly during his service, especially before and after foreign deployments.

Where there is suspicion of psychological stress for soldiers, which arises during screening, but also in the case of imminent stressors such as foreign deployments, the Federal Armed Forces is increasingly working on the development of effective primary prevention measures.

Education (psychoeducation) plays a central role in the primary prevention of the

Federal Armed Forces. This is mainly provided by the “troop psychologists” working in larger units. In addition, there are other elements, the effectiveness of which has not yet been studied to any great extent. Measures of stress preparation through virtual exercises, coupled with procedures of active relaxation as well as the improvement of social skills, seem to be the most suitable in order to be able to make good use of social reference systems even in the event of stress. A supportive social environment has been shown in numerous studies to be an essential element of disease prevention.

Under the Magnifying Glass

The use of modern media seems to be a suitable approach to offer prevention in a standardised way and from a learning theory point of view in an effective and motivation-increasing manner. The Psychological Service of the German Armed Forces has developed the computer-based blended learning platform CHARLY in cooperation with civilian partners. In a 1.5-day group seminar, the participants are taught the above-mentioned preventive elements in a multimedia and playful manner. In cooperation with the PTZ, an effectiveness study was carried out among medical personnel. In a randomized, controlled longitudinal design, a comparison with routine stress training resulted in a significantly lower symptom burden for the CHARLY group after a mission in Afghanistan (Wesemann et al., 2016).

After exposure to stressful events, secondary prevention methods can influence the process of processing or disease development. Here again, psychoeducation seems to be of great importance. This should be offered on a low-threshold basis and, if necessary, also anonymously, since, particularly in hierarchical systems such as the military, feelings of shame accompany the disease process,

lead to stigmatisation fears and thus make it difficult and delay contact with the help system.

Thus, in secondary prevention, the new media again offer themselves as the first contact option. These are supplemented by personal counselling services such as the 24/7 telephone hotline of the Psychotrauma Centre (0800-5887957) (Zimmermann et al., 2013).

Since mid-2016, a smartphone app (“Coach PTSD”) has been able to provide the above-mentioned prevention elements in an easily accessible form, especially for younger patients. It was developed by the PTZ and the TU Dresden and has already been downloaded several thousand times in the year of its release.

Intensified and extended formats for secondary prevention are also very popular, especially the 2- to 3-week preventive cures. Following the increased occurrence of mission stressors, these can be applied for unburdened and carried out in civilian clinics at the expense of the Federal Armed Forces. They do not claim to provide professional psychotherapy, but can contribute to strengthening resources and thus to preventing illness. They also convey recognition and esteem for the participating soldiers on the part of their employer and therefore have a high level of acceptance. The participants consider sports and movement-related offerings in particular to be important and helpful (Zimmermann et al., 2015b).

24.5 Therapy Within the Framework of the Federal Armed Forces

24.5.1 Therapeutic Facilities in Federal Armed Forces Hospitals

Years of experience in the therapy of soldiers with mission-related mental disorders have shown that soldiers often prefer to be

treated in Federal Armed Forces facilities, since there is specific knowledge available about the everyday military requirements, mission stress and trauma. However, the German Armed Forces currently have only 4 hospitals where in-patient trauma therapy can be offered (Berlin, Hamburg, Koblenz, Ulm). For this reason, outpatient, semi-inpatient and inpatient offers of the civilian care landscape are also regularly used.

Under the Magnifying Glass

A close-meshed regionalized supply, which can at the same time also contribute a profound knowledge of the military field of life, is not available. Due to a lack of experience with war-traumatised soldiers in the civilian sector, intensive therapeutic and scientific cooperation with military authorities is necessary.

In recent years, outpatient and inpatient treatment settings have developed in the German Armed Forces, which have been specially adapted to the needs and specific characteristics of military patients (Zimmermann et al., 2016). In order to document treatment quality in line with the current state of scientific knowledge, it was necessary to evaluate these settings with regard to the quality of outcomes.

The trauma therapeutic procedure EMDR (Eye Movement Desensitization and Reprocessing) has proven to be particularly suitable and effective for soldiers: controlled studies have shown high effect strengths (Alliger-Horn et al., 2015; Köhler et al., 2017). However, the therapy results varied due to various influencing factors, which have since been increasingly taken into account in the planning of therapeutic processes. In the foreground are the number of traumas experienced and the extent

of concomitant diseases (comorbidities) (Alliger-Horn et al., 2014, 2015).

In a broader sense, personal value orientations as well as moral injuries in the context of the traumatic situation, whose influence on the severity and form of symptoms has already been described, must also be taken into account in this context. In a recently published study on the course of qualified withdrawal among alcohol-dependent soldiers, for example, a strong expression of the value “tradition”, which characterizes a high value of traditional social norms and habits, contributed to a significantly improved therapy outcome (Zimmermann et al., 2015a).

In order to respond to these observations with appropriate therapy, a 3-week group programme was introduced at the Federal Armed Forces Psychotrauma Centre, which was specially designed for soldiers with mission-related mental illnesses and moral injuries. This programme includes classic elements of psychosocial stabilisation, but also topics such as self-care and self-compassion. Building on this, value orientations and their change in the context of operational experiences are reflected upon. Violations of moral standards by others (e.g. superiors) or by the patients themselves are discussed in a group setting. Group cohesion and mutual understanding provide protection against excessive feelings of guilt or shame. The course concludes with a social competence training, which focuses on the verbalisation of experiences in the social environment.

A first pilot evaluation of 20 participants showed that the phenomenon of shame, which often contributes significantly to the psychological strain of this group of people and can lead to delays in the therapeutic process, can be influenced significantly positively. This has an effect above all on the dimensions of aggressiveness towards oneself and others as well as social withdrawal as a result of shame (Alliger-Horn et al., 2018).

Under the Magnifying Glass

The involvement of relatives in the treatment process is of great importance for successful healing. Numerous studies have shown that social support is a key factor in the mental well-being of people under stress, also and especially in a military context. A systematic literature analysis showed that social support from the social environment of military forces, from the comrades' circle, but also from the family reference system has a significant protective influence on the course of mission-related psychological trauma sequelae in soldiers (Waltereit et al., 2013).

In the Federal Armed Forces hospitals, work for relatives is offered as an outpatient open group or as a block event lasting several days. The work is supportive and focuses on psychoeducation and communication structures within the family. Through the pastoral care project of the Protestant Church Office (ASEM) and the Soldiers and Veterans Foundation of the German Armed Forces Association, 3-day to 1-week events are supported financially, in terms of personnel and content. According to a recent study, this has reduced the psychological burden on family members in particular, while at the same time improving their quality of life and their sense of mutual support (Wesemann et al., 2015).

Under the Magnifying Glass

An innovative therapeutic approach is the support of relatives' work through horse-supported interventions according to the EAGALA method. An open pilot study conducted by the Psychotrauma Centre has shown that these seminars have a significant positive effect on the psychological well-being of couples with post-traumatic disorders (Köhler et al., 2017).

24.5.2 Trauma Therapy in a Federal Armed Forces Hospital Based on Case Studies

24.5.2.1 General Conditions

The treatment of patients with traumatic disorders is carried out according to the guidelines of the German-speaking Society for Psychotraumatology (Deutschsprachige Gesellschaft für Psychotraumatologie, DeGPT) and the Association of Scientific Medical Societies (AWMF Guidelines). Janet's step-by-step model is generally accepted as a valid standard. Thereafter, the therapy proceeds in 3 phases (detailed ► Sect. 24.5.2.3):

- Stabilization phase (relationship building and stabilization),
- Processing phase (trauma processing),
- Integration phase (integration and reorientation).

The avoidance of the trauma experience should be abolished and replaced by coping experiences.

The fact that this takes place in a military environment has many implications:

- The dislocated origin of the patients from all over Germany limits the contact to the personal environment of the patients.
- The duration of the stay is often longer, as the aim is to restore a level of function appropriate to the service. On the other hand, the often positive resource situation of military patients (stable psychosocial environment, etc.) can favour a speedy therapeutic procedure.
- Care is provided in a "company medical" system, with corresponding advantages and disadvantages in terms of relationship management. On the one hand, patients appreciate the therapists' knowledge of the system and their work; on the other hand, as part of the treatment process, expert opinions are required time and again, for example regarding the necessity of a transfer close to home,

renewed participation in an assignment, etc. In some cases, a separation of therapeutic and expert functions is necessary.

- In many cases **interval therapy** is necessary. This is achieved by appropriate interim dismissals and resumption of treatment.

24.5.2.2 Conditions of Admission

In-patient trauma therapy is mainly provided for soldiers with mission-related or work-related trauma. These are mainly patients with disorders that can be assigned to type I traumas. However, even after an intensive preliminary diagnostic phase, the possibility cannot be ruled out that earlier traumas will become apparent in the therapeutic process, which will then require a significantly higher therapeutic effort in all dimensions. According to experience, this is frequently the case with female soldiers who, for example, have earlier intimacy traumas. In most cases, patients with complex trauma that is not related to their duty are referred to external outpatient or inpatient treatment. In the case of acute trauma, a decision is made in accordance with the usual guidelines as to whether acute trauma therapy is appropriate or whether, after crisis intervention and consultation, the self-healing process should be awaited in the further course of the case, in order to then make a well-founded decision

on the further procedure at the appropriate time (Barre & Biesold, 2001).

24.5.2.3 Therapeutic Approach

The therapeutic procedure comprises 3 phases:

- Stabilization phase,
- Processing phase,
- Integration phase.

1. Stabilisation phase

The psychological traumatising arises from the vital discrepancy between threatening situational factors and individual coping options, which is accompanied by feelings of helplessness and defenceless abandonment. Especially members of high-risk professions with their self-image oriented towards functionality and resilience perceive this as a disturbing loss of control over themselves and their life situation. They lose confidence in their ability to maintain control and therefore often live in fear that superiors and comrades might notice their unstable condition and lose respect for them. A lot of energy is spent on maintaining the facade of “normality”. In a vicious circle of failed coping attempts, many of those affected get deeper and deeper into a symptom swirl from which they are no longer able to free themselves alone. The following example vividly illustrates this.

Case Study: Mission-Traumatised Female Paramedic

“I knew it would be difficult to get through a course. – But this way – to hear someone describe the symptoms of PTSD – and to feel how each of these symptoms starts slowly. – The anxiety – the palpitations – the pressure in the ear – the nausea – the dizziness – the numbness in the hands – when something like that happens, I distract myself by ignoring myself – but how can that work when everything you’re feeling right now is described in the smallest detail – and then the sentence: ‘After a year, it

becomes chronic.’ That was it – I didn’t get any further. – Is that so? ... That simply can’t be. – It can’t stay like this. If not even I want to live with myself like this – how can I expect this from someone else?

And above all the sentence: ‘Talk is golden.’ ‘... Exactly, great idea – since I talked, all my paramedics look down on me: – ‘She should learn to walk again. – What is she trying to tell me, she’s not even able to do her job herself.’ It really worked!”

Under the Magnifying Glass

Stabilization must precede trauma processing if the severity of the trauma overtaxes the individual's ability to cope with it and makes processing appear too stressful. In this phase, military-specific conflicts (e.g. with hierarchical system structures) and transfer reactions should also be dealt with.

Imaginative and relaxation techniques are an integral part of the stabilisation work. Their aim is to improve the processing capacity of the patients. This includes techniques for excitation control (autogenic training, progressive muscle relaxation, light current techniques, self-instruction techniques, etc.), as well as resource building through imaginative exercises. In mild trauma I cases, the stabilisation phase can be shortened. Postponing trauma processing for too long can reinforce the patient's avoidance behaviour and have counterproductive effects (Neuner, 2008).

Among other things, the following are used for stabilisation

- Relaxation techniques,
- Sports,
- Physiotherapy, occupational therapy and sociotherapy,
- Aromatherapy, acupuncture,
- Meditation, Yoga, QiGong,
- If necessary, symptom-related medication.

■ Building Trust and Relationships

In the military environment, building relationships is of particular importance in order to gain the compliance of those affected and to encourage them to start therapy or to avoid discontinuation of therapy. Relationship building is based on the model of "party abstinence" (Reddemann, 2003). Here, the patient is given an active part in the therapy. Right at the beginning, if possible in the first hour, the patient is therefore approached about his/her strengths

and competences and these are brought into connection with the special nature of his/her profession as a positive resource. It has been proven to be beneficial in the work with soldiers, especially in their role as helpers, to emphasize that the patient has experienced his/her traumatization precisely because he/she stands and acts where many other people react paralyzed. Often this alone leads to spontaneous relief, because it integrates the tormenting disorder into a positive context with which the patients identify and which is part of their "corporate identity".

Appropriate metaphors can initially alleviate feelings of shame and self-unworthiness and thus further lower the threshold. For example, a comparison with a truck driver who consults a signpost when reversing, not because he can drive better, but because he has a different point of view, is quickly understood by those affected. The comparison with a rescue cruiser who goes out to rescue when all other ships remain in port is an image that is also gladly and relievedly accepted by helpers. Transparency about the therapeutic relationship within a "company medical system" right at the start of the work helps to build a relationship of trust based on informed consensus.

■ Normalization and Psychoeducation

The affected person is taught that his or her disorder is a normal reaction of a normal person to an abnormal, i.e. pathogenic, situation (Mitchell & Everly, 1996). The connections between extreme situations and stress reactions are also conveyed with the help of brain physiological models. This is an indispensable step that often already provides relief.

■ Acknowledging the Coping Attempts

Previous attempts to cope with the situation are appreciated, even if they appear to have failed from the outside and the therapy is classified as a joint effort to find more sustainable solutions and establish a new homeostasis.

■ External Stress Factors

Assistance with external stress factors that would require a lot of mental energy during the stabilization phase (funeral, pending court proceedings, expectation of punishment, financial hardship, unprovided for relatives, etc.) requires the involvement of social services and military pastoral care.

2. Processing phase

In the processing phase, **trauma processing takes** place, which in the German Armed Forces Hospitals is carried out exclusively in individual therapy. The following therapy methods are used:

- “EMDR” (Shapiro, 1998; ► Chap. 14),
- Elements of cognitive behavioural therapy (Heiland & Maercker, 2000; ► Chap. 13),
- Imaginative resource installation and Imagery Rescripting and Reprocessing Therapy (IRRT).

In the meantime, controlled studies of the Psychotrauma Centre have shown a significant effectiveness of these procedures (Alliger-Horn et al., 2015; Köhler et al., 2017).

Under the Magnifying Glass

In the processing phase, it is important, on the basis of an inner stability strengthened by resource installation, to enable a confrontation and work through the most stressful aspects of the traumatic experience, to overcome avoidance and to put the experience into an adaptive and rational perspective. This should also take into account the specifics of the peritraumatic operational environment (space alien to the culture, role models in the deployment as helper and fighter, etc.).

■ Third Integration Phase

In the final phase of therapy, the aim is to rethink the significance of the trauma for the self-image and world view in order to develop new future perspectives (trauma integration). Under certain circumstances, new career and life perspectives must be developed, for example, if continued use as a soldier is no longer possible for health reasons. Especially in such cases, trauma therapy can encounter resistance that is difficult to overcome. Soldiers trust that they will be supported by their commanding officer if they suffer damage while performing their duty. If this expectation is disappointed, e.g. because a mission-related PTSD with a corresponding deterioration in the level of function does not lead to the hoped-for acceptance as a professional soldier, this can lead to deep bitterness, which can lead to a chronification of PTSD. The person affected feels that his or her commitment and thus his or her person are devalued, especially in relation to comrades who were not in the mission. He reacts with depression, hatred and psychosomatic disorders. To the burden of the traumatising situation is added the bitter feeling of having been betrayed (Shay, 1998).

Under the Magnifying Glass

In the integration phase, the patient must be supported to sacrifice grief, to accept losses without resigning, to allow forgiveness and self-forgiveness, thus giving room to “traumatic growth”.

In this phase, albeit closely linked to the trauma confrontation, the processing of personal value orientations and their change in the course of the assignment as well as possible moral violations also play an important role.

Case Study: Change in Value Orientations and Development of Moral Injury

A 35-year-old sergeant major and professional soldier has taken part in combat operations during his foreign deployment and has witnessed abuse of Afghan women and children on several occasions during his patrols of Afghanistan. For security reasons, the Operations Centre has always forbidden him to intervene. After returning home, he shows the symptoms of post-traumatic stress disorder in view of his own life-threatening condition. At the same time, however, he also develops feelings of guilt for having injured and/or killed people during the fighting. In addition, he feels anger towards his superiors because they would not have let him intervene against the injustice (mistreatment) he had experienced. As a result, he now increas-

ingly gets into conflicts at home, as he no longer takes military authorities seriously.

In the group therapy, which focuses primarily on moral violations, he learns, also through the exchange with his comrades who are also affected, to evaluate the behavior of his superiors in a more differentiated and understanding way and to understand his anger as a mechanism that harms above all himself. He can also develop this understanding towards himself and subsequently less strict evaluations of alleged own misconduct. At the same time, he can increasingly perceive and also appreciate positive changes in his experience as a result of the commitment, for example a significantly higher value placed on interpersonal and family ties.

Case Study: Sequence of a Trauma Therapy

Cause for Introduction

The soldier, 26 years old, is presented because he collapsed with crying fits after his return from the mission at home. He had expressed panicky fear of going to the barracks. Until then, the patient was a well-motivated and well-judged soldier. Exceptional previous burdens and illnesses could not be determined. The patient was assigned to a supply unit. In his function, he had a lot of contact with the field hospital.

Traumatic Event

In the fourth week of deployment, he had been given the task of handing in the standby planning to the emergency department. It was at this very moment that an ambulance drove up at high speed and brought a small boy lying on a stretcher, whose legs had been torn off, presumably in a mine accident. This led to an encounter in which the child's gaze met that of the soldier. The boy had looked at

him desperately and, seeking help, had stretched out both hands to him. The boy was then carried away through the "sluice".

Experience Processing

The patient had the feeling of having failed and "abandoned" the boy. "*I should have done something*" was the self-reproachful attitude he developed. He tried to distract himself and, although he had hardly drunk any alcohol until then, he now drank up to 10 bottles of beer and 1/2 bottle of whisky per day. He had not asked for help on the spot for fear of being repatriated!

Therapy

After a preparatory meeting, in which stabilisation measures were largely dispensed with, the disruption was dealt with in an EMDR meeting over the next hour. The patient focused on the presentation of the little boy and the outstretched arms. This was associ-

ated with the negative idea: “*I should have done something.*” As positive cognition (goal), the idea was chosen: “*I did what I could do*”.

During the treatment, there was a clear, emotionally charged abreaction (crying fits), which was followed by a completion of the memory. The help on the spot, which was given to the child, came to the fore. This was combined with a distancing on the part of the patient, which he expressed as follows: “*I feel sorry for the child ... that this misfortune has happened to him. But I am not to blame and there was nothing I could have done. There were much more competent helpers on the scene.*”

The patient felt relieved: “*I feel liberated and can laugh heartily again. When I talk about the experience, I no longer feel any*

straining body symptoms. The images are somehow changed, further away.”

In the “Impact of Event Scale – R” (IES-R) there was a cumulative value of 70 points before treatment, which decreased to a value of 3 points after treatment.

Catamnesis

In the outpatient examination 5 months later, the therapy result was stable. In addition, the patient was able to improve the relationship with his fiancée and made new life decisions. A new deployment was planned. The patient continued to feel untroubled and free of symptoms. The point value in the IES-R had dropped to 0. He had a positive attitude towards the new operation.

