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Traumatised refugees – immediate response required

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Content

Summary and recommendations

Before and during their flight from their countries of origin, many of the refugees arriving in Germany have experienced extreme violence and life-threatening situations, or have witnessed such traumatising events. The lives of these people have been shaped by ongoing stress: poverty and traumatising childhood experiences in environments with scarce resources, organised violence, coercive measures, persecution, the disappearance or death of family members and friends, sexual and physical violence or exploitation.

For many refugees, these events have such a severe effect that they lead to mental and physical illness. Frequent symptoms include pain, sleep disturbance including nightmares, flashbacks and difficulties regulating their emotions. Due to a weakened immune system, mental suffering is often compounded by physical illness, for example in the form of chronic inflammation or autoimmune disease. People who have experienced violence, whether at home or in war situations, or who have participated in violence also have a lower threshold for becoming violent themselves – this is particularly true for men. Scientific studies have shown that the after-effects of trauma are often chronic, incurring considerable and possibly long-term treatment costs. Traumatising events experienced during childhood or adolescence have particularly strong repercussions because they significantly hinder a young person's developmental potential.

Many refugees who are under extreme psychological stress urgently require help. Immediate action is needed in order to prevent severe negative consequences – not just for the person affected but also for future generations and for society as a whole. Refugees who suffer psychologically are often unable to cope with everyday life, to establish relationships built on trust, or to learn a new language; the very skills that are key preconditions for integration into society, professional success and a contented life.

Intense traumatic stress and the resulting psychological effects can lead to deviant behaviour, which affects the social cohesion of the host country and which in turn may lead to the rejection or discrimination of refugees. If the psychological challenges facing refugees remain unattended to and untreated, dramatic changes in social cohesion may develop over the medium and long term.

The living conditions and numerous obstacles encountered while settling into the host country, in particular uncertainty about the fate of family members, social isolation and the loss of social status compared to the home country, cause additional psychological stress. The high rate of dropouts from language courses as well as the fact that many refugees struggle to organise their own daily lives in accordance with the host country's customs are expressions of these problems. Although certain courses, such as initial orientation courses, now allow students to learn at a slower pace and with less pressure, such services are of little help to refugees who have experienced severe psychological trauma. Support directly addressing psychological distress needs to be offered at an earlier stage to ease the transition into the receiving society.

1 | We recommend
offering traumatised refugees timely psychosocial and – where needed – clinical support so that integration and language courses can have the desired effect. To this end, we suggest that a range of services be made available to meet the specific needs of traumatised refugees and that these services be integrated into the existing health and social systems without putting too much strain on them.

Scientific findings suggest that a significant number of traumatised refugees can only be helped specifically by professional trauma therapy. At the same time, many traumatised refugees also benefit considerably from immediately available and easily accessible services, such as psychosocial support, active integration into social networks and targeted behavioural activation. The effectiveness of these measures at improving quality of life and ability to act has been scientifically proven.

2 | We recommend
a support structure which complements the current German care model. A differentiated support and care model would facilitate the provision of both professional psychotherapeutic treatment by licenced psychotherapists and psychiatrists as well as low-threshold services by trained supporters such as peer counsellors. Low-threshold services can also help with needs-based care for the population at large by removing barriers to accessing psychotherapeutic care, especially for marginalised groups.

Differentiated service requires early identification of the support needed. Under EU Directive 2013/33, Germany is obliged to identify particularly vulnerable people and provide them with appropriate care.

3 | We recommend
the use of screening tools such as the Refugee Health Screener to identify the need for treatment as early as possible. Screening, as it is understood here, must not be confused with noting patient history or making a medical diagnosis. Such screenings must be offered to each and every refugee arriving in Germany and should ideally be IT-based (smartphone, tablet computer). Local authorities would play a key role in this regard: Screenings should be conducted as part of the reception process in accommodation facilities in local municipalities and should be carried out by health authorities, youth welfare offices or psycho-social services.

Very often, refugees come into contact with the German healthcare system through a general practitioner. As a result, general practitioners are often faced with helping patients find their way through the healthcare system, which also means supporting refugees suffering from psychological distress or physical illness. This presents a great challenge for many general practitioners, not least because of language barriers, time-consuming consultations and cultural requirements. Apart from general practitioners there are many other professions, such as social workers or teachers, who are in regular contact with refugees.

4 | We recommend
the further development and expansion of qualified, additional training and education opportunities for professionals who do not primarily work as psychotherapists and providing them with information and concrete support in dealing with traumatised refugees.

There is currently a lack of psychotherapists with adequate training in the treat-

ment of post-traumatic disorders, which leads to deficiencies in the care system.

5 | We recommend
the further development and expansion of additional training and education opportunities for psychotherapists in the diagnosis and treatment of post-traumatic disorders.

Peer counsellors also play a key role in providing support services for refugees. They can help guide refugees through the healthcare system by accompanying them, mediating, translating, explaining, guiding and supporting. Once they have undergone additional training as trauma counsellors, they can also support psychotherapists treating traumatised refugees by taking over certain treatment elements as delegated.

Peer counsellors are generally familiar both with the linguistic and cultural background of the refugees and with the situation in Germany. Students who come from countries situated within the same cultural sphere as the refugees are good candidates for this type of work, provided that they have received thorough, practical training and – if they support psychotherapists by assuming delegated tasks – that they receive intensive supervision and support from the psychotherapists responsible for the case. In order to ensure that peer counsellors provide effective support, it is especially crucial that they are trained by qualified institutions and teachers.

6 | We recommend
using peer counsellors to support traumatised refugees. The measures described should be incorporated into existing integration and support services offered by the federal government, the governments of the German federal states and by local municipalities, and these institutions must receive adequate funding.