24.6 Supply Law for Soldiers of the Federal Armed Forces

24.6.1 Damage to Military Service

Federal Armed Forces soldiers who suffer damage to their health during their period of service can claim a **military service injury**, provided that the degree of injury (see ► Chap. 9) is not only temporary but also at least 25%. As a consequence after the end of their military service, they may, on application, receive care, including medical treatment.

- The early presentation of active and former soldiers to the Federal Armed Forces Social Service (► <http://www.personal.bundeswehr.de>) as soon as they are suspected of having a mental illness caused by their deployment is crucial for the smooth running of the application procedure and for the later allocation of benefits.

Soldier Pensions Act (Soldatenversorgungsgesetz ; SVG)

Damage to military service (WDB) is damage to health caused by the performance of military service, by an accident suffered during the performance of military service or by circumstances peculiar to military service (§ 81(1) SVG).

For the recognition of a health disorder as a result of damage caused by military service, **the probability of the causal connection is sufficient**. If the probability required for the recognition of a health disorder as a result of damage during military service is not given because there is uncertainty in medical science about the cause of the identified illness, the health disorder can be recognised as a result of damage during military service with the consent of the Federal Ministry of Labour and Social Affairs; consent can be granted generally (§ 81(6) SVG).

24.6.2 German Act on Employee Benefits

The **Law on the Regulation of Benefits for Special Foreign Deployments (Gesetz zur Regelung der Versorgung bei besonderen Auslandsverwendungen; EinsatzVersorgungsge-**

setzung [Deployment Supply Act], EinsatzVG) of December 2004 and the Law on the Improvement of Benefits (Einsatzversorgungs-Verbesserungsgesetz, EinsatzVVerbG) of December 2011 adapted the pension law to the new requirements of foreign deployments.

The core of these laws is the concept of “accident on the job”. This covers any damage to a soldier’s health that he/she suffers during military operations abroad (“special deployment abroad”) as a result of an accident at work or the special conditions in the area of deployment. If this operational accident leads to a GdS of at least 50%, the operational provision takes effect after the soldier leaves the service. The benefits that are intended to ensure adequate financial provision are listed in a catalogue in the Soldier Pensions Act.

24.6.3 Deployment Reuse Act (Einsatz-Weiterverwendungsgesetz)

Those affected who have suffered serious injury and wish to continue to participate in working life are granted a legal right to continue employment or to be reinstated in a “special type of military service relationship” for soldiers who have already been discharged by the **law regulating reuse after accidents in action** (Einsatz-Weiterverwendungsgesetz, EinsatzWVG) of December 2007. This law applies not only to soldiers, but also to judges, civil servants and federal employees as well as helpers of the Federal Agency for Technical Relief whose earning capacity has been reduced by at least 30% due to an injury during a foreign mission. During a period of protection to restore their health, those injured during a mission cannot be dismissed against their will or be retired. In order to secure continued employment with the confederation or

integration into working life as permanently as possible, they receive the necessary professional qualifications. The law applies retroactively to all mission victims who suffered their injury after 1992.

24.6.4 Appraisal of Damage Caused by Military Service

The medical expert’s first task is to determine which (mental) disorders are present in the proband and whether these health conditions are related to military service (causality question; ► Chap. 9). If this can be affirmed, then a **WDB** is present and, in accordance with the principles of care medicine in social compensation law and in accordance with the law on severely disabled persons, an assessment of the GdS is made, as in the case of other health disorders.

However, the question of causality is not always easy to answer, even in the case of mission trauma. In the case of victims of assassinations, mine accidents, hostage-taking, victim identification or other incidents that have become officially known, it is usually not difficult to reconstruct the experience of a potentially traumatic event. Often, however, soldiers experience trauma in the day-to-day operation of the mission, on patrols, at accident sites, through contact with the local population, so that the psychological stress caused by these experiences is initially also considered normal by them and their pathogenicity only becomes apparent much later. The early documentation of possible psychological “bridge symptoms” is therefore also of particular importance in general medical care.

- It should not be forgotten that PTSD is not the only possible trauma sequelae and that trauma-induced anxiety disorders, depression, somatoform disorders or addiction can also be a possible consequence.

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Torture Survivors and Traumatized Refugees

M. Wenk-Ansohn, N. Stammel, and M. Böttche

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25.1 Epidemiological Aspects and Types of Traumatization

Despite international efforts to uphold human rights, organized state persecution and systematic torture are continued to be practiced in many regions of the world, as well as severe forms of human rights violations to the civilian population in (civil) wars. The majority of people who leave their countries of origin due to persecution and war are internally displaced persons or flee to neighbouring countries; only a minority of these people reach Western countries as refugees.

In international epidemiological studies, the prevalence rates for post-traumatic stress disorder (PTSD) in torture victims and refugees vary widely from 10% (Review: Fazel et al., 2005) to 31% (Meta-analysis: Steel et al., 2009). Recent representative international studies covering the population of torture victims and refugees report prevalence rates of 8–37% for PTSD (Alpak et al., 2015; Slewa-Younan et al., 2015) and 28–75% for depression (Gammouh et al., 2015; Slewa-Younan et al., 2015). In Germany, studies show PTSD prevalence rates of 7–77% in institute-based samples and 16–55% in population-based studies (Bozorgmehr et al., 2016), but no representative studies are available yet. In an older study, 40% of asylum seekers were diagnosed with PTSD shortly after their arrival in Germany (Gäbel et al., 2006), and in a study in a reception centre, the PTSD rate was 27% (Butollo & Maragkos, 2012).

25.1.1 Torture

In the Convention against Torture and Other Cruel, Inhuman or Degrading Treatment or Punishment (United Nations, 1984), torture is defined as follows.

Torture

“... any act by which severe pain or suffering, whether physical or mental, is intentionally inflicted on a person for such purposes as obtaining from him or a third person information or a confession, punishing him for an act he or a third person has committed or is suspected of having committed, or intimidating or coercing him or a third person, or for any reason based on discrimination of any kind, when such pain or suffering is inflicted by or at the instigation of or with the consent or acquiescence of a public official or other person acting in an official capacity...” (United Nations, 1984).

Among the “man-made disasters”, torture is one of the most damaging forms of intentional and in most cases purposely planned systematic violations. Although 162 out of 197 countries have ratified the Convention against Torture (as of January 2018, OHCHR, 2018), torture was still being practiced in 122 countries around the world in 2015 (Amnesty International, 2016). Even some modern constitutional states do not hesitate to use torture; in the name of “war on terror”, torture was practised various countries, such as in Iraq in Abu Ghraib prison or in Guantanamo, USA. Miles (2006) was able to show that the use of psychological torture methods, the “harsh interrogations”, was systematically researched in the USA and refined by doctors and psychologists. Similarly, systematic measures of “psychological decomposition” were used to torture opponents of the regime in the former GDR (Behnke & Fuchs, 2010; Maercker et al., 2013).

Systematic torture generally involves a combination of physical torture (e.g. hanging, forced postures, electric torture, water-

boarding) and psychological torture (e.g. mock executions, overstimulation or stimulus deprivation, isolation). Also, forms of humiliation and violence are regularly used, that are particularly taboo and dishonouring in the respective culture of the victims, e.g. sexualised violence and torture against women from traditional and Muslim societies (Wenk-Ansohn, 2002). Female and male victims of sexualised violence can be found among survivors of torture and violence in wars and civil wars from all areas of origin, as this form of violence is the most degrading form of humiliation and dishonour in all cultures (Gurris, 1995). In a study (N = 154) by Busch et al. (2015), sexualised torture was described in 78% of the women and 25% of the men that were examined. Due to the particular tabooing, epidemiological data on this issue are generally hardly available. When tortured persons die under the torture, they are usually described to the public as “disappeared”, which means that the states evade responsibility. This creates endless psychological strain for the surviving relatives (Heeke & Knaevelsrud, 2015; Preitler, 2006), as they can neither bury the loved ones nor mourn the loss.

Systematic torture has special aspects compared to other forms of traumatisation (Gurris, 2003b).

Specific Aspects of Systematic Torture

- By other people planned and intentionally
- The vital threat
- Extreme humiliation
- Prolonged and repeated exposure over long periods
- Inability to act, helplessness and dependence
- Possible betrayal of companions, existential threat to family members or political friends
- Feelings of guilt (especially when witnessing the torture of others, death of

fellow prisoners, extension of persecution measures on family members)

- Deep shame (due to humiliation and loss of control, especially after sexualised torture)
- Socio-cultural uprooting and alienation
- Continuing stress due to persistent persecution, living in the underground or a situation of flight and exile
- Persistent shaking of self-confidence, trust in others and the world
- Loss of coherence
- Loss of self-efficacy

“Torture places the individual in a situation of extreme helplessness and vulnerability, which sooner or later leads to the breakdown of important emotional, cognitive or behavioural functions” (Fischer & Gurris, 2000, p. 468). The traumatising effect results not only from the traumatic situation itself and the peritraumatic reaction directly connected to it, but also from its lasting significance for the individual in his or her personal, social, historical and political context, as well as from the resulting social and material consequences (Gurris & Wenk-Ansohn, 2013).

- Torture is a systematic and intentional damage to the personality of the victim and ultimately aims to damage the core of the personality (Drozdek & Wilson, 2004; Maier & Schnyder, 2007).

It means a humiliation and degradation deeply affecting the personality structure and social relationships; it influences family, society and subsequent generations (Kira, 2002; Weierstall et al., 2011). Studies on the second and third generation of Holocaust survivors (Kellermann, 2001), in Iraq (Fritzemeyer, 2017) and with refugees from Iraq and Lebanon (Daud et al., 2005), show that torture can create a transgenera-

tional problem. In addition to the individual consequences, the effects of traumatisation in the social system, especially in the family, must therefore be considered. Children can be parentified and overburdened, and parents may keep children close to themselves because of their own fears and restrict their range of movement or show aggressive outbursts.

25.1.2 War Trauma

Refugees have often experienced prolonged and repeated traumatisation caused by other persons. This “type” of traumatic events (see specification of traumatic events according to Maercker, 2009) is associated with an increased probability of developing trauma sequelae. A “dose–response effect” was found, which shows that a higher number of war traumas is associated with increased distress and a higher probability of diagnosing trauma sequelae (Steel et al., 2009). War traumas often include not only the experience of bombing and attacks with weapons, but also torture-like systematic violence – often in the form of sexualised violence.

25.1.3 Stress Due to Flight and Persistent Strains in the Host Countries

In most cases, refugees have experienced potentially traumatic situations not only in their country of origin but also during their flight and are in a persistent stress situation in the host country. These sequential traumatisations have a significant impact on the development of trauma sequelae. The model of sequential traumatisation (Keilson, 1979) continues to be helpful for understanding the development of mental disorders in torture victims and traumatised refugees. Keilson distinguishes 3 traumatic sequences:

- Sequence 1: Beginning of persecution characterised by increasing repression or a war situation;
- Sequence 2: Time of persecution until flight, i.e. a phase with a high risk of traumatic events;
- Sequence 3: Phase after the end of the persecution.

It was shown that sequence 3 is crucial for the course of mental disorders. The course of the disorder is highly dependent on contextual factors after the traumatic experiences. In the case of traumatised refugees, this is the phase in exile. In this phase, so-called post-migration stressors have a considerable influence on psychopathology (Porter & Haslam, 2005). Due to the political situation in many EU countries (e.g. Dublin procedure), refugees are confronted with increasingly long-term and serious post-migration stressors. In Germany, for example, the stricter asylum laws that have been in force since 2016 (see BAMF, 2018) have led to the increased number of residence titles with restricted rights (e.g. subsidiary protection) and higher rejection rates, resulting in longer asylum appeal processes. These legal decisions have an impact on the living situation of the refugees in terms of their social situation (e.g. restricted family reunification, longer stay in refugee shelters). The future prospects remain uncertain, and a feeling of constant dependence arises. It has been shown that post-migration stressors such as uncertainty about residence (Nickerson et al., 2011b), fear of deportation (Herlihy et al., 2002) and the hearing process itself (Schock et al., 2015) are associated with an increase in PTSD symptoms. It should be noted that there are first indications that new traumatisation and post-migration stressors in the host country have a comparable influence on the increase in psychopathology (Schock et al., 2016). Retraumatising experiences (► Sect. 25.4.1.7) contribute to the fact that a processing or recovery process is impeded (Brandmaier & Ahrndt, 2012; Car-

swell et al., 2011; Herlihy & Turner, 2007) and a chronification of trauma-reactive disorders is facilitated (Laban et al., 2004, 2008).

25.2 Psychological Consequences of Traumatization and Flight

Torture victims and people who have fled war zones often suffer complex post-traumatic sequelae and high levels of comorbidity (especially depression with pronounced suicidal tendencies; anxiety and obsessive-compulsive disorders; severe dissociative disorders; impulse control disorders; substance abuse; somatoform disorders, pain disorders). Below is a brief description of the stress-related mental disorders that can arise as a result of stress or trauma, with reference to the group of torture victims and refugees.

25.2.1 Posttraumatic Stress Disorder

PTSD symptoms in torture victims and refugees are usually characterized by a high severity of symptoms (Spiller et al., 2016; Stammel et al., 2017). The described intrusions usually refer to the most threatening and emotionally stressful sequences. Triggers of these intrusions refer to these sequences (e.g. New Year's Eve firecrackers, basements, narrow corridors, uniforms).

In many cases, the full-blown picture of PTSD does not yet appear during flight, but often shows a delayed onset after arrival in the host country. One explanation for this could be that the symptoms are suppressed beforehand due to the ongoing (surviving) stress or are not yet noticed.

25.2.2 Complex Post-Traumatic Stress Disorder (CPTSD)

For people who have been exposed repeatedly or over a long period of time to man-

made trauma, Herman (1992) coined the term “complex PTSD” (► Chap. 3). The complex and chronic psychological trauma consequences (Cloitre et al., 2011; Herman, 1992) in torture victims and refugees include disorders of regulation of the affective arousal level, disorders in relationships with other people, changes in attention and consciousness, psychosomatic disorders and changes in personality and its systems of meaning. These were listed in DSM-IV as “disorders due to extreme stress, not otherwise specified” (DESNOS, American Psychiatric Association, APA, 1996), but are no longer included in the current DSM-5. After long lasting trauma-reactive disorder processes, torture victims and refugees may show symptoms that were once classified in the ICD-10 as personality change after extreme stress (ICD-10 F 62.0; Dilling et al., 2011), but are no longer used in the ICD-11. In ICD-11, complex PTSD (CPTSD) is included as a separate diagnosis and is intended to be a sibling diagnosis to PTSD. CPTSD should, in addition to the “classic” PTSD symptoms, include symptoms from three other areas (difficulties in emotion regulation, negative self-concept, interpersonal difficulties). Data on the prevalence of CPTSD in torture victims and refugees are rare to date. Current prevalence rates according to ICD-11 diagnosis vary from 3% (Silove et al., 2017; Tay et al., 2015) to 33% (Nickerson et al., 2016).

25.2.3 Prolonged Grief Disorder (PGD)

People who have lost one or more loved ones in their country of origin or during flight often show clinically significant symptoms. Until now, coding a prolonged grief disorder has only been possible with auxiliary diagnoses (e.g. adjustment disorder F43.2 or other reaction to severe stress F43.8). In the ICD-11, however, there will probably be an independent diagnosis for this disorder,

which is characterised by a persistent mental attachment (or persistent longing) in relation to the deceased person, as well as a deep emotional suffering. The duration of this grief goes beyond the respective culturally or religiously accepted grieving phase, but extends at least over a period of 6 months. Exact prevalence rates of PGD (according to ICD-11) in refugees are still missing. Older studies, however, indicate that this disorder occurs frequently (31–54%; Craig et al., 2008; Momartin et al., 2004).

25.2.4 Adjustment Disorder

In terms of differential diagnosis, an adjustment disorder (ICD-10 F 43.2, Dilling et al., 2011) should also be considered for refugees who have experienced a stressful phase of life in their home country and during their flight and who are simultaneously in the phase of adaptation in exile (Sluzki, 1979). This diagnosis, often used as a “residual category”, will be newly and more clearly defined in ICD-11 (► Chap. 5). Here, the dysfunctional symptomatology is triggered by the presence of a psychosocial stressor (or loss of resources). For the cohort of torture victims and refugees, this loss of resources is manifold and serious (including loss of social structure, loss of family, loss of financial and social status). For example, refugees in the host country may experience symptoms of maladaptation, with symptoms of anxiety and depression and mental preoccupation, as well as difficulties in coping with a new situation, with or without PTSD. Prevalence rates on adjustment disorder in refugees and victims of torture are scarce. An older study shows prevalence rates of 6–40% among refugees in post-conflict regions (Dobricke et al., 2010).

25.3 Need for Psychosocial and Therapeutic Care

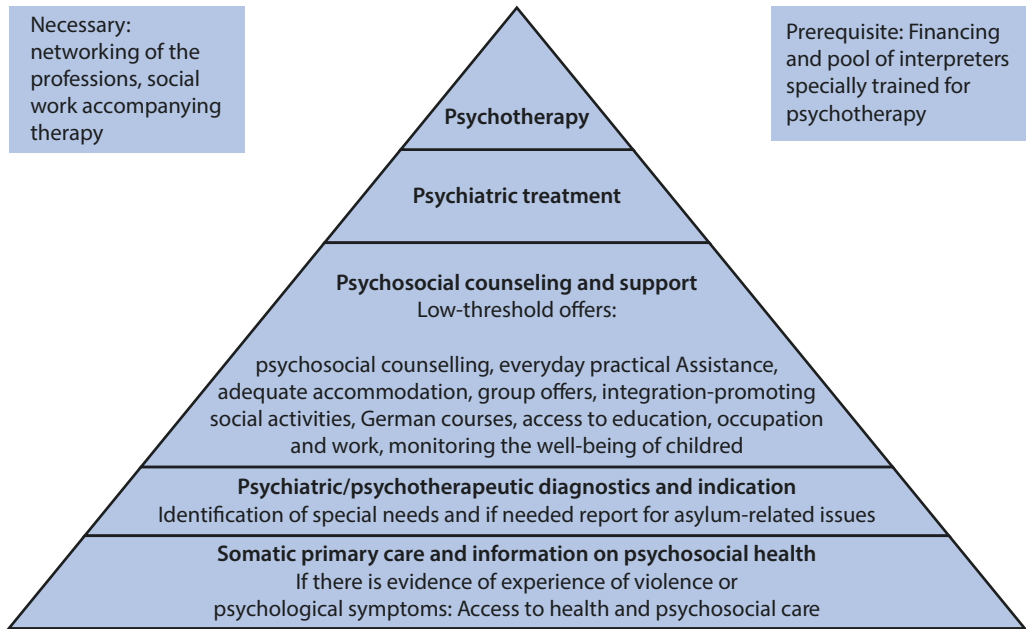
Due to the severe psychological burden caused by traumatic experiences in the country of origin and during flight, as well as the often continuing impact of serious post-migration stressors, the earliest possible access to adequate health care at various levels (i.e. social, medical, psychological) is recommended. Therapeutic services should be adapted to the needs of the respective legal and social context and phases of the migration process. ■ Figure 25.1 shows different levels of health care, based on the intervention pyramid for humanitarian disasters – IASC Guidelines (Inter-Agency Standing Committee, 2007), a graduated approach to mental health and psychological support recommended by the UNHCR, here adapted to the conditions in a country with a developed health care system (Wenk-Ansohn, 2017). With the model of care levels, it is important that, if necessary, an allocation can be made from one care level to the other in the sense of a “stepped care model” (NICE Guidelines, NICE, 2009); parallel, coordinated therapeutic interventions at the different levels are often also useful.

It should be emphasised that adequate material and social basic care, i.e. covering “basic needs”, are the basic prerequisite for medical and psychotherapeutic measures to be effective.

► Achieving secure living conditions is a prerequisite for psychological stabilisation after traumatic experiences.

The following framework conditions are central to cope with traumatic experiences:

- Security,
- Sufficient material conditions,



■ **Fig. 25.1** Elements of adequate health care for refugees (see Wenk-Ansohn, 2017)

- Social recognition,
- Possibility of social contact and autonomous action,
- Hope and future prospects.

Most traumatised refugees do not have a secure residence when they are admitted for treatment, that often lasts for years. Because of their psychological symptoms, traumatised refugees are often not able to present their persecution in a “complete, consistent, detailed and vivid” manner, as demanded by the authorities in the asylum procedure (Birck, 2002). So far, the early identification of vulnerable groups by independent, specially trained health professionals has only taken place in some regions of Germany, as is actually required for the implementation of the Reception Directive of the European Union (Europäische Union, 2013). Overall, a large proportion of particularly vulnerable

refugees are not identified in the initial asylum procedure or by the health system. These refugees are often for years in the middle of legal proceedings with uncertain future prospects. In view of this situation, the qualified expert assessment of trauma-related and other mental health problems in refugees or the preparation of an expert statement/psychological or medico-legal report (mlr) for refugees undergoing treatment is of great importance.

The diagnosis of trauma sequelae can, if necessary, support the statements on a political prosecution, describe the need for treatment and, if serious health risks are to be expected in the case of forced return, support the recognition of obstacles to deportation (Haenel & Wenk-Ansohn, 2004; Wenk-Ansohn et al., 2013; Scheef-Maier & Haenel, 2017). In 2003, the German Medical Association released standards for assess-

ment based on the United Nations Istanbul Protocol (United Nations, 2004; in German translation: Frewer et al., 2009) and the proposals of the working group “Standards for the Assessment of Psychologically Reactive Trauma Consequences in Residence-Related Procedures” (Gierlichs et al., 2012) together with a corresponding certified curricular training. The training and other requirements for assessors have also been adopted by the Chamber of Psychotherapists and the German-speaking Society for Psychotraumatology (see homepage DeGPT). This is a complex subject with legal questions on the one hand and professional requirements on the other. Shorter reports according to minimum standards can also be helpful. In 2007, there was a landmark decision (decision of German Federal Administrative court, September 11, 2007), which determined which minimum requirements must be met by the “substantiated presentation of an alleged PTSD” in order to initiate further obligations of the court to investigate the facts (Deutscher Anwaltsverein, 2008).

25.4 Psychotherapy with Torture Victims and Refugees

- ▶ Torture victims and traumatised refugees from war zones need treatment that takes into account both the specific traumatisation and the stresses and strains of exile.

The requirements for a treatment concept for torture victims and war traumatised persons living under exile conditions are manifold. They include trauma-therapeutic expertise, a multi-professional and methodologically broad range of treatment and support, interdisciplinary cooperation, cultural sensitivity and the use of interpreters (Maier & Schnyder, 2007; Gurriss & Wenk-Ansohn, 2013). The aim of such a multidimensional treatment concept is to open up individually adapted therapeutic approaches

as well as rehabilitation measures, taking into account the respective disorder, limitations of everyday functions, contextual conditions and cultural imprints as well as the level of education. Ultimately, the aim of a treatment process is not only to improve the symptoms, but also to provide support in the rehabilitation process and the greatest possible participation in the host society.

Most treatment is provided in psychosocial and treatment centres for refugees, which offer an integrated multi-professional approach (for centres in Germany see: ▶ <http://www.baff-zentren.org>, for other countries see ▶ irct.org). In the field of regular outpatient care and in outpatient departments of institutes, it is generally not possible to offer such a comprehensive and integrated range of care that takes into account the various problem areas. Nevertheless, a meaningful approach can be achieved through networking. Close cooperation with legal and social counselling centres is necessary in order to identify residence and social issues that influence the current needs and motivation. Trauma-focused treatment is not indicated in highly unstable situations. Here, first of all, a stabilisation of the external framework is necessary and – in addition to social work – psychiatric or psychotherapeutic crisis intervention and support.

In their complementarity, different forms of therapy ensure a variable and lively setting and allow the use of forms of expression and processing at different levels and the adaptation of the procedure to different individual and cultural imprints and educational levels. In practical work, basic cognitive-behavioural or psychodynamic methods are suitable, which can be supplemented, for example, by techniques of systemic therapy (Hanswille & Kissenbeck, 2008) or imaginative methods (Reddemann, 2004). Trauma-specific techniques and modules are integrated into the therapeutic process depending on the training background of the therapist and suitability for the spe-

cific patient, such as narrative exposure therapy (NET) (Schauer et al., 2005), eye movement desensitization and reprocessing (EMDR) (Hofmann, 2009; ► Chap. 14) or the screen technique (described in Gurriss & Wenk-Ansohn, 2013). Further useful components of multimodal trauma therapy are, according to experience, body-oriented and creative forms of therapy, such as physiotherapy, pain therapy with biofeedback (Liedl et al., 2011), concentrative movement therapy (Karcher, 2004), music therapy or art and design therapy. Research has shown that these multimodal approaches lead to significant reductions in symptoms (Stammel et al., 2017; van Wyk & Schweitzer, 2014), but there is still a lack of information on the contribution of single treatment components to the reduction of symptoms.

The efficacy of treatment approaches for refugees also seems to be influenced by the current life situation. In countries where the refugees face complications related to cultural and linguistic aspects and an increased risk of social marginalisation, these complications influence the course of treatment (Sandhu et al., 2013). Treatment studies with refugees in Europe and the US (meta-analysis, Nosè et al., 2017) showed an efficacy of NET in reducing PTSD and depressive symptoms. This supports older meta-analyses, which showed that NET is also effective in other settings in the treatment of refugees (Crumlish & O'Rourke, 2010; Gwozdziwycz & Mehl-Madrona, 2013), as well as for the treatment of torture victims (Patel et al., 2014). In worldwide studies, trauma-focused therapy approaches have generally been shown to be effective (Nickerson et al., 2011a).

While psychoeducation, skill training, resource work, sports and relaxation and mindfulness training as well as work with creative tools or focus groups, on questions such as life in exile and interpersonal skills,

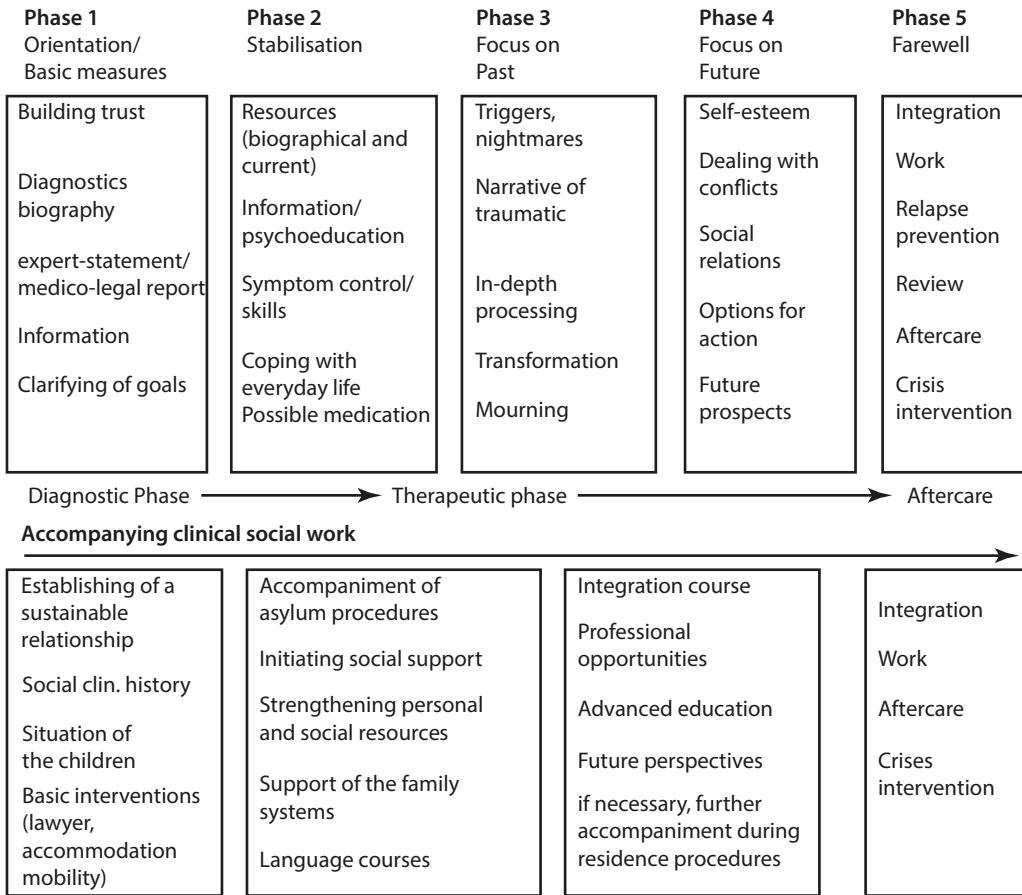
can take place very well in group settings, experience shows that trauma-focused work is better done in individual settings, since the experiences of torture and violence and the emotions associated with them are usually extremely full of shame.

The therapeutic procedure should be flexibly adapted to the individual development of the traumatic process and the individual process of coping with the traumatic impact, the specific constellation of symptoms (Cloitre et al., 2011), the current social life and the culturally shaped possibilities – resources and possible restrictions. The use of rigid, manualised techniques usually is limited (Ottomeyer, 2011) and does not meet the needs of those affected. A culturally sensitive approach, transparency and the consideration of the needs of control of traumatised people as well as a stable therapeutic relationship, which should be regularly reflected upon through supervision and intervention, are central.

25.4.1 Steps of Trauma-Oriented Treatment for Victims of Torture

A procedure that offers certain focal points in the course of treatment (Cloitre et al., 2011; Kruse et al., 2009) has proven suitable in the work with traumatised refugees (► Fig. 25.2).

The phase model is not to be applied rigidly, rather elements of other phases are also useful in each phase. In particular, due to interim crises, e.g. as a result of difficulties in the proceeding regarding the right of residence, stabilising therapeutic and social work are necessary over and over again. The therapeutic steps and modules should be adapted to the individual course of the post-traumatic process, the coping style and the requirements of coping with life in the current context (Wenk-Ansohn, 2017).



■ Fig. 25.2 Therapy phases – components of trauma-oriented treatment (phase model). (Modified according to Meichenbaum, 1994; Drozdek & Wilson, 2004)

25.4.1.1 Initial Interview

A detailed initial conversation in the first session with the support of an interpreter (Wenk-Ansohn, 2017) is recommended in order to decide together with the patient whether psychotherapeutic treatment is likely to be helpful for the special needs.

Initial Interview: Setting with a Professional Interpreter

Topics to ask about and for consideration of the interviewer:

- Complaints
- Key biographical data – potentially traumatic background

- Current stressors
- Social situation/residence situation; is a lawyer involved
- Motivation to contact the treatment facility; preliminary information
- Previous diagnostics/treatments
- Suspected diagnosis – no diagnosis – other problem?
- Unstable life situation or other external factors in the foreground?
- Therapy motivation?
- Treatment indication (general – current)?
- What type of action/treatment is likely to be indicated? Which mea-

asures can I offer and which not? Eventually concluding consultation and, if necessary, referral.

- In case of treatment indication: Is there a need for acute care or for long-term psychotherapeutic treatment including monitoring of the rehabilitation process?

The result of an initial psychotherapeutic interview can then be the indication of various measures by the psychotherapist himself/herself or by the network.

Indicated Measures Can Be

- Carrying out a diagnostic phase and – in case of substantial results – preparing an expert statement/psychological or medico-legal report for the proceedings regarding the right of residence
- Referral for medical diagnosis and care; if necessary, referral for documentation of injury traces by doctors trained in forensic medicine or according to the Istanbul Protocol (United Nations High Commissioner for Refugees, 2011)
- Referral to psychiatric differential diagnosis and possibly treatment; in case of suicidal tendencies, severe depression or significant dissociative or psychotic symptoms, possibly hospitalisation
- After diagnosis and preparation of a possibly required expert statement/psychological or medico-legal report: further psychosocial support through low-threshold counselling and group

offers or practical support by (possibly voluntary) helpers

- Crisis interventions or predominantly stabilisation-oriented short-term psychotherapy and possibly pharmacotherapy to alleviate symptoms in a still ongoing stress situation (e.g. considerably unstable residence situation)
- In the case of severe chronic symptoms and possibly simultaneously limited ability or motivation for self-reflection: long-term (low-frequency) supportive psychotherapeutic, psychiatric or social therapeutic treatment, if necessary installation of individual case help. A day clinic treatment or close social care with integrated psychotherapy would possibly be more effective here, but such (interpreter-supported) services for migrants are hardly available to date.
- Trauma-oriented psychotherapy (usually a long-term therapy process in individual setting plus group setting if available)
- Accompanying psychotherapeutic measures, autonomy-promoting social work is generally useful for the areas: residence, accommodation and material situation, access to social activities, German and job-oriented courses; monitoring of the possible need for help of children who have arrived with the patient. It is advisable to ask adult patients who arrived with children about the welfare of the child and, if necessary, to arrange parental counselling, diagnostics with appropriate specialists or assistance from the youth welfare system.

Case Study: Mr. S., Syrian Refugee

Mr. S., a 29-year-old Syrian who has been in Germany for 1.5 years, was registered at the treatment centre for torture victims and traumatised war refugees by a social worker working in the refugee shelter.

In the first interview, he appears controlled and reserved. He reports on the history of bombings. Asked about his complaints, he reports that he can hardly concentrate during the German course, is restless, irritable, cannot fall asleep for hours and then wakes up again and again, drenched in sweat. Asked about bad dreams, he affirms and mentions that the same horrible contents occur again and again. Even during the day sometimes “*these images*” would come into his mind, “*sometimes I have the feeling that I am still in Syria*”. Asked about triggers for

memories: when he hears aircraft noise or when there is a loud bang or when he sees police. Recently, when he was standing in a long corridor at the social welfare office, “*suddenly this narrowness*” (goes out of eye contact, is petrified for a minute, then comes back into contact when addressed). When asked, he confirms that he had been imprisoned and had experienced torture. Since then he would have had nightmares.

Regarding the current situation, he reports that he is in the process of re-opening his asylum procedure after having been granted only subsidiary protection. A major problem, he said, is that he has not been granted international protection and thus may not be able to bring his family together for years.

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25.4.1.2 Acute Treatment Versus Long-Term Treatment

The need for treatment and thus the therapeutic procedure differ, depending on the phase of migration and the associated primary stressors. Experience in recent years has shown that it makes sense to initially offer acute or short-term therapy (duration approx. 6–9 months) to newly arrived refugees or refugees still living in a very unstable social and residence situation (Wenk-Ansohn, 2017). Taking into account emergency psychological and trauma therapy aspects, such treatment offers immediate psychotherapeutic help, which is combined with psychiatric medication and social work support if necessary. After a diagnostic phase, in which an initial narrative of the biography is also developed in an overview, psychotherapeutic interventions usually focus on dealing with current stress and trauma-associated triggers as well as dealing with symptoms with psychoeducational (Liedl et al., 2010) and skills-oriented elements (Koch et al., 2017). If necessary, after the diagnostic phase, an

expert statement (also called medico-legal report) will be prepared for the proceeding regarding the right of residence, in order to support a stabilisation of the external situation as soon as possible.

Individual sessions can be combined with group sessions for acute treatment. Such acute treatment can have the effect of achieving psychosocial stabilisation and a recovery process can begin. The chronification of psychological symptoms is reduced and paths towards rehabilitation and integration into the host society are made possible. A longitudinal study with patients in an acute programme shows a significant improvement in symptoms of PTSD, anxiety and depression (Wenk-Ansohn et al., 2018). At the end of the acute treatment, it can be clarified with the patients whether further trauma-focused treatment is indicated and preferred at the current stage of the migration process or whether other steps are more important, such as participation in vocational preparation training. In the case of chronically complex traumatised persons and in the case

of already relatively stable residence conditions, a long-term psychotherapy process should rather be intended from the beginning, which also aims, after an initial phase of trust-building and stabilisation, to process the traumas as far as possible, develop coping strategies and open up new perspectives. Particularly in cases of violent loss or disappearance of close relatives, after sexualised torture or wartime violence (Wenk-Ansohn, 2002), or when dealing with perpetrators, treatment is often lengthy. Also in the case of pre-traumatic psychological problems, longer psychotherapeutic treatment is often necessary (Wenk-Ansohn, 2017).

25.4.1.3 Diagnostics and Basic Measures

Components of the Diagnostic Phase (5–10 Sessions) After Admission

- Clinical psychological and if necessary psychiatric diagnostics
- If required, general medical diagnostics and documentation of eventual physical traces of torture
- Psychological test diagnostics
- Social anamnesis
- Start with initial social work interventions
- If necessary and if there are substantial findings: Preparation of an extensive medico-legal or psychological report or a shorter expert statement for the proceeding regarding the right of residence
- Joint decision-making with the patient on treatment planning

In addition to clinical diagnostics, this first stage of treatment includes an assessment of the previous course of symptoms and psychological test diagnostics. Likewise, the reconstruction of the biography including the traumatic events should be worked out in this phase, as far as this is possible and ethically justifiable at this time – and necessary for a possible report. This procedure presupposes careful handling (Pielmaier & Maercker, 2012) as well as good skills in early recognition and in dealing with dissociative reactions and must be accompanied by initial therapeutic support and psychoeducational interventions. The pressure of having to prepare an expert statement/psychological or medico-legal report for submission to the authorities is problematic for the early phase of the interaction and the therapeutic relationship and is associated with professional and ethical problems (Gurris, 2003c). At the same time, however, this also offers the possibility of a first verbalization (“first disclosure”) and thus an important step for the treatment (Gangsei & Deutsch, 2007; Gurris & Wenk-Ansohn, 2013). If the patient succeeds in overcoming his or her avoidance, traumatic experiences are often verbalized for the first time during the diagnostic phase and a process of integrating traumatic fragments in the overall biography begins. A narrative is created that is recorded in writing (see Testimonial Therapy; Cienfuegos & Monelli, 1983; Jørgensen et al., 2015). The material can then be part of the expert statement/psychological or medico-legal report in the asylum procedure and at the same time be a documentation for the patient.

Continuation of the Case Study Mr. S.

In the diagnostic phase, the suspected diagnosis of PTSD is confirmed, accompanied by depressive symptoms. During the interview, Mr. S. is limited to negative thoughts about himself and the future. Mr. S. reports to have had a happy childhood, worked as a craftsman after school, married at the age of 22, he had a 5-year-old daughter. In 2012, he had been arrested on the charge of supporting the opposition. Regarding torture he reports different forms of torture, such as beatings, electric shocks, hanging. Some of his friends had died in custody, and even today he hears the screams of the tortured people in his dreams, wakes up from them. He himself had been bought free after 3 months. In the following period, he reports to have been repeatedly detained at checkpoints and asked to collaborate with the regime.