7 | We recommend
the use of peer counsellors trained specifically to support psychotherapeutic treatment. The prerequisite for this is a training as a trauma counsellor, based on scientifically proven, evidence-based[1] methods and procedures, which should be one of the strings attached to the corresponding training courses and the financing thereof.

8 | We recommend
making better use of the option of delegating part of the psychotherapeutic treatment to, for example, trained trauma counsellors. This may require adapting the respective legal framework.

9 | We recommend
that all services be accompanied by scientific research and monitored by an independent institution.

Treating refugees with severe psychological distress frequently incurs particular challenges for the therapeutic setting: In addition to the need for culturally sensitive treatment, psychotherapy must often be supported by specially trained interpreters. This is indispensable for the success of the psychotherapeutic treatment of traumatised refugees.

10 | We recommend
that the costs of treatment and interpreting services be covered for the entire duration of the therapy, irrespective of the refugee's residence status or duration of residence. To further support treatment and to eliminate language barriers, digital services should be assessed to determine their specific benefit and should be further developed where appropriate.

1 Evidence-based means that the efficacy of the procedures was proven in several independent clinical studies.

1 What's at stake?

Before, during and after their flight, refugees[2] are subjected to particular physical, mental and socio-economic stressors. Physical problems and psychological distress vary depending on the accumulated experience of severe threats, such as war and displacement, and in particular depending on the conditions of development during childhood and adolescence. Preliminary investigations have shown that a substantial number of the refugees having arrived in Germany over the last two years require professional help and support to be equipped with the skills needed to successfully navigate the family, school and professional requirements needed to integrate them into society.[3]

Traumatised people suffer severely both mentally and physically as a result of what they have experienced. If the psychological distress remains untreated, traumatised refugees are often unable to learn a new language or to fulfil their potential at school or at work. The high rate of dropouts from language courses as well as the fact that many refugees are unable to organise their everyday lives are a reflection of these problems. People who are not sufficiently integrated into society have a higher risk of deviant and potentially violent behaviour.[4]

The timely treatment of the consequences of trauma is vital for humanitarian, medical, psychological as well as economic reasons. In Germany, healthcare services are currently not equipped to deal with the high number and the specific needs of traumatised refugees. This is why the implementation of innovative support and care models appear to be useful. These models are inspired by those that have been tried and tested in emergency and development aid for many decades.[5]

Based on estimates it is assumed that half of the refugees who arrived in Germany over the last few years are suffering from psychological distress due to multiple and severe traumatic experiences. Of this group, half are unlikely to recover without outside help. Current unsubstantiated estimates suggest that a quarter of a million of the refugees who arrived in Germany in 2015/2016 are affected.[6]

2 We understand the term "refugee" to mean people who have come to Germany with the goal of receiving a protection status as vulnerable persons.

3 Elbert et al. (2017).

4 Collier (2014).

5 Elbert et al. (2017); Schneider et al. (2017).

6 The number and severity of post-traumatic disorders amongst refugees varies depending on the sum of distressing experiences. The proportion of severely traumatised people differs amongst different refugee populations, with up to circa 30% of adults suffering from post-traumatic stress disorder (PTSD) (Fazel et al., 2005; Miller et al., 2005). A similar percentage can be estimated for the current refugee population in Germany (Kaltenbach et al., 2017). Due to a lack of data, it is difficult to make any scientifically robust statements on the exact number of traumatised refugees, or the expected costs of care – or non-care.

2 Why do traumatised refugees suffer from mental health problems?

The more frequently and the more severely someone has been exposed to life-threatening events, the more likely they are to develop a psychological illness. Studies carried out amongst populations affected by war have shown that the probability of psychological illness[7] and the extent of functional impairment affecting everyday life[8] increases with the number of different life-threatening experiences[9]. At the same time, the greater the number of traumatic stressors experienced, the less likely the person is to recover without professional psychotherapeutic help.[10]

Refugees are exposed to the following stressors, in particular:[11]

1. Life-threatening experiences caused by organised violence before fleeing, as a result of acts of war, state persecution, systematic torture, rebel attacks as well as violence in the streets and in communities.

2. Life-threatening experiences and deprivation during flight, which often required a violent response.

3. Distressing experiences and the need to adapt following arrival in the host country, for example when staying in refugee camps/facilities.

4. The loss of significant others and family, especially for children.

In addition, when parents and significant others live in an environment shaped by violence and are exposed to violence-related stressors, they are very likely to pass this experience on to their children, which means that the children may suffer physical and emotional violence as well as neglect. This is particularly critical for children and adolescents because such experiences are formative (see also Chapter 4). When combined with threats and injuries caused by organised violence, such stressful childhood experiences have proven to be particularly detrimental for a person's mental and physical functioning during adulthood.[12]

2.1 Before fleeing

Various studies have shown that people in war regions and conflict zones are frequently exposed to a tremendous degree of violence, both directly and as witnesses.[13] A critical increase in violence then prompts people to flee.[14] Refugees who have fled from war zones report experiences of physical and mental torture, bombings, sexual violence and other atrocities.[15]

Apart from these immediate threatening experiences, refugees are often exposed to a range of ongoing stressors, including threats, persecution, intimidation, fear of being arrested, raids, dis-

7 Mollica et al. (1998); Neuner et al. (2004a).
8 For children, see Catani et al. (2010).
9 Schauer et al. (2003).
10 Kolassa et al. (2010).
11 Schauer (2016).
12 Nandi et al. (2015); Spitzer et al. (2009); Afari et al. (2014); Gupta (2013); Paras et al. (2009).
13 See, for example, Ertl et al. (2011); Neuner et al. (2004a); Steel et al. (2009).
14 Gäbel et al. (2006); Abbott (2016); Schauer (2016); Underwood (2017).
15 Elbert et al. (2013); Hensel-Dittmann et al. (2011); Neuner et al. (2004b); Mnookin (2016); Steel et al. (2009).

appearance or death of friends and family members, witnessing the suffering of people close to them, loss of status and profession, interruption of education or training, separation, isolation of families, being socially uprooted by repeated moves, unhealthy diet and lack of medical care as well as systematic deprivation or coercive measures.