His house had been bombed, his brother had been killed (cries, apologizes). He had fled with the hope of being able to catch up with his family as quickly as possible in a safe way. At the moment, he is very afraid for his wife and daughter, he has heard that his town is being bombed again. He currently has no telephone connection to them (cries). Sometimes he thinks about going back to Syria. Asked whether he had reported on his detention at the hearing in the asylum procedure at the Federal Office, he said that he had mentioned this, but that in the notification of decision is written that he had not been believed. At the end of the diagnostic phase, a psychological and medical expert statement documenting psychological and physical consequences of torture is written for his asylum procedure.

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25.4.1.4 Psychological Test Diagnostics

The use of questionnaires and/or standardised and structured interviews to assess mental health is challenging for victims of torture and traumatised refugees, but is however possible and recommended. It should be mentioned here that the collection and acquisition of information regarding mental symptoms can have different objectives (e.g. recording of current symptoms, monitoring symptom changes over time, supporting the decision on the diagnosis). Different instruments are used to operationalise the respective objective (self-assessment questionnaire, external assessment scales, interviews, behavioural observations).

The challenges in test diagnostics for torture victims and traumatised refugees can be divided primarily into 2 categories:

■ Language

Adequate recording and exploration of the symptoms by psychodiagnostic procedures

requires the use of qualified interpreters or the use of instruments that are already translated into the patient's language. It should be pointed out that ad-hoc translations during the diagnostic process should be avoided if possible, as this can lead to inaccurate translations and specific concepts may be translated incorrectly, which leads to a loss of validity.

■ Culture

The perception and experience of psychological symptoms are also influenced by the cultural background of the person. However, it should be noted that "culture" does not produce stereotypical symptom manifestations, but rather that these symptom manifestations are characterised by individual variances (e.g. gender, age, education). The challenge is therefore to understand diagnostics as an open exploration process. Following on from the concept of "culture", the diagnostic instruments per se represent a challenge in a transcultural set-

ting, since they were developed on the basis of Western concepts of disorders and also validated in Western samples. For adequate application in non-Western contexts, first of all a linguistic adaptation (i.e. independent back and forth translation) is required, and in a second step, validation and, if necessary, cultural adaptation. Currently, however, hardly any sufficiently validated questionnaires are available in the various languages. The development, validation and free provision of such instruments for practitioners are desirable and are currently being aimed at.

In the practical implementation of psychodiagnostics, there are specifics and challenges, which are merely listed in the following (for a more detailed overview, see Stammel & Böttche, 2017; Böttche & Stammel, 2018).

■ Preparation

The diagnostic session should be announced in a timely manner. This includes, on the one hand, the provision of information about the course of the session, i.e. the duration (usually 50–100 min) and the content. Since obtaining information may remind of interrogations during torture or hearings during or after flight (e.g. at borders, asylum hearings), it is also important to explain the purpose of the diagnostic session clearly and comprehensibly beforehand.

The literacy level should also be assessed. Especially when answering questions using rating scales (i.e. multi-point rating scales such as “never”, “often”, “sometimes”, “mostly”, “always”), non-literate persons often find it difficult to classify their symptoms. Visualised rating scales in the form of differently sized circles or other geometric shapes often help here.

Depending on the literacy level (and the presence of translated instruments), the presence and involvement of the interpreter is also necessary.

■ Test Diagnostics Session

During the diagnostic session, as with other patients, various problems may arise that require appropriate general psychotherapeutic procedures:

- Short-term severe stress until decompensation or dissociative states;
- Items are not understood;
- Rumination is classified as intrusive experiences;
- Answers too detailed, containment of the patient is necessary;
- Answers are only given in extremes (motivation, cultural linguistic customs, etc.);
- Different information for clinical anamnesis and test diagnosis.

25.4.1.5 Stabilisation and Resource Work

In the initial phase of therapy (and repeatedly in the course of therapy), it has proven to be effective to focus on emotion-regulating, control-restructuring, desensitizing and resource-activating interventions.

Proven Stabilizing Treatment Steps

- Structuring everyday life and promoting activity, encouraging self-care
- Psychoeducation in individual or group settings (Knaevelsrud & Liedl, 2007)
- Identification of symptom triggering conditions in everyday situations, dealing with triggers
- Skills training (Koch et al., 2017; Sendera & Sendera, 2007), mindfulness training
- Practice of self-soothing procedures (e.g. various forms of relaxation, stabilizing body work [Karcher, 2004]), physical activation
- Sleep hygiene and possibly sleep-promoting antidepressant medication

- Symptom-oriented methods of pain control and management (Gurris, 2003a)
- Strengthening the ego functions in dealing with current everyday conflicts, self-management
- Support of self-determined action in the social environment, “empowerment”
- Reviving and anchoring of pre-traumatic resources, e.g. through

biography work, guided imaginative journeys and imaginative techniques (Gurris, 2005; Reddemann, 2004), resource work with EMDR (Korn & Leeds, 2002; Rost, 2008)

- Acknowledgment and therapeutic use of introduced metaphors, exploration of traditional rites
- Acknowledging feelings of grief, e.g. loss of home, family structures, cultural environment, property, etc.

Continuation of the Case Study Mr. S.

The psychiatrist prescribes Mr. S. a sleep-promoting antidepressant medication with mirtazapine, which he takes for several months. In addition to individual therapy, Mr. S. participates in a psychoeducational group for 12 sessions, in which progressive muscle relaxation is also practiced. In the group, he gradually overcomes his timidity. The social worker motivates Mr. S. to take part in a German course again. In the individual therapy, the first 10 sessions focus on the following contents:

- Development of a therapeutic working relationship;
- Structuring of everyday life, sleep hygiene (e.g. evening walks, no looking at pictures from home on the Internet in the evening);

- Dealing with trauma-associated triggers, reorientation exercises;
- Resource work, validation of skills, evoking and anchoring of positive childhood memories using the lifeline (manualised in Schauer et al., 2005);
- Mourning for the loss of his brother and for leaving the family.

News of bombings in his home area repeatedly leads to crises, in which he sometimes visits the centre without an appointment to share his worries, to find someone to whom he can communicate and who can give him support in all the fear.

25.4.1.6 Trauma-Focused Treatment

The necessity of integrating the extreme traumatic events into the biographical narrative of those affected is emphasised across all therapy schools. This means that avoidance and dissociation should be resolved, as far as possible in each case, in favour of the gradual empowerment to expose oneself to the traumatic images and memories in a conscious and controlled manner. The associated feelings should be admitted and

verbalised in a bearable form and a new position in relation to the experience should be worked out. The trauma-confronting work is only started when patient and therapist are sure that sufficiently strong resources have been “established”.

- Trauma exposure in torture victims and severely traumatised war victims should only take place if there is sufficient stability of the external and internal situation and with the patient’s consent and if

the therapist–patient relationship is sustainable. It should not be carried out in psychosis-near conditions or in cases of suicidal tendencies.

Depending on the therapeutic background, different forms of trauma-focused work are used. If, in the diagnostic phase, a rope symbolizing the life line was used in the reconstruction of the biography, this work can be taken up again in the later course of therapy for trauma exposure within the framework of a therapeutic procedure based on NET (Schauer et al., 2005; ► Chap. 16).

In addition to narrative processing, “screen work” or “screen technique” (Sachsse, 2008; Putnam, 1989) is a proven possibility for trauma-focused work. Using this technique, traumatic events are viewed as in a film and a narrative is created at the same time. The screen technique is based on Putnam (1989) and was further developed by Gurriss (2003b) as a multidimensional imaginative-narrative exposure. At its core, it is a flexible imaginative form of approxi-

mation and distancing, which is carried out imaginatively and at the same time narrative-meaning-making on changing levels of experience and behaviour. While the patients are encouraged to approach the trauma scenes imaginatively (projected onto an imaginary screen) in a detailed and continuing manner, they can use various previously learned distancing techniques that enable controlled relief and prevent flooding at the same time – e.g. reducing the size of the screen, switching to a dynamic resource image.

Imaginative-narrative trauma-focused techniques, which make proximity and distance to the painful events and images controllable for the affected person, enable a careful reconstruction of memories, supported and deepened by the therapist, involving various channels of perception and gradual elimination of dissociation, as well as the processing of trauma-related emotional and cognitive schemata. This results in a composition of traumatic fragments and the expression of connected feelings through verbalisation.

Continuation of the Case Study Mr. S.

In the individual therapy of another 15 sessions, Mr. S. increasingly reports the content of his nightmares, in which the particularly traumatic moments are shown. He verbalizes details of his brother’s death and the feeling of helplessness when he could not stop the heavy bleeding. His mother had not been able to get over this death and subsequently became very ill. Since the nightmares repeatedly depict scenes of imprisonment, he is willing, after initial avoidance reactions, to face the memories of his arrest and torture in detail. He can overcome his sense of shame and also share how he experienced an extremely humiliating and painful anal rape,

from which a dialogue about a sense of honour and masculinity develops.

He also describes as particularly incriminating the cries of fellow prisoners who were tortured in the neighbouring cells and some of whom died in prison. The unifying element, which apparently does not allow the memories to rest, are feelings of guilt to have survived, which we then work on over several sessions – until he was able to say: “*It was out of my hands. I did what I could*”. This gives room for mourning for the lost. In the following time, the nightmares decrease significantly, Mr. S. is able to concentrate better in the German course.

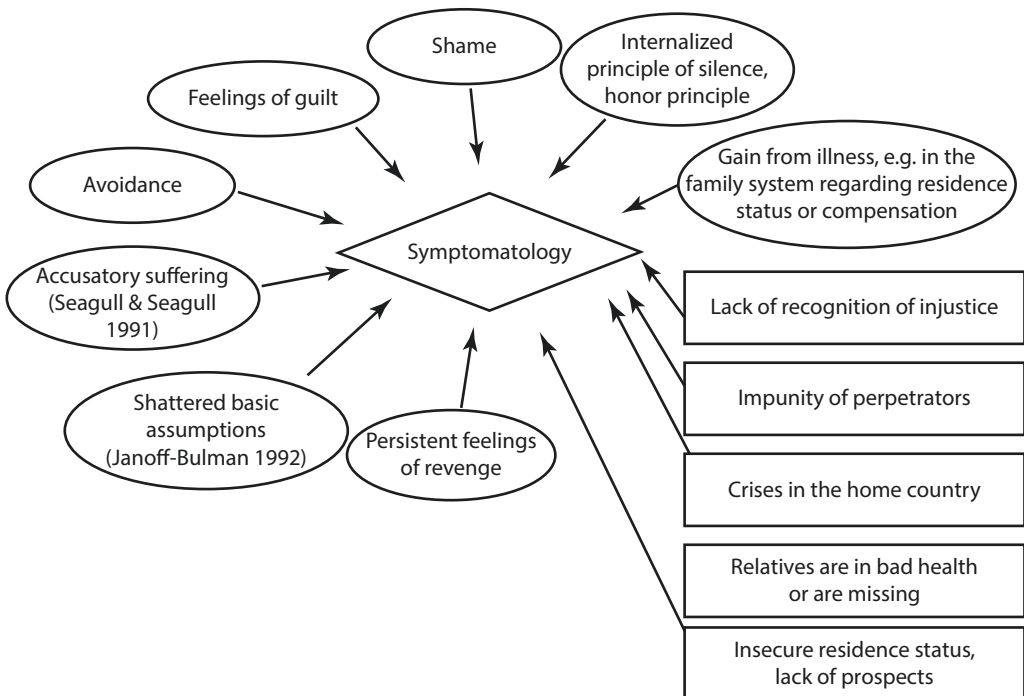
With torture survivors, trauma-focused work is often not possible as a sequential working through of the entire traumatic memories. Often, however, elements (“hotspots”) and different levels of the traumatic sequence and its meaning can be focused on at different points in the therapeutic process. Trauma-focussing work or trauma exposure should not be seen in isolation, but as part of a treatment process, which, as a whole, focuses on the functional impairment at the various levels of the complex trauma sequelae and on social rehabilitation (Cloitre et al., 2011).

25.4.1.7 Work on Symptom Stabilizing Cognitive and Emotional Schemata

The term symptom-stabilizing schemata here is used for psychodynamically effective and cognitive patterns that can impede the processing and coping with the traumatic experience. Depending on the pre-traumatic personality, cultural ties, constellation of the traumatic

situation, attribution of meaning, reactions of the environment, social consequences and other influencing factors, the centrally effective symptom-stabilizing schemata are of different types (cf. psychodynamic tension points of the course of the traumatic process; Bering, 2011). In both cognitive and psychodynamic therapy, work on symptom-stabilizing schemata is an effective component that can also be applied when detailed exposure to the traumatic experiences themselves is not possible or not desired or when symptoms persist after confrontation with the traumatic memories. External symptom-stabilizing factors elude the influence of therapy, but the patient may be able to develop a new attitude towards them. Internal symptom-maintaining schemata, such as shame and guilt (see Boos, 2005; Kröger et al., 2012), can be dealt with in therapy and their symptom-stabilising effect can be reduced (■ Fig. 25.3).

The symptom-stabilizing inner schemata are reflected in the behaviour in the therapeutic



■ Fig. 25.3 Symptom-stabilizing factors. (Rectangular outer factors, oval inner schemata)

tic relationship or in the social environment as well as in the form of repeated scenically or symbolically trauma-connected stressful dreams. The interaction in the therapeutic relationship, everyday conflicts or dream contents brought into the therapy can be used as an occasion and access for processing. Some patterns and conflicts are difficult to change, especially if they are influenced by inner cultural imprints and interrelationships in the current social environment. The therapist can possibly act as a bridge for the development of new interpretations, taking into account the views of the exile society, e.g. experienced sexual violence does not mean loss of honour. An in-depth dialogue on meanings, limits and possibilities for changing self-perception, patterns of interaction and options for action is required.

► **The work on the individual dysfunctional processing mode has a reducing effect on the persistent or recurrent PTSD symptoms and comorbid disorders. It counteracts a traumatic process that otherwise deepens in the personality.**

Even in cases where avoidance behaviour dominates, clinical experience shows that stabilisation and reduction of PTSD symptoms can be achieved by processing symptom-stabilising cognitions, psychoeducational, control-focused as well as resource-oriented, activating and social integration-promoting therapeutic interventions (Kruse et al., 2009). With dominant avoidance behaviour, a tendency towards persistent distressing dreams, a persistent depressive processing mode and somatisation is noticeable (Huijts et al., 2012; Wenk-Ansohn, 2002).

25.4.1.8 Dealing with Reactualisation and Retraumatization

During ongoing therapies, obstacles and crises must be expected, e.g. if a further dete-

rioration occurs as a result of negative news from home or burdens in the asylum procedure, with the re-actualisation of traumatic content and/or worsening of depressive symptoms. In the case of severe deterioration or retraumatization (Schock et al., 2010; Wenk-Ansohn & Schock, 2008), emergency psychological interventions are necessary. Relief and self-control techniques are then in the focus, possibly temporary medication may be helpful. If it is also a matter of restoring external security, social work and/or legal advice are also necessary.

25.4.1.9 Integration Phase

Based on the work on conflicts in the current reality of life and relationships, the focus is on the effects of traumatization on the personality and self-confidence, the development of new perspectives as well as a renewed ability to act and relate. The therapeutic space of individual and group therapy can serve here as a place to gain and test new scope for action.

In the final phase of therapy, the therapeutic accompanying of the integration process in exile is a central theme with the following focal points.

Focus on Therapeutic Support

- Establishment of social relations
- Processing of relationship patterns shaped by trauma and flight experience
- Promotion of autonomy and competence development through motivating to participate in measures such as language courses or vocational preparation courses
- Support for the gradual integration into the work process, adapted to the patient's state of health (Wenk-Ansohn, 2007)
- Processing of relapse, development of strategies for new stress situations

In this phase, social work in groups is helpful. Cooperation with the network of organisations that offer integrative measures for refugees is also recommended. The end of the therapy should be well pre-

pared so that it is not processed as a breaking off of the relationship, especially since traumatised refugees have experienced traumatic break-ups of the relationship before the flight.

Continuation of the Case Study Mr. S.

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After the medico-legal report had been submitted to the judge, the Federal Office was asked to revise its decision, as there was sufficient evidence for a personal preliminary prosecution. Mr. S. is granted refugee protection under the Geneva Refugee Convention and can apply for family reunification, a process which will last months though. Mr. S. can feel hope and joy again. However, there are several relapses when he hears of bombings in his home area. Such news causes fear and the traumatic content to reappear, so that elements from the stabilization phase are rehearsed, and we put together an “emergency suitcase”. In addition, a self-esteem problem is to be worked on during this therapy phase, which is based on the fact that Mr. S. puts himself under pressure to offer his

family a good life here, but without sufficient knowledge of German and formal training, he cannot work in his previous job. Parallel to psychotherapeutic individual sessions, autonomy-promoting support through clinical social work is increasingly coming into the focus. The social worker arranges a vocational preparation course.

After termination of the regular therapy (with diagnostic phase a total of 50 sessions over 1.5 years), Mr. S. takes a few individual sessions as part of the aftercare programme to discuss current stresses and conflicts. Six months after end of therapy, he presents us very happy his wife and his little daughter, who is proud that she is already attending a welcome class.

- The farewell process is of particular importance. The possibility of aftercare in the sense of further selective support in the event of renewed stress, e.g. conflicts in the building up of life in exile, should be granted.

25.5 Therapeutic Work in a Transcultural Setting

25.5.1 Transcultural Encounter in Psychotherapy

Perception, feeling, thinking and forms of expression are culture- and context-dependent. The cultural background of individuals is not only determined by geo-

graphical origin or ethnicity, but is also influenced by many factors (e.g. educational level, gender). Values, social norms, the position of the individual in relation to other members of the group and patterns of thought and action are handed down in the interaction of the group, change in the historical and social context over the generations and form internalized “maps of meaning” (Clarke et al., 1979).

In a traumatic situation, culture-specific systems of meaning influence the evaluation of the event and interpretations of the trauma and its consequences (Afana et al., 2010). The culturally shaped actual or anticipated reaction of the social environment has a significant impact on the course of trauma reactions and coping options. In women from traditional societies, in which

honour and shame play a central role in regulating social status and references, complex trauma-reactive disorders are particularly common after rape or other forms of sexualised violence (Wenk-Ansohn, 2002) with chronification processes maintained by collective dysfunctional cognitions (Kizilhan & Utz, 2013). The tendency to conceal the experiences has the effect that treatment is often sought out late and under great pressure, e.g. when deportation is imminent.

In diagnostic and therapeutic interventions, the systems of meaning as well as thought and behavioural patterns underlying interpretations must be explored and taken into account to allow cultural adaptations (Heim & Maercker, 2017; Kizilhan & Utz, 2013). Symptoms and accompanying behavioural patterns may also vary. Even though symptom clusters of PTSD occur across cultures, their form of expression, the interpretation of symptoms, their classification, and the understanding of disease may vary across cultures (► Chap. 18).

Psychotherapy with refugees means an encounter with people that demands openness to reflect on one's own reference systems, awareness of one's own cultural and contextual ties and flexibility for changes of perspective. On the one hand, psychological models from Western contexts should not take place without verification and adaptation (Gurris, 2012; Schnyder et al., 2016). In a systemic perspective, the societal, historical-political and current social context should also be included. On the other hand, the therapist should not lose sight of the individual patient. Here, an attitude of respectful curiosity and committed neutrality with the help of circular questions has proven to be successful (Oesterreich, 2004). Attention to non-verbal communication makes it possible to reduce misunderstandings and to enter into a direct, lively contact with each other (von Lersner & Kizilhan, 2017).