2.2 During the journey

Experiences during the journey can vary a great deal: For some, fleeing may be a short and relatively safe process which only takes a day, such as evacuation by plane. For many others, however, fleeing is a life-threatening ordeal sometimes lasting several years and forcing them to travel through multiple countries. During this time, ongoing mental stress and extreme physical strain or even hunger and starvation go hand-in-hand with yet again witnessing or experiencing more traumatic life events: For example, many refugees experience sexual and physical violence, are separated from family members or robbed during the journey. In some cases, they are forced to harm or even kill others. They may witness torture and killings, lose close family members or friends, and may have to suffer extreme environmental conditions, such as the heat whilst crossing the Sahara Desert.

When violence is inflicted by fellow human beings, it can shatter positive assumptions about the world and about other people (shattered assumptions)[16] to such an extent that fears can no longer be assuaged (anxiety buffer disruption)[17]. This has a negative effect on refugees' ability to develop relationships of trust with others, which in turn is decisive for recovering from trauma.

Loss of the sense of belonging and status as well as property and resources, helplessness, uncertainty, hopelessness in a situation of displacement, waiting times, loss of self-efficacy and autonomy as well as physical exhaustion and permanent worry about family members wear every refugee down. This is particularly true of individuals who have already experienced previous traumas.[18]

2.3 After arriving in the host country

Even after refugees arrive at their destination, many stress factors remain – and new ones are added:[19]

- War, persecution and especially displacement often cause the destruction of social networks. This goes along with a fundamental feeling of loneliness.[20] For many people who have already been severely traumatised and are therefore particularly vulnerable, basic human needs, such as belonging to a family or a group[21] and the desire for appreciation and status[22], must be at least partially met, before mental health can recover[23].
- Worry about family members who have not fled or are still fleeing.[24]
- Loss of the established role within the family.[25]
- Loss of perceived societal status and the recognition associated with it, as well as loss of economic security.[26]

16 Janoff-Bulman (2010).

17 Edmondson et al. (2011).

18 Schauer et al. (2011).

19 Li et al. (2016).

20 Bogic et al. (2015); Chen et al. (2017); Gorst-Unsworth and Goldenberg (1998).

21 Baumeister and Leary (1995); Tafjel and Turner (1979).

22 Anderson et al. (2015).

23 Correa-Velez et al. (2010).

24 Nickerson et al. (2010).

25 Miller et al. (2002a).

26 Jablensky et al. (1992); Miller et al. (2002b); Mollica et al. (2002); Singh-Manoux et al. (2003); Sulaiman-Hill and Thompson (2012).

- Stigmatisation puts additional strain on those affected in addition to the actual suffering, once again reducing their self-esteem. For example, prejudice against people perceived to be mentally ill frequently leads to discrimination, rejection or even exclusion.[27]

- Continuing uncertainty about the about the possibility of staying in the host country.

- Extended periods without any occupation (waiting for work permits, et cetera) are common.[28]

- Rejection and even threats of violence or actual violence from the population of the host country.[29]

27 Ben-Zeev et al. (2010); Bhugra et al. (2017).
28 Warfa et al. (2012).
29 Jasinskaja-Lahti et al. (2009); Willems (1995).

3 How is suffering expressed by refugees?

3.1 How do body and mind respond to threats?

Life-threatening and other traumatising events have a direct effect on a person's perception and behaviour as well as on their physical functions. If people are forced to hide, to fight or to flee, the mind and body react with an acute alarm reaction and are in a state of high arousal. The sympathetic nervous system is activated with an increased heart rate, sweating, trembling. The body is in a state of fight or flight, which makes some people prone to rash and impulsive actions. When a situation seems hopeless, the parasympathetic system is activated and blood pressure drops. Generally people present three possible response patterns: 1) fear and the impulse to flee; 2) aggression in combination with the readiness to fight and 3) in the case of obvious hopelessness, a state of paralysis (tonic immobility in a state of shock or flaccid immobility or even fainting). This quickly leads to cognitive limitations such as attention and perception deficits, so-called tunnel vision, inability to act and the feeling of being exposed and helpless.[30]

The acute, very high level of arousal changes the way memories are formed. The severe emotional strain is practically burned into memory in such a way that its recollection can be beyond voluntary control. As the number of life-threatening experiences increases, so do the number of environmental stimuli that can activate these memories. Those affected often feel threatened, for example when they see a person wearing a uniform, smell fire or even when they are merely excited.

Acute threats and chronic stress trigger the body's stress response (Box 1), which causes direct mental and physical changes. The body's defence system is activated and energy resources are made available, amongst others through a rise in lipid and glucose levels in the blood, and blood pressure and heart rate increase. At the same time, digestion, protein synthesis, immune response and sexual functions are reduced.

If an organism remains in an ongoing state of stress, even after the acute threat has retreated, and does not "understand" that the threat exists only in memory, the stress response will become chronic and dysregulated.[31] This may result in permanently elevated levels of inflammatory markers and changes to the immune system, affecting the brain as a whole and the body peripherally. Symptoms of a chronic dysregulated stress response include ongoing nasal congestion or rheumatic conditions.[32] Psychological disorders are also amongst the consequences of a chronic stress reaction, for example feelings of helplessness, or even depression or excessive aggressiveness. At the same time, the person may experience a loss of motivation and may feel overburdened, even in minimally challenging situations. Chronic stress may also lead to an impairment in cognitive performance and concentration (e.g. being easily distracted), the inability to solve problems, a limited working memory and a bad long-term memory. The person may also be plagued by uncontrollable, sudden traumatic memories both during the day and at night. The con-

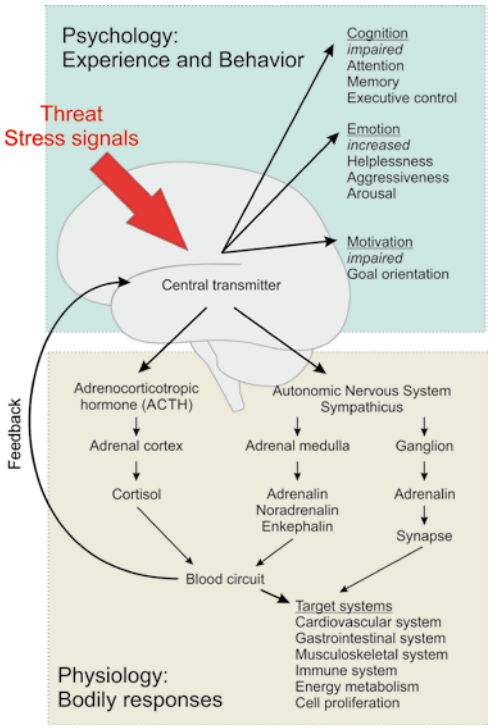
30 Schauer und Elbert (2010).

31 Elbert und Schauer (2014).

32 See, for example, Sommershof et al. (2009).

Box 1: Physical and psychological responses to threats

Almost all physical functions undergo changes when a person perceives a serious life or bodily threat; feedback effects cause changes in the functioning of the brain as well.



Threats and chronic stress trigger an organism's stress response, which manifests itself in psychological and physical changes. The autonomic nervous system can cause enormous changes in blood pressure and heart rate, while the body's main defence system is activated simultaneously by the release of cortisol. This prompts the body to make energy resources available, for example by increasing the levels of blood lipid and glucose. At the same time, digestion, protein synthesis, immune response and sexual functions are compromised and the blood supply to regions of the brain changes. This has both a direct impact on neuroplasticity processes, which are vital for memory formation, and an indirect impact through the release of neurotransmitters (noradrenaline), i.e. "messenger substances", and immunomodulating agents (cytokines). As a result, the conditioning of fear- inducing signals takes place more readily, and the fear memory generalises faster to other neutral signals, while the ability to erase conditioned fear associations is reduced. Attentiveness becomes limited, and emotions and motivations can no longer be properly regulated. Fears and aggression can spiral out of control, resulting in feelings of helplessness or uncontrollable aggressiveness.

sistent reconstruction of experiences of war and torture is significantly more difficult for people who suffer from post-traumatic stress disorder (PTSD), as this condition makes it impossible to put the specific triggers of the traumatic memories into their context in terms of time and place. This means that a remembered threat is perceived to be in the here and now, which can lead to an uncontrollable state of arousal and anxiety.

3.2 The (long-term) consequences of traumatisation

Immediately after a traumatising event, most people experience passing symptoms such as hyper-vigilance and avoidance of trauma-associated stimuli, as well as intrusive, unwanted memories of the trauma. In persons who have not yet experienced several traumas, the symptoms can be expected to diminish over the course of a few weeks or months. With more frequent experience of stress, however, the symptoms become constant, leading to full-blown post-traumatic stress disorder (PTSD). When additional stress is added, other consequences of trauma such as depression or dissociative disorders may follow.[33]

It has been proven many times that the risk of suffering from PTSD rises in accordance with the number of life-threatening experiences, and with the number of different situations in which fear and helplessness were experienced;[34] this makes spontaneous recovery without treatment increasingly unlikely.[35] Furthermore, experiences and stress during resettlement may contribute to furthering

33 Schnyder and Cloitre (2015).
34 Neuner et al. (2004a); Wilker et al. (2015).
35 Kolassa et al. (2010).

a refugee's psychological distress, which means that a large number of traumatised refugees will often remain trapped in psychological and physical illness for decades as a result of such stressful experiences.[36]

Surveys amongst comparable risk populations suggest that the late consequences of psychological trauma lead to a significant drop in life expectancy[37], for example as a result of an increased incidence of lethal cardiovascular disease.[38] The correlations for this have not yet been finally investigated but it is assumed that the foundations are established during childhood and adolescence. Depending on the intensity and frequency of traumatising experiences as well as the age of a person at the time of the experience, the risk of additional psychiatric disorders such as affective disorders, anxiety disorders[39] and addiction problems[40] at a later stage is increased. Social exclusion and living within an instable social framework are additional key risk factors for addiction. Psychoses, i.e. severe psychological disorders, which affect almost all areas of thinking, feeling and behaving, are more likely to occur in people who have experienced trauma.[41]

3.3 Culturally specific expressions of mental suffering

Depending on their culture and language, people have different ways of expressing mental suffering.[42] One thing that all cultures do have in common is that mental suffering is often expressed in the form of somatic, in other words physical, complaints. Symptoms of depression such as lack of motivation, low self-esteem and depressive moods are also found across all cultures. There are differences, however, in terms of subjective experience as well as how symptoms of depression are dealt with and described.[43] The way these symptoms are interpreted frequently depends on the norms of a person's culture or religion, and the expression of symptoms takes different forms in different cultures, making diagnosis difficult.[44]

When it comes to refugees, symptoms from the trauma spectrum are generally expressed in the form of physical complaints. Many refugees are not familiar with psychotherapeutic care and may even perceive it as stigmatising. Instead, these people generally seek out a general practitioner for help with their physical complaints.[45] The general practitioner may be able to help alleviate some of their symptoms, but without therapy, the underlying causes remain untreated. This leads to repeated doctor's consultations. Cultural and language barriers often mean that general practitioners are unable to adequately judge the symptoms described.