Helpful Tools in Transcultural Communication

- Openness and respect
- Observing rules of courtesy
- Mindful handling of shame and taboo subjects
- Pay attention to potentially culturally divergent communication styles/language cultures and indirect expressions
- Inquire meanings of words, phrases, metaphors
- Circular questioning, approaching from different perspectives
- Clarify misunderstandings and encourage further inquiries
- Reflect and make transparent your own culture/culture-bound behaviour
- Dialogue on potential differences in culture of origin and exile
- Make the professional role and the therapeutic approach transparent
- Repeatedly emphasize the own commitment to confidentiality (and that of the interpreter) (also towards relatives and friends of the patient)
- Resourcefulness and courage to improvise (e.g. letting patients draw, use of symbolising objects)
- Pay attention to non-verbal communication

25.5.2 Communication with Interpreters

- In addition to facilitating linguistic communication between patient and therapist, interpreters play an essential role in clarifying culture- and communication-specific questions – a resource that can be used in the short follow-up discussion after the sessions.

The necessary training of interpreters for use in a therapeutic context includes the teaching of the basics of

- psychopathological symptoms and problems of traumatized persons,
- basics of therapeutic work and therapeutic relationship,
- contents of special medical/psychological terminologies
- concepts related to the everyday reality of asylum seekers
- exercises in literal translation in a therapeutic setting

Training should also include methods of preventing vicarious trauma and burnout.

Psychotherapy involving interpreters generally requires clearly structured cooperation with clearly defined activities and roles (Abdallah-Steinkopf, 2017). The therapist is responsible for the structuring of communication, the course of the conversation and the therapeutic process and has the protection of the interpreter in mind. Transference and counter-transference reactions take place in a triad (patient-interpreter-therapist; Haenel, 2001). The therapist's constant attention to these events and joint reflection on them with the interpreter is necessary. In order to have an overview of all what is happening in the triad, a seating arrangement in a triangle has proven to be effective, which also illustrates the aspect of partnership for successful communication.

Rules for Communication

– General rules

- Preliminary talk before the first assignment
- Professional and specially trained interpreters
- No relatives/acquaintances as interpreters
- Confidentiality (set out in writing)

- No private contacts, no disclosure of the telephone number of the interpreter to the patients
- Presentation of the interpreter and informing the patients about regulations for language mediation
- **Rules applicable for the interpreter**
 - Translating in first person form/direct speech
 - Translation as literal as possible
 - Everything spoken in the room will be translated (also the patient is informed that every communication between interpreter and patient outside the therapy will be communicated to the therapists)
 - Generally consecutive translation
 - Use of regular supervision and further training
- **Rules for therapists:**
 - Paying attention to the flow of speech of the patients
 - Adapt the language to the level of education and ability of abstraction of the patients
 - Short sentences and avoidance of abstract or technical terms;
 - Polite stopping when the spoken gets too long
 - Offer the interpreter to interrupt and ask back
 - Striving for direct address and eye contact with patients and paying attention to non-verbal communication
 - Follow-up conversation with the aim of relieving the interpreter by clarifying misunderstandings, peculiarities, methodical approaches, triadic aspects of the relationship

If the rules of communication are followed, therapy in a transcultural setting with the support of interpreters is not less effective

than in a native speaker setting. In a meta-analysis, in which 13 studies with refugees were evaluated, no treatment-related differences were found between studies in which interpreters were used to facilitate sessions and those in which this was not the case (Lambert & Alhassoon, 2015).

25.5.3 Therapist–Patient Relationship

- ▶ Central to the therapeutic relationship is that it is based on sincere and recognisable respect, because regaining a sense of dignity is central for victims of torture and other forms of humiliating violence.

In therapy with torture victims and war traumatised people, extremely contradictory attitudes are noticeable frequently. On the one hand, too great distance of the therapist with a lack of empathy can lead to the patient closing his or her mind and even to the termination of therapy. On the other hand, a lack of distance and too much empathy with over-identification and even personal involvement are frequently observed (Haenel, 1998; Wilson & Lindy, 1994). Experience shows that in therapy with traumatised people, a controlled distancing from the usual therapeutic abstinence is recommended (Maier & Schnyder, 2007; Wenk-Ansohn, 2002). Of central importance is a high degree of transparency in therapeutic work. In addition, however, the therapeutic attitude towards torture victims and refugees also requires partiality with regard to respect for human rights and condemnation of human rights violations.

- ▶ In the case of people traumatised by torture, an attitude of overprotection can lead to those affected being perceived solely in the role of victim, with the subjective motive of sparing them and withholding unpleasant realities from them.

In the end, they are thus further incapacitated and fixed in their role as victims.

In the therapeutic setting, an interaction is created in which the patient can recognize himself as an equal human being in his basic human dignity. Fischer and Riedesser (1998) describe the transference relationship in trauma therapy as a process of re-bonding. In the case of trauma caused by human hands, the overcoming of mistrust and the rediscovery of the foundations of the communicative reality principle are particularly necessary.

Torture survivors tend to transfer perpetrator aspects to the social environment (Comas-Diaz & Padilla, 1991; Wilson & Lindy, 1994). The setting in diagnostics and therapy alone can trigger violent re-actualizations of the traumas with flashbacks or dissociative states. On the part of the traumatised person, an associative link with experienced interrogation situations or psychological tortures develops. If these processes cannot be adequately processed and resolved, not only is further treatment blocked, but retraumatisation can also occur. On the other hand, the fear of perpetrator transference can lead the therapist to avoid clarification and confrontation, so that therapeutic opportunities are not used. The repeated reflection of the therapeutic relationship in supervision during the course of treatment is therefore a basic requirement (Lansen, 2002).

25.5.4 Vicarious Traumatization

The possible psychological consequences for care givers in their work with traumatised persons have been described repeatedly (▶ Chap. 27). The particular pressures on therapists in centres for torture victims and war traumatised persons and the effects of trauma-related patterns on the interac-

tion of teams have been investigated (Pross, 2006), as have institutional factors promoting burnout (Pross, 2009). A changed world view can have a fundamental impact on the well-being of the professionals, as treatment takes place in a life context (Ghaderi & van Keuk, 2017) that is influenced by violent conflicts in the world and the often restrictive conditions also in the host country. Gurriss (2005) and Deighton et al. (2007) found in a study in treatment centres for traumatised refugees on the 3 scales of ProQOL R-III (“Compassion Satisfaction”, “Burnout” and “Compassion Fatigue”; Stamm, 2010) less favourable values for therapists of torture survivors compared to other helping professions. It was shown above all that the therapists were permanently burdened by the insecure residence situation of their patients. Around 50% of the sample showed strong feelings of exhaustion, powerlessness, helplessness as well as anger and rage. About one third of the therapists could be assumed to partially fulfill the criteria of PTSD.

It is therefore necessary to have a good structuring of work and cooperation between the different professions in the institution. Therapists should have well-founded psychotherapeutic training and be trained in psychotrauma therapy. Regular supervision, constant work on the therapeutic role and attitude as well as sufficient self-care (Schneck, 2017) and networking are prerequisites for positive management of the stresses and strains. At the same time, the work is enriching due to its diversity and intensive interactions with people from other cultures.

25.6 Concluding Remarks

The treatment of traumatised refugees and torture victims brings along special requirements: working mostly in a transcultural setting, involving interpreters, as well as the

treatment of extremely traumatised people, most of whom suffer from complex disorders. At the same time, the patients are in a process of coping and adaptation determined by many factors due to cultural uprooting and stress in exile.

- A schematic application of trauma therapy techniques is often not appropriate in the treatment of traumatised refugees and torture victims, even though these techniques can be important components of the trauma-oriented treatment process.

It is necessary to adapt the form of treatment to the special situation of the refugees. Social work and low-threshold services as well as psychiatric- or psychosomatic-oriented medical treatment, if required, can be a useful supplement to psychotherapeutic work. Transparent cooperation and networking are necessary for this.

- Social work accompanying therapy is usually necessary for the psychotherapeutic work to be effective.

The treatment of torture victims and traumatised refugees requires a biopsychosocial approach and, in addition to trauma-oriented psychotherapy, also includes the promotion of integration into the host society and a rehabilitation process in the sense of Article 14 of the Convention against Torture (see UN-Committee against Torture, 2011).

Acknowledgement The authors would like to thank Prof. Dr. Norbert Gurriss, who was the author of this chapter together with Dr. Mechthild Wenk-Ansohn in previous German editions. The text in this edition is based on this preparatory work and has partly taken over sections and illustrations. New parts and updates were added.

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Gerontopsychotraumatology

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While trauma sequelae in younger people have increasingly become the focus of clinical and scientific interest in recent decades, knowledge about the extent and consequences of trauma in older people remains limited. Most psychotraumatological studies to date have either not included enough older people to be able to assess age effects or have concentrated exclusively on younger study participants. This is problematic insofar as the current state of knowledge indicates that both age-specific developmental tasks or stressors and collective, generation-specific traumas contribute to a specific development and processing of trauma sequelae and especially post-traumatic stress disorder (PTSD) in old age (Cook, 2001). The following overview shows typical stressors that can affect older people to a very different extent.

Potential Stressors in Old Age

- Physical diseases
- Reduced mobility
- Lower sensory capacity
- Cognitive disorders
- Multiple drugs with alternating and side effects
- Widowed
- Retirement as loss of status
- Financial problems
- Moving to assisted living
- Social withdrawal

Trauma sequelae can interact negatively with these stressors in the sense of a vicious circle and can significantly impair the physical and psychosocial quality of life. However, there is a lack of controlled studies investigating the connection between post-traumatic stress disorder (PTSD) and specific age-related stressors. It is not clear whether PTSD manifests itself differently in older people or whether traumatic events are processed differently. Previous research suggests that the symptom profile remains stable even in older age.

► Case Study 1: Elderly Patient with Limited Range of Motion

Due to progressive heart failure, Mr. M.'s range of movement is increasingly restricted. Therefore, he can hardly engage in hobbies, such as regular meetings with skat friends, and has difficulties structuring his everyday life. He is increasingly troubled by traumatic childhood memories of the expulsion from East Prussia after the end of World War II, combined with nightmares and considerable sleep disturbances. He does not want to burden his wife, who was also expelled, because she is already taking medication against high blood pressure. He is afraid that she would feel even worse and thus become even sicker. Both postpone the upcoming decision about moving to a nursing home. They would have to leave the house they had built as their “new home” after the war. Mr. M. does not experience himself as mentally ill with his symptoms: *“It is the same for everyone who has experienced the war. Many were hit much harder than me.”* ◀

► Case Study 2: Victim of Robbery

Mrs. V. has been the victim of a robbery. She contacted the aid organization “WEISSER RING”. They advised her, among other things, not to avoid the pedestrian zone (the place of the robbery). She avoids the pedestrian zone just as much as she avoids chaotic streets and going out in the evening. Everything there reminds her of the robbery itself. Since Ms. V. is widowed, and her children live in other cities, she has hardly any social contacts accompanying her to the pedestrian zone. Therefore, Mrs. V. withdraws and the walk “outside” becomes an insurmountable obstacle for her. She refuses to start a psychotherapy because she considers herself “not crazy”. ◀

It should be remembered that today's older generation has grown up with a high degree of stigma associated with mental health problems. In addition, the first case study demonstrates that generation-specific collective traumas (e.g. in Europe during the

World War II) can lead to an underestimation of individual suffering in favour of perceived normality (“That was the case at the time!”). Thus, going to a psychiatrist or psychotherapist often seems to be an insurmountable hurdle for this age cohort, which prevents adequate diagnosis and therapy.

At the same time, today’s images of old age also emphasise individual developmental opportunities and resources in this phase of life: Maturity, life knowledge, wisdom, the ability to regulate well-being and effective coping skills can be seen as possible psychological gains from the ageing process. Thus, earlier deficit models or unrealistically idealising images of old age have mostly been replaced by a multidimensional win-loss perspective on the ageing process (Forstmeier & Maercker, 2008). Moreover, protective variables have been identified as important for “successful ageing”: Factors such as resilience, optimism, self-efficacy, wisdom, spirituality and a positive attitude towards one’s own ageing process appear to be associated with less mental stress and in some cases also have positive effects on physical disease processes or mortality (Vahia et al., 2011).

These resources or protective factors must be considered in psychotraumatological models for the development and maintenance of trauma sequelae.

26.1 Epidemiology

Epidemiological data on the prevalence of trauma and PTSD are now also available for the age group above 60, indicating an increased prevalence of trauma (i.e. the experience of a traumatic event) compared to young and middle-aged adults. Prevalence rates, however, vary considerably between studies: 47.4–96.1% (De Vries & Olf, 2009; Maercker, Forstmeier, Wagner, et al., 2008; Spitzer et al., 2008). Only one study found a lower trauma prevalence in older people compared to younger people (73.7%; Frans et al., 2005).

With regard to the prevalence of PTSD, the opposite picture emerges. Studies almost unanimously show a lower PTSD prevalence in older people compared to younger people. There is, however, also variance between the studies: 2.5–6.5% (De Vries & Olf, 2009; Frans et al., 2005; Kessler et al., 2005; Pietrzak et al., 2011; Spitzer et al., 2008). The exception is a representative study from Germany, showing a higher PTSD prevalence (3.4%) in the cohort of older people compared to younger adults (1.4–1.9%, Maercker, Forstmeier, Wagner, et al., 2008). A possible explanation could be the high proportion of war trauma in this age group. This influence, however, could not be conclusively clarified, as another German study with a similar composition could not show this increased prevalence (Spitzer et al., 2008).

At this point there is a need for further epidemiological studies including potentially mediating variables to explain such effects.

Phenotype of PTSD in Old Age

The definition of the PTSD phenotype in old age is currently still vague. More specifically, it is not clear whether the existing symptom clusters of PTSD in ICD-10/11 (i.e. re-experience, avoidance, arousal) can also be represented in older people and whether the symptom severity of PTSD is comparable to the other age cohorts (Böttche & Knaevelsrud, 2017). At this point, it should be noted that sub-syndromal PTSD has significantly higher prevalence rates in older people (5.5–13.1%; Glaesmer et al., 2010; Pietrzak et al., 2012; van Zelst et al., 2003). It could also be shown that the PTSD prevalence in this age cohort decreases significantly from ICD-10 to ICD-11. The reason seems to be the change in the cluster “re-experience” (Glück et al., 2016).

Considering the above-mentioned prevalence rates, PTSD is a quite common disease in older age, especially in countries where collective trauma experiences cause corresponding cohort effects. This effect is supported by Swiss study results, demonstrating much lower PTSD prevalence rates among older people (0.07%; Maercker, Forstmeier, Wagner, et al., 2008). Risk populations that are particularly relevant in this context are Holocaust survivors, refugees, war traumatized and displaced persons.

For a closer examination, it seems reasonable to differentiate the following 3 concomitant types of PTSD in the elderly on the basis of lifespan (Maercker, 2002)

- chronic PTSD due to traumatisation in early stages of life,
- delayed onset of PTSD in old age due to trauma from earlier phases of life (“delayed onset”),
- current (or chronic) PTSD due to traumatisation in old age.

26.1.1 Chronic PTSD

Chronic PTSD is based on traumas that occurred in earlier life stages. In the generation of over 65-year-olds, the effects of collective extreme traumatisation must be considered as an age-specific cohort effect, with National Socialist crimes and World War II playing a prominent role in the European area.

Here it is important to record whether the chronic PTSD had a characteristic progression over the lifetime, i.e. whether the symptoms and severity of PTSD have been constant or have undergone changes in previous life stages. Most long-term studies indicate decreasing prevalence rates of chronic PTSD over time (e.g. Yehuda et al., 2009; Shlosberg & Strous, 2005). It is particularly interesting that a change in symptom clusters is evident, i.e. a decrease in symptoms of re-experience and an increase in avoidance symptoms (Böttche et al., 2011).

Effects of the World War II on the Older Population in Germany

War events lead to complex and sequential traumatisation, which can include physical injuries, fear of death, violent death of caregivers, emotional neglect and experience of deprivation (hunger, poverty). Especially the war children of that time represent a vulnerable subgroup.

From the perspective of **psycho-historical trauma research**, it is only in recent decades that the investigation of individual effects of World War II with regard to PTSD prevalence and other trauma sequelae in the now older German generation became possible without falling into suspicion of trivializing the systematic mass murder by German SS and German Armed Forces members (e.g. Beutel et al., 2007; Fischer et al., 2006; Heuft et al., 2007; Maercker & Herrle, 2003; Kuwert et al., 2007, 2008).

Publications deal primarily with distinct subgroups from this period, such as front-line nurses (Teegen & Handwerk, 2006) or women who have experienced sexual violence in war. PTSD prevalence rates of 4–11% are reported here (Kuwert et al., 2010; Kuwert, Glaesmer, et al., 2012b; Eichhorn et al., 2012). People who have been displaced seem to represent a particularly burdened subgroup of those traumatised by war (Teegen & Meister, 2000; Fischer et al., 2006; Kuwert et al., 2007). Here, in addition to post-traumatic symptoms, increased anxiety and reduced quality of life or resilience have been demonstrated in a representative survey (Kuwert et al., 2009). In a further population-based study, the number of traumas suffered during displacement predicted the degree of somatisation in the now older study participants (Kuwert, Brähler, et al., 2012a).

26.1.2 Delayed PTSD

A phenomenon in PTSD diagnostics of older people is the self-monitoring of affected persons that after decades without mental impairment, post-traumatic symptoms can occur more frequently in old age (Maercker, 2002). The increased onset of post-traumatic symptoms during the aging process could be demonstrated in retrospective studies (Solomon & Ginzburg, 1999; Kruse & Schmitt, 1999; Port et al., 2001). It should be noted that delayed PTSD is more likely to be an exacerbation or reactivation of pre-existing (subsyndromal) PTSD symptoms than a development from complete symptom-free status (Andrews et al., 2007).

This seems to be the result of various influencing factors, whereby having more time to reflect over one's own biography, comparable/similar historical/societal events (e.g. wars; Solomon & Mikulincer, 2006), but also the potential stressors mentioned in the above overview could play a role. Since prospective studies are lacking for this category, knowledge about this phenomenon is still insufficient.

26.1.3 Current Trauma and PTSD

With regard to the severity of symptoms and the phenotypic characteristics of PTSD after a recent trauma, the question arises as to the comparability between young and older PTSD patients. In a meta-analysis, it could be shown that older people are more likely to develop PTSD symptoms after natural disasters (i.e. current trauma) than younger people (Parker et al., 2016). There was no difference between older and younger people in the development of anxiety symptoms and depression, nor in subjective well-being (Parker et al., 2016).

Age-specific acute traumatisation (e.g. violence against people in need of care, widowhood) and its consequences are empirically less studied. A special topic is the abuse of older persons in need of care, both in terms of violence and neglect. A long-term study has shown that violence against older people significantly increases the risk of developing mental disorders (e.g. PTSD) 8 years after the experience of violence (Acierno et al., 2017). At this point, there is also a need for methodological research, as there is a lack of adequate instruments to investigate severely ill and potentially cognitive impaired people with regard to post-traumatic symptoms. Concerning the sudden loss of a loved one (often the partner) as acute trauma, there appears to be a temporal link between PTSD and prolonged grief (► Chap. 20), with symptoms of prolonged grief after death leading to PTSD

symptoms in the long term in older people (O'Connor et al., 2015).

26.1.4 Comorbidity

In old age, as in other age groups, PTSD often occurs not as a singular disorder, but together with other mental (Pietrzak et al., 2012) and somatic (El-Gabalawy et al., 2014) disorder and cognitive dysfunctions (Schuitevoerder et al., 2013).