36 Elbert et al. (2017).
37 Charlson et al. (2016).
38 Hendrickson et al. (2013).
39 Green et al. (2010).
40 Driessen et al. (2008).
41 Abbott (2016).
42 Penka et al. (2012).
43 Kizilhan (2009).
44 Bermejo et al. (2017).
45 Elbert et al. (2017).

4 Focus on children and adolescents: The particular significance of prenatal stress and experiences of stress during childhood and adolescence

4.1 The effects of traumatising experiences during sensitive stages of development

Traumatising experiences during early childhood and adolescence, in other words during those phases when the nervous and immune systems are not yet fully developed, are particularly critical for health and psychological functioning. While both the nervous and immune systems develop on the basis of genetic programs, environmental factors play an indispensable role in the concrete expression of structures and functions. This is particularly true for such fundamental functions such as vision, but also for more complex functions such as language or – a factor which is of particular importance here – the ability to control stress and to fight illness. Moreover, there are specific phases during pre- and postnatal development in which the nervous system is particularly formable, and where the environment has an especially formative and lasting effect. These phases are known as sensitive or critical periods – sensitive because the system's increased plasticity and critical because certain environmental effects are necessary in order for these functions to develop in the first place.[46] The beginning and the end of these critical phases for the various functional divisions have not been fully established, but it may be assumed that all functional divisions have such critical phases and that the time before and during puberty is such a period of increased plasticity.

The lasting impact of specific environmental conditions begins already in the mother's womb.[47] Controlled animal studies, for example, have shown that the mother's exposure to stress during certain phases of the pregnancy can have a negative impact on the offspring's immune response during adolescence.[48] In the meantime, comparable observations have been made in humans: A connection has been shown between the mother's exposure to stress during pregnancy (for example due to domestic violence) and her offspring's immune status and mental health during adolescence.[49]

Unfavourable environmental conditions directly after birth also have lasting effects on the development of the immune and nervous systems. Controlled animal studies have shown that the mother's care behaviour has an effect on the behaviour and the physiology of the offspring later in life.[50] Offspring that receive little care and little physical contact from their mothers during the first weeks of life exhibit more anxious and less exploratory behaviour as well as stronger stress and defence responses in stressful situations than the offspring who have an intensive physical contact with their mothers. The respective environment (and conditions) thus either activates or blocks the genetic development programme. These so-called epigenetic effects, which can be triggered both prenatally and postnatally, will affect a person throughout their life[51] and can be

46 Knudsen (2004); Nationale Akademie der Wissenschaften Leopoldina et al. (2014).

47 Weinstock (2008).

48 Coe et al. (2002); Yirmiya und Goshen (2011).

49 Radtke et al. (2015); Radtke et al. (2011); Entringer et al. (2010).

50 Zhang und Meaney (2010).

51 Heim und Binder (2012).

expressed in factors such as low resilience, psychological limitations and illness (for example depression, schizophrenia, psychosis, drug dependence). Traumatisation that occurs during the vulnerable, early stage of development can increase the risk of suicide as much as twentyfold.[52] People with early traumatising experiences also have a higher and sustained risk of a range of somatic diseases such as autoimmune diseases, cardiovascular disease, obesity and diabetes.[53] Children who were traumatised by violence may become more prone to violence later in life. This was shown in a recent study, which suggested that a significant proportion of criminal behaviour may be the result of interpersonal childhood trauma.[54] Ultimately, stress can be passed down to the generation of their grandchildren through epigenetic processes,[55] making pregnant women and children a particularly sensitive group amongst refugees.

4.2 Symptoms of mental suffering in children and adolescents

Many underage refugees develop post-traumatic symptoms as a result of traumatising experiences and often suffer from severe sleep disturbance, nightmares, dissociation and intrusive memories of the traumatising events. Other possible effects of traumatisation during childhood and adolescence include difficulties in regulating behaviour and emotions, which may take the form of self-harm or substance abuse, a disturbed sense of self or psychotic symptoms as well as attachment disorders. Apart from post-traumatic stress disorder (PTSD), the most frequent post-traumatic disorder amongst underage refugees is depression. Studies on the prevalence of depression amongst underage refugees have shown that up to one third of these young people may be affected.[56] Adolescents who come to Germany without a responsible adult companion have an even higher prevalence of depression.[57] There are also clear indications of high levels of anxiety.[58]

4.3 Stress for parents – stress for families

In addition to traumatising events before and during flight, young refugees are also at risk of experiencing violence at the hands of psychologically distressed parents. Parents' psychological stress may be expressed in impatience, lack of understanding and even aggressiveness and violence towards their children.[59] Parents often mirror their own childhood experiences of neglect and violence at the hands of adults in the way they deal with their own children.[60] In many of the countries where refugees come from, violence and physical punishment are widespread when raising children.[61] Research on trauma and aggression as well as on organised violence and violence in the family[62] suggests that violence plays an important role in the way that children are brought up in refugee families and that parents often resort to violence because they themselves are stressed and overwhelmed and lack knowledge of alternative methods.

52 Santa Mina und Gallop (1998).

53 Gold et al. (1986); Pasquali et al. (1993); Chrousos (2000); Roy et al. (1993).

54 Webb et al. (2017).

55 Serpeloni et al. (2017).

56 Metzner et al. (2016).

57 Mueller-Bamouh et al. (2016).

58 Metzner et al. (2016).

59 Saile et al. (2014); Rieder und Elbert (2013).

60 Elbert et al. (2006); Ruf-Leuschner et al. (2014).

61 Straus (2010).

62 Fazel et al. (2012); Hecker et al. (2014); Rieder und Elbert (2013); Ruf-Leuschner et al. (2014).

5 Need for action in the host countries

There is no question that every person in need of help in Germany should receive support. It also goes without saying that this also applies to refugees.[63] Due to the severe effects of traumatisation and the large number of traumatised people, there is a particular social relevance for adequate treatment. If left untreated, the after-effects of trauma can become chronic,[64] causing suffering for the individual, making integration difficult and creating a burden on the healthcare system.[65] Experiencing violence can lead to the victims becoming violent themselves.

5.1 Trauma and experienced violence as barriers to integration[66]

The stress and mental suffering of refugees described in Chapter 3 often limits their ability to participate in society and lead a normal life. Traumatised people are extremely anxious and often lead very withdrawn lives. They frequently misinterpret social pointers, seeing them as a threat and reacting either too aggressively or with helplessness.[67] Another possible effect of traumatisation is that those affected find it difficult to find their way around in a foreign culture, as traumatised people have a limited learning capacity and lack the energy to learn a new language. In severe cases of post-traumatic stress disorder (PTSD), patients are entirely unable to interact with the environment in a concentrated and controlled way. This means that these refugees benefit from integration programmes only to a very limited extent, if at all.

The cognitive, emotional and physical impairments caused by trauma can be successfully treated by therapeutic intervention, thereby preventing or reducing long-term negative effects.[68] Without adequate support, these limitations frequently prevent the persons affected from benefitting from language courses or professional training.[69]

Trauma is often expressed in chronic physical illness, with traumatised people often becoming “revolving door” patients in general practices[70]. The burdens that this places on the public healthcare system are obvious. At the same time, integration into the labour market remains difficult, which leads to increased utilisation of social support systems. In light of these aspects, it is all the more urgent to find effective, realistic and affordable support and care strategies for refugees experiencing psychological distress.

The resulting economic costs for all relevant areas of society (healthcare system, welfare system, education and training, labour market, public safety, criminal justice system etc.) are still difficult to

63 The member states of the European Union have undertaken to take into account the special situation of persons with serious physical illnesses, persons with mental disorders and persons who have been subjected to torture, rape and other serious forms of psychological, physical or sexual violence; see Article 21 Directive 2013/33/EU, Official Journal 180/96 dated 29.06.2013.

64 Sack et al. (1999); Tam et al. (2017).

65 Heinz and Schneider (2017).

66 The integration of refugees today is entirely different to the integration of refugees after the Second World War, when refugees spoke the same language and had the same cultural background as the receiving society, and more often than not had a similar level of education and training.

67 Maercker (2013).

68 Summarised by Schnyder and Cloitre (2015) as well as Landolt et al. (2017).

69 Heinz and Schneider (2017); Schneider et al. (2017).

70 Penka et al. (2012).

gauge due to lack of data. Short-term noticeable relief for this situation is unlikely to be found. Long-term relief, for example by successful integration into the educational, social and labour systems, can be expected; however, due to a lack of data and the necessity of long-term observational periods, it is currently not possible to make any reliable and robust statements in this regard.

5.2 Deviant behaviour as a result of trauma and experienced violence

More than 60 percent of adult refugees and more than 40 percent of adolescent refugees have experienced violence within the context of civil war in their countries of origin[71] and/or during their journey[72]; most of them were the victims of violence and occasionally they resorted to violence themselves. Some of the people who experience this type of violence do not just suffer from stress-related and post-traumatic illness, but are also more prone to violent behaviour[73], whether against themselves or against others.[74]

This human response to violence is universal and has been extensively described for various cultures.[75] It occurs in two different forms: (i) *reactive aggression*, which takes the form of a defensive response to the large number of sociocultural stressors, and which is frequently expressed in negative emotions such as hostility, fear, anger and rage; and (ii) *appetitive aggression*[76], which is targeted, experienced as pleasurable and often observed in people who took part actively in wars or armed conflict, or were forced to do so.[77]

Such a possible tendency towards violence is not just fostered by personal experience of violence but also by the effort it takes for a person to deal with a foreign culture (acculturation stress).[78] A perceived cultural distance between the rules in someone's own country of origin and those in Germany may also foster a tendency towards violence. As described in theories about cultural conflict, such perceptions may result in rising estrangement from the surrounding society, which in turn may lead a person to display abnormal social behaviour or even commit criminal offences.[79]

Deviant behaviour also affects the social fabric of the host country. This is expressed in a variety of different ways, for example in the loss of mutual trust within the host population as well as between the population in the host country and the migrant population; it may also take the form of an increasing unwillingness to share social goods, or even of open rejection and discrimination.[80] If the causes of deviant behaviour and psychological problems amongst refugees remain unnoticed or untreated, this may lead to changes in social cohesion in the medium and long term.

Furthermore, the behaviour of traumatised refugees may trigger cycles of violence in that parents have a negative effect on the children's resilience beyond the epigenetic effects described in Chapter 3.[81] The influences to which children are subjected are particularly critical because childhood is the period where self-control, social competencies and value systems are learned. Unfavourable development conditions or stressful experiences during childhood may prevent a person from learning to control violent impulses, increase the risk of internalising behaviour to the point of self-harm,

71 Abbott (2016).
72 Schock et al. (2016).
73 Bushman (2017).
74 Hecker et al. (2014); Webb et al. (2017).
75 Elbert et al. (2017).
76 Elbert et al. (2018).
77 Nandi et al. (2017).
78 Messinger et al. (2012).
79 Chen and Zhong (2013).
80 Collier (2014).
81 Elbert und Schauer (2014); Ullmann et al. (2017).

or even externalising behaviour in the form of violent criminal behaviour. The former response is particularly prevalent amongst young women, while the latter is more prevalent amongst young men.[82]

5.3 Insufficient care and support for refugees suffering from psychological distress

In Germany, refugees suffering from psychological distress are faced with a healthcare system which already falls short of meeting the demand for psychotherapeutic support in many regions. This structural deficiency is compounded by the special needs of refugees.[83]

Lack of personnel resources

Providing care for all refugees through licensed psychotherapists and psychiatrists is impossible. There are many rural areas in Germany where psychiatric/psychotherapeutic care does not even cover the needs of the current, local population.[84] Becoming a qualified therapist requires many years of psychotherapeutic training. What's more, there is currently a lack of psychotherapists with adequate training in the treatment of post-traumatic disorders.