As an age-specific mental comorbidity, dementia of varying degrees of severity must be considered first and foremost. It has been shown that the presence of PTSD in old age increases the risk of developing dementia (Flatt et al., 2018). But also nonspecific impairments (e.g. mobility, self-care, everyday life) are associated with the presence of PTSD. It has been shown that these impairments are much more severe in older people with PTSD than in older people without PTSD (Byers et al., 2014). With regard to ageing per se, evidence shows that the presence of PTSD leads to an accelerated ageing process, as well as to earlier mortality (Lohr et al., 2015).

26.2 Diagnostic Specifics

A retrospective survey of traumatic events in earlier life phases of today's older patients is difficult. Nevertheless, it should be an integral part of the anamnesis. Many older people do not address their traumatic experiences on their own initiative. This can also be explained by an insufficient awareness of a possible connection between the traumatic experiences and current psychopathology.

In principle, the usual instruments can be applied for PTSD diagnostics in older people, the advantages and disadvantages of which are described in detail in ► Chap. 8. It should be noted, however, that it has not yet been finally clarified whether the existing thresholds (i.e. "cut-offs") for the indica-

tion of a diagnosis or the classification of severity levels are reliable and valid for older people as well. So far, it has been shown that there is a comparable classification of PTSD severity into “low”, “moderate” and “high” across all age groups (Böttche & Knaevelsrud, 2017). It should also be noted that, depending on age, measuring instruments sometimes include several questions about physical symptoms, making it difficult to distinguish between psychological and physical causes of the symptoms. Reference is made here to the changes in the ICD-11, where non-specific physical symptoms have been removed from the PTSD definition.

The following factors should be specifically considered in the differentiated evaluation of diagnostic results (Cook & O'Donnell, 2005).

Evaluation of Diagnostic Results of Older People

- Older people more often conceal or dissimulate post-traumatic symptoms, as they are more ashamed of suffering from psychological impairments due to their socialisation. In general, a cohort effect can be observed in that self-opening is rated less positively than in younger people.
- Gender studies have shown that older men in particular have learned a role model that equates psychological stress with weakness. (“... tough as leather, hard as Krupp steel ...”).
- It must also be taken into account that the “psychotraumatological perspective” on socio-historical events was not yet developed in the formative years of today’s elderly people: the term “post-traumatic stress disorder” (PTSD) was not introduced into the diagnostic nomenclature until 1980. This can lead to a trivialisation of one’s own traumatic experiences due to lack of awareness.

- The longer lifespan of older people leads to a higher prevalence of multiple, temporally distinct traumatizations. For this reason, the anamnesis must go beyond current traumas to include past traumas.

26.3 Treatment of Trauma in Older Adults

26.3.1 Accessibility and Utilization of Psychotherapy

Despite the significant prevalence rates of trauma sequelae in older people, they are clearly underrepresented in outpatient psychotherapeutic care (Byers et al., 2012; Kruse & Herzog, 2012; Troller et al., 2007). The low rate of utilization of psychotherapeutic support by older people can be traced back to various aspects, both on the side of the therapist and on the side of the patient.

Only in recent years has there been corresponding gerontological psychiatric/psychotherapeutic specialist literature as well as few age-specific trainings for specialized staff. There is still a lack of evidence-based, widespread concepts for the psychotherapeutic treatment of older people. Existing social images of age contribute to the fact that older patients are relatively rarely admitted to outpatient psychotherapy, e.g.:

- the assumption that older people benefit less from psychotherapy (Remmers & Walter, 2012),
- the assumption of resistance to change,
- the assumption of age-specific behaviour (e.g. social withdrawal, sleep disorders),
- the comparison of age with senility,
- psychotherapist’s attitude towards older patients (Peters et al., 2013).

On the other hand, not only therapists, but also older people themselves often have cer-

tain prejudices or have their own images of age that prevent them from attending psychotherapy (for an overview, see Kammerer et al., 2015). For example, older people with a positive image of old age make more use of psychotherapeutic/psychosocial care services than people with a negative image of old age (Kessler et al., 2015). Beyond that, older people have a less pronounced tendency to perceive the need for psychological help (Mackenzie et al., 2010) and are less likely to admit the need for psychological help (Maercker et al., 2005). These are significant barriers to their utilization, on top of more obvious obstacles such as limited mobility or the aforementioned fear of stigmatisation (Arean et al., 2012).

Stereotypes of this kind can lead not only to self-fulfilling prophecies, but also to misdiagnosis and inappropriately negative prognoses of healing (American Psychological Association, APA, 2004).

26.3.2 Gerontopsychotherapeutic Basics

The specificity of geriatric psychotherapy includes a sound knowledge of physical illnesses in old age and their treatment standards. Due to simultaneous physical and potentially also social problems mentioned above, close networking of the support system (family doctor, specialists etc.) is helpful (APA, 2004). Knowledge about life-historical contexts, norms and values of different age groups can help to overcome obstacles. Dealing with one's own fears and ideas about old age, death and dying, as well as dealing with the limited time of life of this patient group helps to reduce potential insecurities on the therapeutic side.

An age-related decrease in fluid intelligence, slower learning processes and sensory impairments necessarily involve a reduced work pace, more frequent repetition and the use of different media (e.g. written materi-

als). However, it should be noted that most age-related cognitive changes (including longer reaction times, slowing down of information processing) are moderate and do not cause significant impairment in everyday life (APA, 2004).

The exploration of existing social contacts or, if necessary, the initiation and strengthening of social support options helps to deepen treatment effects. Relatives should be involved in the therapeutic process as early as possible. Social reintegration is an important component, especially given the perceived isolation and loneliness and the lack of understanding. Reactions of the social environment (trivialisation: *"It was so long ago"*; accusations: *"Why didn't you react earlier"*; embarrassment) have a decisive influence on coping with the traumatic experience.

Special Features of Gerontopsychotherapy

- Consideration of comorbid psychological and somatic symptoms
- Knowledge about life-historical contexts, norms and values of different age groups
- Adaptation to slower learning processes and sensory impairments
- Close cooperation of the support network
- Social (re)integration
- Confrontation with one's own fears, one's own ideas about old age, death and dying and how to deal with the limited lifetime of this patient group

26.3.3 Gerontopsychotherapeutic Approaches of PTSD Therapy

In principle, the evidence-based treatment like exposure therapy (▶ Chap. 13), cognitive therapy (▶ Chap. 13), EMDR

(► Chap. 14) and narrative approaches (► Chap. 16) are also used in PTSD therapy for older people. For the therapy of PTSD in adult populations, there are now a number of empirically well-evaluated and effective cognitive-behavioural treatment approaches. Watts et al. (2013) found in their meta-analysis an average effect size of $d = 1.26$ for cognitive-behavioural interventions. It should be noted here that most of the studies included in this meta-analysis did not address age effects, because the sample of people above 65 years was previously excluded or too small to derive conclusions about the evidence.

There are hardly any adequate psychotherapeutic or psychopharmacological intervention studies on treatment approaches for older patients with PTSD. Concepts for the treatment of elderly trauma survivors have so far mostly been published in the form of case studies and uncontrolled studies. In most cases, concepts from the general PTSD intervention have been adopted, but without sufficient empirical basis (Böttche & Knaevelsrud, 2017).

For example, initial pilot studies show that trauma confrontation leads to a significant reduction in PTSD symptoms in older people (Thorp et al., 2012; Yoder et al., 2013). Thus, this treatment method, which is identified as the method of choice in the national guideline (S3 guideline PTSD, Flatten et al., 2011), appears to be applicable to older people with PTSD as well.

Randomized-controlled studies on the treatment of PTSD in older adults are currently available for narrative approaches that combine life review and trauma confrontation. Here, there are two studies that have been able to show the efficacy of this therapeutic approach, i.e. a significant decrease in PTSD symptoms for this age cohort (Bichescu et al., 2007; Knaevelsrud et al., 2017). The included cohorts were traumatized in earlier phases of life and showed PTSD symptoms in old age due to this early traumatisation.

To the authors' knowledge, there are no randomized controlled pharmaco-studies specifically targeting older patients with PTSD. Clinically, the usual recommendations of gerontopharmacology apply, i.e. a lower initial dose and slower increase of substance dosage, which are described in detail in ► Chap. 19.

26.3.3.1 Life Review Therapy

Life review therapy (LRT) offers an extension of therapeutic approaches, especially for older people. In LRT, the life story is chronologically remembered, structured and evaluated in a therapeutically guided process. LRT, which also belongs to the narrative therapies (for a detailed description of narrative therapy, please refer to ► Chap. 16), was already considered effective in the treatment of elderly depressive patients (meta-analysis by Bohlmeijer et al., 2003) and was adapted to older people with PTSD symptoms by Maercker (2002). Here, in addition to general biographical work, the focus lies on the treatment of the trauma. In addition to the development of a coherent life story, the stressful experience shall be integrated into the biography of the older person. The main goal of LRT is to give earlier stages of life an altered meaning so that negative trauma-related memories do not dominate positive biographical memories.

The aim of this approach is

- Symptom reduction;
- Promotion of well-being,
- Dealing with the past,
- Restoration of self-esteem,
- Grieving,
- Improved quality of life and coping strategies.

Thereby LRT meets the need to evaluate one's own life and find meaning in it (Maercker, 2002).

In LRT, the traumatic experience is retold and not relived in sensu. On the one hand, this takes into account the fact that the creation of a coherent narrative and

not primarily the sensory re-experience is the main therapeutic agent. On the other hand, the health of elderly patients may already be limited and an increased comorbid respiratory or cardiological vulnerability must be assumed. At this point, a somatic clarification is important. However, initial pilot studies show that trauma confrontation seems to be feasible and effective in older people with PTSD (Thorp et al., 2012; Yoder et al., 2013). For a detailed description of the procedure and mode of action of LRT in traumatised older people, please refer to Knaevelsrud et al. (2012).

26.3.3.2 Integrative Testimonial Therapy

The following is an example of a project treating traumatized former war children who suffer from the psychological consequences of their experiences in old age. Based on the case studies of Maercker (2002) and narrative exposure therapy (Schauer et al., 2005), the integrative testimonial therapy (ITT; Knaevelsrud et al., 2011, 2017) was developed. The ITT is an internet-based writing therapy that combines biographical approaches with those of testimonial therapy and additionally focuses on trauma-related dysfunctional cognitions. Similar to narrative exposure therapy, one objective is the spatio-temporal location of the traumatic experiences in the early life stages through a chronological reconstruction of the biography. In addition, it deals explicitly with persistent dysfunctional cognitions.

The objectives of the ITT are

- Integration of traumatic memories into autobiographical memory,
- Alteration of problematic interpretations and evaluations of the traumatic experiences and their consequences,
- Improving the quality of life in value-led areas.

The therapy takes place online. During 6 weeks of treatment, patients write a total of 11 texts in 45 minutes each. In the thera-

pist's personal feedback, the patients receive instructions for the texts that follow after.

Advantages of Internet-Based Therapies

The efficacy of internet-based therapies for the treatment of PTSD in adults has already been proven (Kuester et al., 2016). The integration of new media is particularly useful in the context of gerontological psychotherapy. Some of the already mentioned barriers for the use of psychotherapy in older people can be overcome by internet-based approaches. For example, the barrier of limited mobility can be overcome by geographical independence. The fear of stigmatisation can be reduced by non-visual anonymity. Also, opening up and sharing fear, shame and guilt seem to be easier in a non-visual context.

With approximately 15.9 million active Internet users above 60 in Germany, this medium already has a high reach (Koch & Frees, 2017).

In a total of 7 texts, the individual phases of life are reviewed and written down chronologically. All writing instructions are accompanied by a list of characteristic life events and experiences that are associated with this phase of life or have historically occurred in this phase of life (e.g. building the wall, fall of the wall). Before describing the phase of life in which the trauma occurred, the patients describe the traumatic event in 2 texts. In these 2 texts, the experienced is described with all sensory details, physical and emotional reactions.

In the final phase, patients write a letter to the child they were at the time of the traumatic experience. Negative beliefs and self-blame as a result of the traumatic event often turn out to be central schemas. By working out and becoming aware of one's own abilities and competencies, persistent dysfunctional cognitions are addressed.

► Case Study from the ITT – Processing of War Experiences

During an Allied bombardment of his hometown in 1943, Mr. H., now 79 years old, was in the air-raid shelter with his family. The house collapsed due to a bomb hitting it. Mr. H. and his family lay buried under the debris for several hours. Mr. H., a 4-year-old at that

time, reports cries of people who were afraid of suffocating and tried in panic to dig a path with their hands.

He still feels the impression of narrowness and shortage of air in stressful situations or in closed rooms. He often relives the hours in the air-raid shelter and sees the “frozen faces”. He suffers from insomnia, as the experiences continue to reappear in his dreams. ◀

■ Phase 1 – Trauma Narrative (Moderate Exposure)

The ITT focuses at both Mr. H.’s biography and his trauma at the time of the respective phase of his life. To facilitate an embedding of the trauma, the texts on the trauma, here the burial, are written before the corresponding phase of life. Therefore, Mr. H. begins his treatment with the trauma narrative.

► Continuation of the Case Study Mr. H.: Trauma Narrative

- **T:** *“The description of the trauma is an important component for its processing. But because the memories of what happened are very stressful, they are often pushed away and repressed ... Therefore, try to concentrate intensively on the situation at that time. The goal is to describe the traumatic event as detailed as possible, with all perceptions ... When writing, try to concentrate on the memories that are most stressful for you, on the scenes that keep coming back to your mind.*
- **P:** *“You can hear a sound, it is coming closer. A dull thud, I can’t hear anything. Everything is shaking, everyone is screaming. I can see nothing. Again, loud and very bad screams. I do not want to hear that. I don’t want to hear it. I don’t know if I’m shouting or not... Breathing becomes more difficult, my mum tries to calm me down, but I know that she would like to scream too...” ◀*

■ Phase 2 – Biography Work

After Mr. H. described the bombing, he began to write down his biography. In doing so, he gets precise clues about the individual

phases of his life, which should help him to remember his life and to order the events in his biography. However, the focus is not only on the mere events, but also on his feelings and thoughts in the respective situations. Mr. H. went to school after the war and graduated. At the age of 25, he married and together with his wife he had 2 sons. He worked as a locksmith in a large company and stayed there until he retired. He lives together with his wife in a small apartment. His two sons live nearby with their families, so he can often see his grandchildren.

The symptoms he had developed after the attack accompanied him continuously in his life with varying intensity. In the last few years after retirement, his sleep disorders and also his re-experience increased significantly in intensity.

► Continuation of the Case Study Mr. H.: Biography Work

- **T:** *“In the coming weeks, we will reconstruct your biography based on individual phases of your life. The aim of this work is to process the sometimes fragmentary memories and your traumatic experiences to be able to embed them in your biography ... In the current phase of your life, you have decided to start a therapy. How do you feel about it? What were your hopes?...”*
- **P:** *“This year I am travelling a lot with my grandchildren. We often go to the countryside together. I love my grandchildren ... I want to be a normal grandpa for my grandchildren again. I want to be able to play hide and seek with them, without fear and without getting anxious.” ◀*

■ Third Phase – Cognitive Restructuring

Mr. H. has arrived in the present with his biography. He has written down his life with all events that are important and formative for him – together with his feelings, thoughts and perceptions.

At this stage, it is important to find a worthy closure. These texts should form a

letter in which Mr. H. finds, from his present point of view, with all his experiences and expertise, uplifting and supportive words for the child of that time, who was confronted with such terrible experiences.

► **Continuation of the Case Study Mr. H.: Conclusion**

- **T:** *“In order to better classify your thoughts and feelings, such as guilt and helplessness, your two following texts are about writing a letter in which you look at your burial from a different perspective. ... Write a constructive letter to yourself, as the child at that time, from your present perspective. ... This letter should give the child advice on how to deal with the bomb attack and the feelings it had during it. ... Before you finish the letter, I would ask you to consider for yourself how you now place the bomb attack in your life. How you would describe your feelings and thoughts now and how you would like to deal with them in the future.”*
- **P:** *“Dear M., the burial in your childhood has accompanied you all your life. You have always felt the fear and helplessness within you, it has always accompanied you and always influenced you. You survived because you behaved correctly then – you waited, hoped and were completely rigid and stiff – wrapped in cloths so that no dust could penetrate to you. ... All this has made you strong. You have proven this strength again and again in your whole life. Even when it was hard and you were desperate, like under all the debris, you fought. You can be proud of that. Thank you.” ◀*

In addition to the biographical processing of the traumatic experience, an important therapeutic aspect is the documentation and writing down of the experience. Cienfuegos and Monelli (1983) have demonstrated the relevance of testimony in the context of the “Testimony Therapy” they developed. Tran-

scripts of the therapy sessions, signed by the patient and therapist, could be published and shared with human rights organizations, family or friends if the patients wish to do so. This aspect also plays an important role in ITT. At the end of therapy, patients can print out their life story and decide whether they want to share it with their relatives.

26.3.4 Indications

The indication for a specific form of psychotraumatological geriatric psychotherapy depends among others on the following factors (Cook et al., 2005):

- primary and secondary manifested clinical disorders,
- severity and duration of the disorder (acute vs. chronic PTSD),
- cognitive performance/restrictions,
- existing coping skills,
- motivational and cultural preconditions.

In addition, previous experiences with and reactions on psychotherapy are taken into account. For the therapeutic approach, a differentiation regarding the time of the traumatic event is helpful. A traumatic event in the early years of life, the psychological consequences of which are either chronic or delayed, requires a more biographically oriented approach. A trauma that only occurs or is experienced at an advanced age (e.g. experiencing a heart attack, assault, etc.) can be well treated even without a biographical review.

- The number of patients with PTSD will increase due to demographic developments. Therefore, it is ethically indispensable both to conduct an adequate trauma anamnesis in order to identify and classify trauma sequelae and to apply effective evidence-based therapeutic approaches.

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Special Features of Treatment and Self-Care for Trauma Therapists

A. Maercker

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Not every therapist considers himself suitable and willing to work with the difficult group of trauma patients. The horrors, losses and damages that one is confronted with as a therapist can lead to states of stress (“secondary trauma” or witness trauma) that justify a separate chapter on how to cope with these challenges. The particular difficulties of patients who have been victims of interpersonal violence in particular therefore play an important role. The aversive interpersonal consequences of traumatisation also manifest themselves in therapeutic contact and can considerably impair the success of therapy if the problems associated with it are not adequately reflected.

27

27.1 Different Causes for Treatment

There are different traumatic experiences and treatment motives that lead affected persons to seek out a therapist. Different patient groups have different ideas (**subjective theories**) about the traumatic effects and their current state. The most prevalent groups of therapy seekers are:

- Persons after traumas that they have experienced very recently (i.e. a few days or a few weeks). Those affected - or the relatives caring for them - are primarily looking for current care rather than for long-term psychotherapy. Diagnostically, an acute stress reaction (ICD: F43.0) may be present; the interventions are presented in ► Chap. 10.
- Persons who have recently experienced trauma and are seeking counselling or psychotherapy. The therapies presented in this book are especially indicated for this constellation.
- Persons who years or decades ago went through a trauma that they can remember exactly, but for which they did not seek psychotherapeutic help in the past. Examples are: maltreatment or sexual abuse in childhood, war experiences,

dramatic deaths. The therapies for these chronic post-traumatic processes are also described in this book.