Not enough qualified support services

A significant number of traumatised refugees can only be helped by specific professional trauma therapy. At the same time, many of them also benefit considerably from immediately available, easily accessible measures, such as psychosocial support, active integration into social networks and targeted behavioural activation. There is still a shortage of such services.

Language and cultural challenges in therapy

The psychotherapeutic treatment of refugees creates immense communication challenges. Language barriers as well as diverging expectations regarding therapy may make it difficult to succeed. Different values and cultural understandings of psychological distress may pose additional challenges. In light of this, it comes as no surprise that the rate of drop-out, false diagnoses and incorrect approaches to treatment is high.[85]

No long-term funding for interpreters and translators

Language barriers often mean that therapy is only possible with the support of an interpreter. Funding for interpreters is currently not provided for, neither during the first phase nor for the time after transition into the regular healthcare system. Moreover, there are not enough interpreters who are qualified to work in a therapeutic setting.[86]

82 Webb et al. (2017).

83 Schneider et al. (2017).

84 See data published by the German National Association of Statutory Health Insurance Physicians (*Kassenärztliche Bundesvereinigung*) for regional distribution of psychotherapists with psychology or medical training working in the statutory healthcare system, collected in 2016 (Source: statistical information from the Federal Physician's Register), http://gesundheitsdaten.kbv.de/cms/html/16402.php (retrieved: 28.11.2017).

85 Penka et al. (2012).

86 Gouzoulis-Mayfrank et al. (2017); Schaffrath et al. (2017); Schneider et al. (2017).

6 Possible solutions – differentiated and needs-based care

Given demand and the limitations of the current care system described above, what can be done to ensure that traumatised refugees receive the help they need? To adequately respond to these challenges, potential solutions must meet four requirements: They must be immediately available and affordable; they must be accessible; and they must ensure that traumatised refugees are offered adequate support in treating their suffering. What does it take to meet these requirements?

6.1 Screening and assessment

There are good reasons why EU Directive 2013/33 requires member states to identify particularly vulnerable people – including people in psychological distress – and to provide them with appropriate care. This is important for a number of reasons:

- One of the characteristics of post-traumatic disorders is that memories of traumatising experiences are avoided whenever possible. This avoidance behaviour means that traumatised refugees often will not seek medical help until their psychological distress triggers physical symptoms, such as sleep disturbance or pain. Most people will then see a general practitioner for help with their physical pain.

- When psychological distress that requires treatment is not properly identified or not identified at all, it may become chronic.

- Limitations stemming from psychological distress often cause new problems, which in turn add further stressors and intensify the psychological suffering – for example, when a refugee fails to succeed in an integration course, language class, at school or at work.

This is why we recommend that all refugees undergo screening using existing, scientifically validated clinical screening procedures[87], such as the Refugee Health Screener[88]. The Refugee Health Screener asks about the number and severity of symptoms. Screening should be conducted at suitable points of contact as soon as possible upon entry into the host country, e.g. by the health authorities, youth authorities or psychosocial services. Screenings should be conducted and evaluated by trained persons, such as peer counsellors (see Box 2) and could be used to reveal the probability of psychological illness, and who requires urgent action (see Chapter 6.2).

87 Screening, as it is understood here, must not be confused with anamnesis or making a medical diagnosis.

88 Hollifield et al. (2013); see also: http://refugeehealthta.org/wp-content/uploads/2012/09/RHS15_Packet_PathwaysToWellness-1.pdf (retrieved: 15.12.2017).

6.2 Counselling, support and therapy

Not all refugees who suffer mentally need extensive psychotherapy. In many cases, low threshold, participatory and integrative services[89] can be just as effective as resource-intensive individual therapy[90].[91] In less severe cases, social inclusion and behavioural activation may play a key role – and this is something that peer counsellors can provide. Screening thus leads to the following options:

Attentive observation: The refugee is assigned a peer counsellor who contacts the refugee after 3–6 months to discuss whether the situation has improved or worsened. If there has been an improvement, no further observation is necessary. If there has been no change, the peer counsellor contacts the refugee again after another 3–6 months. If there has been a worsening, the screening is repeated.

Syndrome-specific, culturally sensitive guided self-help: The refugee is assigned a specifically trained peer counsellor who contacts him or her directly to provide support with self-help and social integration. Such services include measures for behavioural activation, information and education about post-traumatic disorders, observing stressors and practising problem-solving skills.

Expert intervention: If immediate action is deemed necessary, the traumatised refugee will be referred as quickly as possible to a psychiatrist or psychotherapist, who will make a medical assessment. If the expert determines that treatment is needed, he or she will take over the treatment under his or her case responsibility or delegate parts of the treatment, for example, to a peer counsellor.

To adequately cover the need for support and care of traumatised refugees, sufficient personnel resources are needed. The traumatising experiences must be addressed in an adequate and culturally sensitive way, which is an important argument in favour of peer counsellors (Box 2).

A prerequisite is that peer counsellors are trained by qualified institutions and teachers. Also, peer counsellors should be closely integrated into the structure of the existing healthcare and social systems. Any funding of services and recognition as a peer counsellor should be based on these conditions.