- Persons who (as in the two groups mentioned above) have experienced a trauma recently or for a longer period of time, but who do not come to treatment because of the trauma consequences, but because of other psychological or physical problems. This is still the most common constellation in patients with post-traumatic stress disorder (PTSD) today. The traumatic experiences are only reported in the course of the therapy that has been started and usually require a change in the treatment plan to a trauma-focused therapy.
- Persons who involuntarily come to counselling or therapy, but who have an obvious history of trauma (e.g. offenders, addicts). This growing group of persons would benefit from trauma-focused therapy, but first the motivational problems involved must be clarified with them.
- Persons who want to take up psychotherapeutic treatment in order to achieve clarification about a possible previous trauma which they themselves either no longer remember or only remember in fragments. In particular, these patients have suspicions of rape or sexual abuse in childhood. However, this rare constellation can be particularly difficult (keyword: “**recovered memories**”; for an overview: Davies and Dalgleisch 2001). In the following overview, some useful hints for dealing with this concern are listed.

Instructions for Dealing with Patients Who Wish to Obtain Clarification About a Possible Previous Trauma

- It is useful to look for external, independent evidence of previous trauma. For example, are there statements by other “credible” persons, evidence

from medical or legal documents, or other materials (e.g., school records) that support the patient's testimony?

- The therapist cannot take on the role of a detective or examining magistrate. Contact with other people should be arranged with the patient in advance. Legal questioning strategies (e.g. confrontation with one's own previous statements) are tabooed in the therapeutic context.
- A suggestive diagnostic or therapeutic procedure on the part of the therapist is impermissible, e.g. the statement: "In the past, other patients with your symptoms were usually subject to trauma from abuse".
- The patients are to be taken seriously in their suffering that led them to the therapy and, if necessary, the treatment is to be adapted accordingly. This is independent of the probability that the indicated or suspected trauma has actually occurred.

27.2 Particularities and Difficulties on the Patient Side

The fact that patients with trauma sequelae start therapy late, not at all or with great reservations has to do with various factors. These include particularities of the symptoms, the associated interpersonal problems and - similar to other psychological or medical problems - individual motivation problems (Leiner et al. 2012) or structural preconditions of the health care system.

27.2.1 Health Care Utilisation Patterns

In order to systematically investigate the cascade of possible difficulties, Schreiber et al. (2009) have developed a schematic model

of the utilization behavior of patients with PTSD (■ Fig. 27.1). This model assumes several stages of treatment utilization before the patients actually start therapy.

In the following, selected aspects of the model shown will be explained in more detail. It is also pointed out that these special features can be made clear not only before the start of a therapy but also in the first phase of the therapy process.

27.2.1.1 Knowledge About Traumatization and Symptoms

Although the patient's own post-traumatic symptoms (e.g. nightmares, startle reactions, phobias) are perceived and cause pronounced suffering, there is no knowledge that these symptoms belong to a coherent disorder pattern that is also treatable. Compared to everyday knowledge about depression and anxiety disorders, everyday knowledge about post-traumatic stress reactions is very limited, which naturally makes it difficult for those affected to seek active help.

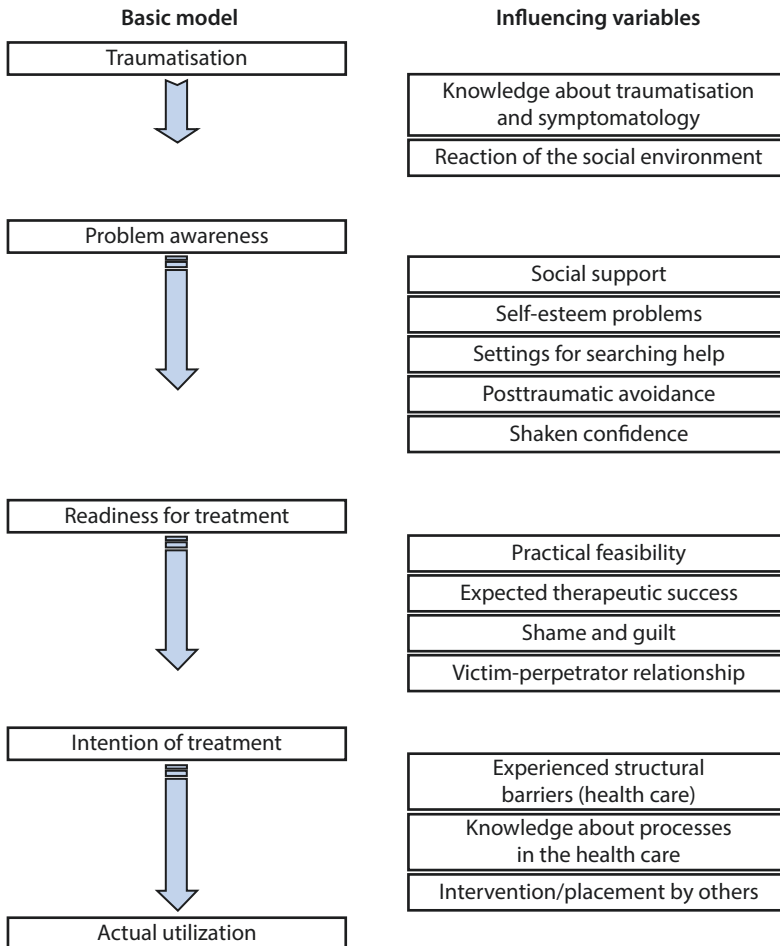
27.2.1.2 Reactions of the Social Environment and Social Support

The symptoms of PTSD have direct consequences for the interpersonal relationships of those affected. Thus, partnership conflicts and problems in the social environment are explicitly mentioned as symptoms of PTSD in DSM-5 and of complex PTSD in ICD-11.

Conversely - in the direction from the environment to the affected person - the traumatised person often experience a request from their caregivers to finally put an end to the thought of what happened. Here, statements such as "Life goes on after all" and "You should simply stop thinking about it" are common (► Sect. 2.5.4.2).

27.2.1.3 Self-Esteem Problems

The experience of absolute powerlessness during the trauma shatters self-confidence and self-esteem in a massive way. People who have



■ **Fig. 27.1** Model presentation of the problems of the treatment utilisation behaviour of trauma patients. (Mod. according to Schreiber et al. 2009)

been repeatedly and chronically traumatised often suffer from cognitive distortions of their self-image and self-esteem as well as the motivations and motives they attribute to their fellow human beings (Pearlman and Courtois 2005). These dysfunctional cognitions are reinforced when disappointments and other abusive situations recur at a later stage.

27.2.1.4 Attitude Towards Seeking Help and Post-traumatic Avoidance

Trauma victims often have the expectation in themselves that they have to “put away” what they have experienced on their own.

Their own suffering is at least partially externalised. Many affected persons stop at the thought that there is an external cause or perpetrator (or accident causer) for the trauma. The experienced psychological impairments are experienced as damages coming from outside.

In addition, there is a marked tendency not to confront one’s own traumatic memories, which can be interpreted as PTSD symptoms of thought and emotion avoidance. Many sufferers have the dysfunctional attitude that a “successful thought stop” would be the best remedy. On the other hand, any thinking about the trauma, including talking

about it to others and organising professional help, would only worsen one's own condition.

27.2.1.5 Shattered Confidence

Man-made traumas in particular often result in a massive shattering of the understanding of self and world. It is through the experience of intentionally inflicted trauma that trust in stable human relationships is often destroyed. The secure basis of those affected is called into question in an existential way. Survivors often describe the feeling of no longer belonging to the formerly familiar surroundings. In this context, Herman (2015) points to the singular “death or life quality” of the traumatic event, which is not found in this form in the experiences of non-traumatised people.

It is not uncommon for traumatised people to react with hypersensitivity to people who try to approach their world of experience. This leads to the fact that trauma victims observe their environment and fellow human beings very closely, and even the slightest misunderstanding confirms their feelings of alienation. Fear of intimacy develops, combined with a high degree of vulnerability in social interactions (Bleiberg and Markowitz 2005). The resulting overreactions often actually lead to a turning away from the social environment.

27.2.1.6 Feelings of Shame and Guilt

Chronic rumination about why they could not prevent the event and the conviction that they failed are associated with feelings of shame and guilt in the victims. Typical is the feeling of guilt for having done something wrong during or after the trauma, or for having caused or not having averted the disaster. The patients who have experienced sexualised violence report feelings of shame to a very special extent. Both feelings of shame and guilt are associated with low self-esteem and self-reproach (Andrews 1998). The aim should therefore be to create a therapeutic environment in which feelings

of shame and aggression can be studied in a safe therapeutic setting. By focusing the therapy on the maladaptive beliefs of the patient, self-esteem should be rebuilt.

One way to reduce feelings of shame and guilt is to contact people with similar experiences. Literature from other affected persons and internet sites where patients can exchange information with each other can be useful in this respect. In the foreground is the experience that other affected persons suffer from similar consequences, which should reduce the feeling of alienation and otherness.

27.2.1.7 Expected Therapeutic Benefits

The perceived emotional alienation of the affected person is consequently transformed into real isolation. Such experiences often lead patients with PTSD to initially shy away from psychotherapy for fear of incomprehension and further disappointment. Particularly at the beginning, there are usually pronounced doubts about the possible benefits of a therapy. The patient often finds it difficult to trust the therapist, which means that the phase in which the therapist is “put to the test” can extend over a longer period of time.

27.2.2 Dropout Rates for PTSD Therapies

Clinical experience shows that patients with PTSD are often dissatisfied with non-trauma-focused therapy and terminate it early. Very high discontinuation rates have also been reported for pharmacotherapies of PTSD, e.g. of over 60% for fluoxetine and over 40% for paroxetine (Lee et al. 2016). In contrast, the dropout rates for specific trauma therapies are comparable to dropout rates for other diagnostic groups, e.g. 20% for trauma-focused therapy (Lee et al. 2016). In particular, it should be pointed out that this also applies to exposure techniques. In the literature, it is repeatedly noted that exposure procedures are associated with particularly

high stress for patients and, as a consequence, with higher dropout rates. Hembree et al. (2003) examined 25 controlled studies on cognitive behavioural therapies and showed that no significant difference in the dropout rate was found between exposure therapy, cognitive therapy, stress vaccination training and EMDR (“eye movement desensitization and reprocessing”).

➤ The therapist’s reactions to the patient are a major cause of failure in therapy with trauma victims. Central to the patient-therapist relationship during the initial contact is the ability for empathic inquiry into what has been suffered. Difficulties in this regard endanger not only the therapeutic relationship, but also the therapeutic process as a whole.

27

27.3 Difficulties on the Therapist’s Side

27.3.1 Stressful Trauma Narratives

On the therapist’s side, the treatment of trauma victims often triggers strong emotions. Trauma descriptions are often bizarre, cruel and sadistic.

► Example 1: 27-Year-Old Survivor of an Air Show Accident

Mr. N. reports: He was standing with his wife K. between the spectators of the air show when an airplane exploded and crashed.

“I only felt a dull thud, then I saw a huge ball of fire coming towards me. It got terribly hot, but only for a second. ... Then I went around in circles and within a radius of 20 meters there were people who were still alive, but not for very long. They were terribly burnt or mutilated. Parts of people were lying everywhere. People lying around who were still

twitching or screaming. I was just looking for my K. I walked everywhere and looked at it very closely, because I didn’t recognize the people anymore. I was desperate to find my K. Afterwards, I was very guilty, because people were lying around and dying. They looked after you and I only thought: One of them is the K. ... And when you passed the same place again, the people were lying dead. The eyes didn’t move anymore. When I went in search of the K., I came across a man, a truck had fallen on his legs, he was all squashed up at the bottom. Burning gasoline ran off the wall of the truck, and the man was burning brightly, and I thought: ‘Well, it’s burning. It’s not the K.’ Half a head lay in front of me; it was only the back of the head. I didn’t see the face and wanted to turn him around, but I couldn’t do it. After all, nobody lived around you anymore. “Mrs. N. died in the accident. Her body could only be identified days later. (In TV magazine “ZDF Kontakte”, May 2001).◀

► Example 2: 37-Year-Old Woman from Bosnia

Mrs. U. reports: The scene takes place in Mrs. U.’s home town. It is early evening and she is in her apartment with her husband and two small children. Serbian paramilitaries storm the house, taking the residents out onto the street. There are already many men, women and children lined up along a wall. In the following hours, all the men are killed. Among the paramilitaries, there are also two young women, about 17 years old, who are particularly cruel. One of them is the daughter of a work colleague of Mrs. U. They have knives and a kind of long-stemmed sickle with wire as a murder instrument. The men’s limbs are cut off and pulled up on wire to form “chains”. For this loot, the murderers get a lot of money from their leaders, says Mrs. U. The men have their tongues cut out, crosses burned into their skin, their throats slit. A lot of blood flows, blood everywhere. There are no screams of horror, no whimper-

ing of the children. Only the sounds of killing and dying break the silence. Mrs. U. tries to protect her children from this sight, hiding them under her skirt. Again and again she faints. At the end of the massacre, all women and children are taken away, the dead remain lying there. The next day a long march of the captured women and children follows to the next town. In a mosque, many of the women are raped, including Mrs. U. ... (Treatment center for torture victims, 1994). ◀

The descriptions cause horror and dismay in many listeners, but sometimes also unwillingness to listen to such details. The therapist has to confront herself or himself with the existence of evil and tragedy in the world, and in doing so he has to continuously deal with his own vulnerability (Coleman et al. 2018). Even experienced therapists are often overwhelmed by the force of the reports and find it difficult to respond professionally to these accounts.

Therapeutic responses can be influenced by various aspects, such as the nature of the trauma, the personal beliefs and attitudes of the therapist, the demographic characteristics of the patient, personality traits of the attitude towards traumatised patients and institutional resources. For specific traumatised groups (such as war-traumatised or torture survivors), therapist responses relate to a broader social context and are additionally influenced by prevailing social attitudes.

In the case of man-made traumas, the therapist has to confront the threatening side of humanity, which can be described as “existential shame”, i.e. the shame that something so horrible can happen at all (Danieli 1988). The therapist’s central task here is to endure one’s own feelings of sadness, horror and dreadfulness and at the same time to confront the patient’s frustration and cynicism about a terrible world without increasing the patient’s hopelessness.

27.3.2 Forms of Reaction of Therapists to Trauma Patients

In initial consultation or therapy situations, it may be necessary to react with one of two extreme positions (see following overview). Wilson and Lindy (1994) have proposed a model for extreme therapist reactions (or “countertransference”) in which they classify the forms of reaction as either avoiding or overidentifying.

Extreme Reaction Styles of Therapists (According to Wilson and Lindy 1994)

– Defense, devaluation

- Repulsive facial expression
- Unwillingness or inability to hear, believe or process the trauma story
- Excessive distance
- **Consequences**
- Defensiveness: do not ask
- Participation in the “conspiracy of silence“

– Overidentification

- Uncontrolled own affects
- Fantasies of revenge or rescue
- Role as a fellow sufferer or comrade-in-arms
- **Consequences**
- “High voltage” in the therapeutic setting
- Loss of boundaries
- Overburdening symptoms (burn-out)

27.3.2.1 Defence Reaction or Devaluation

An avoiding reaction of the therapist implies a defensive and derogatory attitude. The patient’s stories are not believed, or the experiences are trivialised. A lack of inquiry or

a quick change to another topic can also be an expression of such an attitude. For the patients, these are often familiar reactions. Danieli (1988) observed comparable reactions among psychotherapists, in families and society to Holocaust survivors and summarised this phenomenon as a “conspiracy of silence”.

From the therapeutic context, Dalenberg (2004) reported that patients perceived the trivialisation and minimisation of the traumatic experience as a betrayal on the part of the therapist. A possibly well-intentioned referral to a “specialist” after the patient has told his story is also problematic. The patient feels confirmed in his fear that he is not tolerable and would be rejected as soon as he opens himself.

27.3.2.2 Overidentification

At the same time, the treatment of traumatized persons may show a tendency towards over-identification. Too much empathy with the patient can lead to exceeding therapeutic borders, such as assigning the patient’s private number, making extraordinary appointments or being overly committed to the patient’s concerns. On the one hand, there is the danger that assistance measures are more in line with the therapist’s wishes than the patient’s. On the other hand, an excessively directive and caring attitude of the therapist can lead to an increased experience of helplessness and thus to an unfavourable self-perception of the patient. Thus, an intensive dependence on the therapist would be encouraged and the patient is implicitly asked to hand over responsibility to the therapist. Ultimately, these transgressions also lead to exhaustion, excessive demands and inefficiency on the part of the therapist (Wilson and Lindy 1994). In such a state, the over-engagement threatens to turn into defence and aggression.

27.3.2.3 Insecure Reactions

The positions mentioned are certainly extremes. Between the extremes, there are many kinds of uncertainties about how to react as a therapist to traumatised patients.

- An important reason for the uncertainty is the shyness or fear of the therapist to ask for contents and details that put the patient under even more severe strain. Here, the therapist’s fear that the patient could be retraumatised can play a role.

Part of the insecurity may stem from the therapists’ feelings of shame. This is especially the case with sexual trauma. The apparent way out for therapists to escape the described insecurities may be to “cling” to the patient’s hesitation not to want to report their traumatic experiences (e.g. when the patient says: “*I find it hard to tell what happened at that time*”). Patients often say such hesitant sentences from an ambivalent attitude. On the one hand, they find it difficult to report on the traumatising. On the other hand, they hope that the therapist will ask them about their experiences and fears, which they have often not told anyone else before.

- A therapist who is afraid to ask precise questions will have difficulties in gaining access to the patient’s emotional and mental world and will impair his possibilities for later therapeutic work.

27.3.3 Partisanship for the Patient

When dealing with traumatised patients, the problem of partisanship often arises.

- » Anyone who investigates psychological trauma must report on terrible events. When natural disasters and/or events of force majeure occur, it is easy for the rapporteur to feel sympathy for the victim. However, if the traumatic event is the result of human action, the rapporteur is trapped in the conflict between victim and perpetrator. It is morally impossible to remain neutral in this conflict, the viewer must take a stand. (Herman 2015, p. 4)

In this context, it is important for the patient to have a clear positioning. If there is a per-

petrator, he should be clearly named as the perpetrator. This also means that the blame should be clearly assigned. Nevertheless, it is helpful, especially at the beginning of therapy, to avoid harsh statements about the perpetrator, since the patient's feelings are often characterized by ambivalence.

Partisanship for the patient also plays an important role in juridical compensation. A specific topic in therapy with traumatized patients is legal and financial compensation (► Chap. 9). Many patients hope that legal or financial compensation will lead to an improvement in their state of health. The attempt to reduce symptoms by restoring justice often fails, however, and often leads to a renewed burden. Particularly in court proceedings, the additional burden associated with the testimony of witnesses should not be underestimated. If the result of such a trial does not fail in the patient's mind, the therapeutic process can be negatively influenced. For therapists, it is therefore advisable to be cautious and not to put pressure on the patient to take such steps out of a kind of "avenger-savior impulse". In some cases, psychologists are only consulted to obtain expert opinions or other forms of support in a legal dispute. If such a presumption exists, this should be openly addressed and the therapist's possibilities and limitations should be clearly defined.

27.3.4 Negative Basic Social Mood Towards Traumatized People

In the 2010s, the social opinion in Europe towards refugees and migrants deteriorated noticeably. This also affects those of them who are traumatized. As a therapist, one is also exposed to this changed negative basic mood in the public and in social media. Bemak and Chung (2017) have described under the term "political countertransference" the problem that even therapists cannot free themselves from negative ste-

reotypes, e.g. with regard to patients from Muslim countries or countries with an affinity to terrorism, of whom one can have fearful fears of strangeness as a therapist. The diversity of the cultures from which the patients on the one hand and the therapists on the other hand come can contribute to this. Bemak and Chung (2017) propose to face these problems in their own further education and supervision. It is also helpful to establish contacts with a treatment centre for refugees and migrants in order to reflect on these problems and to receive practical advice for one's own approach.

27.4 Therapeutic Relationship and Therapeutic Approach

As in any psychotherapy, the development of a sustainable and secure relationship is a basic prerequisite for the patient to dare to talk about his traumatic experiences and ultimately to be able to integrate them, especially in therapeutic contact with traumatized people. The basis for this is provided by empathic and understanding listening without judgement. In addition, establishing relationships with traumatized persons contains a number of special features and challenges, which are of central importance in therapeutic work and are not per se part of the common property of therapeutic practice.

Important Aspects in Shaping the Therapeutic Relationship Between Trauma Victims and Therapists

- Not pressing approach and respect for the possible loss of patient confidence
- Increased sensitivity with regard to "formalities of therapy setting" (no standard/automated diagnostics before the personal conversation about traumatic experiences)

- Adjusted style of conversation: Encouraging the patient to open up about traumatic experiences or signaling that he/she only needs to open up later
- Clarification of the interpersonal support resources of the patient
- If necessary, support for removal from persistent dangerous situations (e.g. domestic violence)
- Creating safe environmental conditions for patients (e.g. leaving doors open)
- Adequate response to rituals in order to respect the safety needs of patients
- Giving psychological complaints a name and explaining them (psycho-education)
- Joint discussion of concrete therapy goals, the sequence of the therapeutic procedure and explanation of the important therapy components (e.g. self-observation and protocols, trauma exposure or procedure for EMDR)
- If necessary, discontinue or reducing medication before the start of psychotherapy so that patients can attribute possible therapeutic success to the psychotherapeutic intervention.

27.4.1 Building a Trusting Relationship

Due to the generally shattered confidence of many trauma victims (see above), it is not possible to assume a lasting relationship of trust in the initial period of therapy with traumatised persons; the therapeutic relationship is rather “on the test bench”. Patients can show testing behaviour, e.g. by “throwing” individual traumatic experiences into the conversation and evaluating the therapist’s reaction to whether or not the therapist reacts appropriately to the narrative.

► Example: Political Imprisonment

A 32-year-old patient, who was imprisoned for about 2 years for political reasons, briefly hints that criminal fellow prisoners harassed him. Several follow-up questions are asked by the therapist. Only in a later conversation does the patient tell us that he has experienced various forms of sexual abuse. ◀

In other cases, the test behaviour can also be triggered by the fact that patients expect that no counterpart, not even a therapist, can bear the horrors of the stories. They then adopt a paradoxical, anticipatory, protective attitude towards the therapist, whom they do not want to overwhelm with their story.

27.4.1.1 Building Trust Gently

Building trust between patient and therapist is a process that takes time. Attempts by the therapist to justify or prove their own trustworthiness prove to be useless. Rather, expressions that show respect for the difficulty of trusting in the face of what has been suffered are perceived by the patient as a sensitive response.

The therapist can explain that he does not expect boundless trust from the patient and that he is aware that the patient does not feel safe at first. There is also no reason to see the therapist as trustworthy from the beginning. The therapist will try to earn the trust first, even if this will take some time.

- To create a trusting patient-therapist relationship, it is important to consider potential issues of sequencing.

The formalised initial diagnostics (e.g. with a questionnaire) should not take place before the interview in which the trauma is first discussed. Patients may feel repulsed by revealing their traumatic experiences in written questionnaires or tests before talking about them. Therefore, the time of the initial diagnostics should be postponed to a later date if necessary.

Building trust involves anticipating possible difficulties with the potential financial reimbursement of health insurance providers (if available). Otherwise, there may be further disappointment if, in the middle of the therapy, the health insurance makes problems paying for further therapy sessions.

27.4.1.2 Addressing the Safety Needs of Trauma Victims

The first contacts between patient and therapist also serve to create safe ambiance conditions for the patient. Severely traumatised patients are irritable and disturbing due to many triggers (which remind them of their trauma). The therapist should be aware of the testing processes that begin as soon as the patient enters the therapy room:

- Does the door have to remain open or be closed?
- Does the room allow sounds to escape or is it soundproof?
- Does the decoration of the room repel/triggers the patient because it brings back unfavourable memories?

Severely traumatised patients have often developed rituals (e.g. keeping windows or doors open at all times) to channel their fears. The therapist should be open-minded and sympathetic to this. In contrast to rituals performed by patients with other anxiety disorders (e.g. patients with panic or agoraphobia), these rituals do not necessarily need to be reduced in the course of therapy unless they express a persistent dysfunctional feeling of danger (Ehlers 2002) or impair the quality of life.

27.4.1.3 Dangerous Patients

There are patients who carry weapons (e.g. knives, pistols). They have gotten into the habit of doing so in order to be able to protect themselves better if necessary. However, the carrying of weapons is problematic - and

also not without threat to the therapist - as many trauma victims are impaired in their ability to regulate their affects (► Chap. 3). Because of the danger to oneself and others, not carrying weapons can become its own (partial) therapeutic goal.

27.4.1.4 Getting Out of Dangerous Contexts

Basically, the therapist should go beyond the therapeutic setting to explore how safe the patient feels in his or her home environment and whether there is any real reason for recurring dangers there. It should be discussed what the reasons for these feelings of unsafety are. If, in the relevant case, further dangers (e.g. domestic violence) are to be feared, measures should be agreed upon to minimize or eliminate them. Other persons and institutions (e.g. social workers, women's shelters) can be involved in this.

27.4.2 Therapy Goals and Planning

It is a generally accepted basis of psychotherapeutic activity that the shaping of the therapeutic relationship goes hand in hand with the contents that are conveyed to the patients from the initial consultation onwards, so that the patients receive orientation about the services offered and the professional competence of the therapist. In addition to the creation of trusting and safe environmental conditions, as described above, there are some important goals for the early phases of therapeutic contacts:

- Give the patient's complaints a name (psychoeducation),
- Joint discussion of therapy goals,
- Planning the therapy (if necessary, the sequence of therapy steps),
- Explanation of the most important components of therapy (discussion of treatment rationale).

27.4.2.1 Naming Complaints (Psychoeducation)

Traumatised patients often have a vague impression of the changes that the trauma may have caused in them. In the context of psychoeducation, the various changes and strains perceived by the patient should be summarised and named in a coherent concept. Later on, this can be used as a basis, and therapeutic goals, planning and rational strategies can be derived from this content. Many patients react to psychoeducation with relief, as they can finally establish a subjective understanding of the individual changes.

Psychoeducation starts with the patient's problem constellation and his or her previ-

ous knowledge. Embedded in an implicit or explicit biopsychosocial model of the disorder in question, variable priorities can be set.

For psychoeducation on PTSD, metaphorical terms such as “mental wound” or “burned wound” are appropriate. These metaphors can be related to psychological and physical changes, as shown in **Fig. 27.2**.

In the description of the symptoms included in the explanatory model, the patients themselves are the experts and can list all the changes they have noticed within themselves. The therapist can ask specific questions based on his knowledge of the disorder (e.g. asking for flashbacks: “*Do you also have the impression at certain moments that you are completely back in the situation?*”).

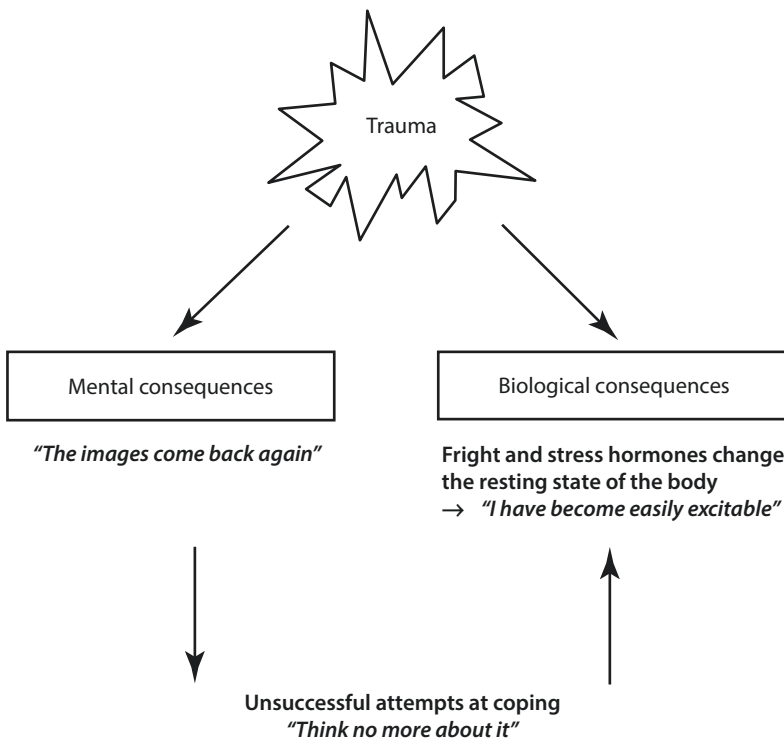


Fig. 27.2 Explanatory model for post-traumatic stress disorders. (Work through example sentences together with the patient)

It is useful to combine the interactive communication of the explanatory model with further procedures:

Psychoeducative Communication

- Better understanding of the impairments experienced. Here, the sentence that “*post-traumatic stress disorder is a normal reaction to an extremely abnormal situation*” can be used analogously.
- It can be conveyed that especially the physical reactions (e.g. faster excitability) belong to automatic protective reactions of the body and thus express a certain “**wisdom of the body**”, which wants to be better protected for future dangers and wants to make **escape** or **fighting reactions** possible by overexcitation.
- Information about ubiquitous trigger stimuli: All possible locations, situations, activities and other stimuli serve as clues before the dangers seem to reappear. However, these trigger stimuli lead to an intensification of symptoms. The explanation of these connections is intended to ensure that the symptoms lose their often surprising character.
- Provide information on specific topics, such as symptoms that are difficult to perceive and explain (e.g. flashbacks, emotional numbness, panic attacks). The information can be based on symptom descriptions (► Chap. 3)
- Information about the fact that during the time of psychotherapy, the symptoms can become stronger before they improve in therapy.

27.4.2.2 Therapy Goals, Planning and Rationale

Many patients with PTSD confront the therapist with the desire to forget the experience completely (“*Can you do anything so that I can forget the whole experience?* “). This understandable wish should be transformed into realistic goals in a suitable form of conversation, e.g. “*...that the memories no longer overwhelm me everywhere and all the time*”, “*...that I can push these memories back*”, “*...that I don't have to have the smell in my nose all the time*”, etc.

An orientation for therapy planning can be provided by the chronological sequence scheme of trauma therapies according to Herman (► Sect. 11.2): Stabilization, trauma synthesis or trauma exposure and reorientation. The respective therapy components can be explained to the extent that the patient can integrate them based on his or her previous knowledge.

Since effective therapeutic procedures explicitly address the trauma - in one form or another (► Chap. 11), even particularly anxious or avoiding patients must be encouraged to consciously confront the traumatic memories within the framework of their therapy.

There are various ways to justify the therapeutic or self-confrontation with the trauma to the patient:

- Use of metaphors,
- Develop elaborate explanations.

■ Use of Metaphors

Straighten broken bones (Hammond 1990, p. 346)

“The work we have to do in the next few hours has much in common with what happens when a child has broken a leg or an adult has a painful and infected wound that needs to be cut open. The doctor does not want to cause pain to the patient. But he/she knows

that if he/she does not straighten the bone or clean the wound, the patient will be in pain much longer, that he/she will remain disabled and probably never recover properly. It is hard and painful for the doctor to carry out the necessary treatments and cause pain by straightening the leg or cleaning the wounds. But the necessary actions are an expression of the care that makes healing possible”.

Cleaning the wound (Hammond 1990, p. 346)

“Reliving the tormenting memories and feelings will also be a painful process for a short time, just like cleaning a wound. But after that the pain will be less and healing will be able to occur.”

Cupboard metaphor (Ehlers 2002; ► Chap. 13)

“You can imagine it like a cupboard into which you have thrown many things very quickly, so that you can’t close the door completely. At some point, the door will open by itself and something will fall out. What do you have to do so that things do not fall out? You have to take things out, look at them, sort them, and then put them in the cupboard in an orderly fashion. It’s the same with the memory of a traumatic experience. Unfortunately, even then the door cannot be closed without first looking

at everything that has happened and sorting it according to the meaning it has for you. In order for it to become the past, it must be looked at and classified.”

Facilitating elaborated views

Within the framework of a Socratic dialogue between patient and therapist, a so-called vicious circle model can be developed together with the patient.

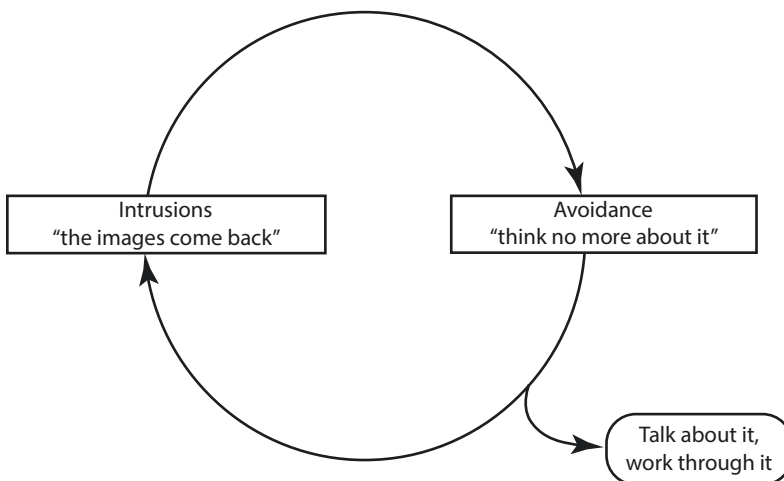
► Example of the “Vicious Circle Model”

■ Fig. 27.3

One patient had reported that “*the images of the experience keep coming back*”. Therapist: “*How do you react in such a moment to the fact that the images keep coming back?*” The patient’s answer: “*I try not to think about it anymore*” could be continued by the therapist with the question: “*What happens in such moments; are your attempts to repress the images successful?*”

In the search for a change idea, one can ask: “*When will you feel better with the flood of memories? Are there situations where the strain is not so great?*” To this question the patient can possibly answer that he feels better when he has talked about it with others.

The therapist can then introduce the concept of working through memories, which helps to break the vicious circle of intrusions and avoidance. ◀



■ Fig. 27.3 Working together on a vicious circle of trauma memories and therapy as a way out

As already explained above in the context of unfavourable forms of reaction by therapists, there is a connection between therapeutic relationship or therapeutic success on the one hand and the reactions of the therapist on the other:

- The empathic therapist encourages the patient to tell stories about terrible events without distracting from the subject or leading to sidelines, without staring at the patient in amazement or shock, or even showing a complete shock reaction.
- If the therapist downplays the importance of spontaneously expressed issues and directs the therapeutic conversation to areas that are not the focus of trauma-related anxiety, the patient will feel that the existential gravity of the experience is considered irrelevant to the treatment and will continue to feel misunderstood.

However, it is obvious that as a therapist you are burdened by the patients' stories and the massive horror of which you can indirectly witness.

27.5 Self-Care for Therapists

27.5.1 Secondary Traumatization

The treatment of traumatised patients often takes a high psychological toll on the therapists. It would also be unnatural to be able to sensitively discuss and work through the terror of a trauma without remaining emotionally and cognitively untouched. Witnessing crimes, accidents or other inhumane experiences indirectly through patients can easily lead to PTSD-like changes for therapists themselves. This phenomenon has been described as “vicarious traumatization” or “secondary PTSD” (Daniels 2008).

Secondary PTSD

Secondary PTSD in professionals is a result of repeated exposure to traumatic reports from patients. It can occur as a mixture of direct PTSD (e.g. in the form of intrusions, nightmares, alienation, sleep disorders) and burnout phenomena (e.g. depression, somatic complaints, cynicism).

The blend of PTSD and burnout phenomena can be assessed by means of a questionnaire (Motta and Joseph 1997), which records the factors affected and emotional exhaustion in addition to the patient's own PTSD symptoms.

Emotionally overloaded therapists also have a higher risk of somatic problems. Personal and professional imbalance manifests itself in fatigue, sleep problems, over-excitement and carelessness, and uncontrolled emotional expression (Wilson and Lindy 1994). In addition, there is the danger that therapists who treat (too) many trauma victims may feel increasingly isolated, rejected and misunderstood by others (colleagues). This has been described in particular for therapists who frequently treat victims of sexual abuse. Withdrawal and cynicism can still lead to a condition for which Figley (1995) coined the term compassion fatigue.

- The increasing specialisation of treatment facilities or special practices can be the cause of increased mental and physical morbidity among therapists. Therefore, exclusively therapeutic work with trauma patients is not recommended (Reddemann and Maercker 2008).

27.5.2 What Is to Be Done?

Efforts can be made at several levels to ensure that therapists do not suffer per-

manent secondary traumatisation (Stamm 1995):

- in professional settings,
- in the organization of work,
- in everyday life and leisure activities,
- in basic (philosophical) attitudes to life.

27.5.2.1 Professional Settings

The spontaneous occurrence of (parts of) PTSD symptoms after working with one or more trauma patients can initially be considered as “a normal reaction to an extremely abnormal situation” (► Sect. 27.4.2.1). In addition, various techniques of self-observation and self-protection help in the sense of self-care:

Techniques of Self-Observation and Self-Protection

- **Recognizing your own reactions**
 - Develop self-awareness for physical signals, e.g. for insomnia, headaches and sweating
 - Try to find words for your own experiences and feelings
- **Learn to cope with your own reactions**
 - Find your own level of comfort to allow openness, tolerance and the willingness to listen to everything
 - Know that every feeling has a beginning, a middle and an end
 - Learning to reduce overwhelming feelings without slipping into repression
 - When the feelings are wounded, take time to take them in and let them calm and heal before continuing

27.5.2.2 Organising One’s Work

It is helpful to integrate relaxation possibilities into the daily work routine (e.g. breaks, periods of reflection alone and with others). Important self-care is guaranteed by supervision by competent, trustworthy and exper-

rienced therapists. Herman (2015) stated that nobody can work with trauma victims on their own. Only through collegial support is it possible to retain the necessary strength to treat traumatised patients. To this end, the establishment of professional networks of therapists who provide trauma therapy can be helpful.

27.5.2.3 Everyday and Leisure Activities

The existential pressure to deal with the subject of trauma, because it is a matter of life and death, violence and crime, can lead to a preoccupation ad infinitum with this topic. Everyday examples of this are to repeatedly look at reports in the media on a trauma topic (e.g. on sexual child abuse). Trauma experts and therapists should claim the right to separate work and leisure. In this sense, advanced training seminars cannot be part of leisure time, but of the profession. One’s own resilience is best served by using and developing one’s own relaxation and leisure opportunities (Brockhouse et al. 2011; Reddemann and Maercker 2008).

27.5.2.4 Basic (Philosophical) Attitude to Life

The confrontation with traumatic events can also lead to changes in therapists’ attitudes to life. This includes acknowledging the “evil in the world” and its many forms of expression as well as accepting the irretrievable. A consciously designed post-traumatic growth process (► Chap. 2) with its areas: new priorities, reflection on one’s own strengths, appreciation of others and/or spiritual orientation, can also show therapists ways out of the burdens of their profession.

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