Peer counsellors relieve some of the burden faced by individual psychotherapists by standing in as trauma counsellors and implementing delegated, manualised and pre-determined modules of a trauma therapy programme (see Box 2).[92]

The medical diagnosis and the ultimate responsibility for the case must always lie with the psychotherapist or psychiatrist, who is responsible for the supervision and creation of a personalised treatment plan that takes into consideration the individual's problems and any comorbidities. For quality assurance, medical associations (*Ärztekammern*) and associations for psychotherapy (*Psychotherapeutenkammern*) should develop guidelines for the qualification of peer counsellors in a therapeutic setting, ideally at the national level.

89 Bajbouj et al. (2018).

90 van Straten et al. (2015). Even though the study published by van Straten et al. (2015) is a meta-analysis of non-refugee populations, in our opinion the results can be transferred to refugee populations.

91 These types of services are also recommended internationally, such as in the briefing paper published by the International Society for Traumatic Stress Studies (ISTSS): http://www.istss.org/education-research/briefing-papers/trauma-and-mental-health-in-forcibly-displaced-pop.aspx (retrieved: 26.01.2018).

92 In this respect, a lot can be learned from experiences with similar approaches used in war-affected regions with insufficient healthcare systems: Studies have shown that in this context trained laypersons are able to carry out modules of a treatment effectively – at no increased risk for the patient, for example in leading the traumatised person through modules of narrative exposure therapy (Catani et al, 2009; Ertl et al., 2011; Jacob et al., 2014; Neuner et al., 2008), of trauma-focussed cognitive behavioural therapy (McMullen et al., 2013; O'Callaghan et al., 2013) or other pragmatic approaches based on cognitive behavioural therapy (Bolton et al., 2014), provided the treatment has a focus on trauma (see also Chapter 6.3).

Box 2: Peer counsellors – people with experience of migration or flight can support traumatised refugees

What are peer counsellors?

Peer counsellors are first- or second-generation migrants or refugees themselves who provide more recent refugees with a range of assistance such as interpreting, practical support and guidance. Ideally, peer counsellors should be bilingual and be role models for successful integration into German society. Good experiences have already been made with peer counsellors as "healthcare guides" for migrants.[93] With additional, specialized training, peer counsellors can also play a role in the treatment of refugees, serving as "trauma counsellors" under the supervision of the acting psychotherapist.

Peer counsellors as "healthcare guides"

"Healthcare guides" can be trained to use screening tools in order to direct refugees to appropriate psychotherapeutic care or other services within the healthcare, social service and welfare systems. "Healthcare guides" have in-depth knowledge of how these systems work in Germany, enabling them to give advice to refugees and, if necessary, accompany them on their first visit to a doctor or therapist. They can also support the social integration of refugees through behaviour activation and integration into social networks.

Peer counsellors as "trauma counsellors"

"Trauma counsellors" receive appropriate and specific training and work under the supervision of a licensed psychotherapist who is responsible for the case. They can help inform refugees about aspects of their condition, thus contributing to an understanding of the condition and its consequences (psychoeducation). They can also carry out evaluated, short-term interventions to treat post-traumatic disorders as part of refugees' psychotherapeutic treatment under close supervision of a licensed therapist following diagnosis determination. Treatments are based on scientifically proven methods, the efficacy of which have been shown even when they are carried out by counsellors who have not received psychotherapy training comparable to the training given in the German system. In these cases, a licensed psychotherapist will always be responsible for the case in hand. A clinical examination takes place after each treatment module, following which the supervising psychotherapist will introduce any appropriate further steps.

How are peer counsellors trained?

"Healthcare guides" are prepared for their role with training courses lasting several days, which can be run by psychosocial centres or other licensed training centres. The minimum requirement for "trauma counsellors" is six weeks of theoretical training followed by practical casework, initially with a therapist present and later under the therapist's supervision. This supervision may be carried out by the therapist to whom the trauma counsellor will be subsequently assigned. It would be possible to train approximately 500 "trauma counsellors" annually if 5–10 training centres each offered 4–8 courses for 10–15 participants per year.

93 Salman (2015).

How can this model be put into practice?

The model described allows a psychotherapist to delegate cases to up to 10 "trauma counsellors". The psychotherapist would then carry out regular supervision meetings with the counsellors at least every two weeks during treatment, either individually or in a group. If just 10% of the 24,000 psychotherapists registered with the statutory health insurance system in Germany took part in the scheme, supervising 4 trauma counsellors on average, around 10,000 of these counsellors could be deployed. All relevant regulations and legislation would need to be reviewed and, where necessary, modified. To enable treatment to start as soon as possible, greater use could also be made of system structures already provided for by law, with modifications where necessary. "Trauma counsellors" should be remunerated on the basis of the tasks that are delegated to them.

In addition, psychotherapists need even more support. Firstly, for direct, interpersonal communication with traumatised refugees. For this, funding is needed to train and pay qualified interpreters. Secondly, psychotherapists themselves need training to understand the specific needs of traumatised refugees and their new role in delegating and supporting treatment in this context.[94] The curriculum for this type of training could be created by expert societies, such as the German Psychological Society or the German Association for Psychiatry, Psychotherapy and Psychosomatics. Relevant contents of such a training could include: the knowledge and skills needed for the science-based treatment of post-traumatic disorders (see Chapter 6.3), implementing trauma-focussed treatment with the help of interpreters, conveying knowledge and skills and supervising peer counsellors.

Digital tools and suitable internet-based programmes may be used for various parts of the screening as well as for the support and treatment of refugees in psychological distress.[95] These technologies come with a whole range of potential advantages. Apart from being cost-effective[96] and easily disseminated, they make it easier to overcome two traditional barriers to care: language[97] and stigma[98]. However, there is still need for research on a range of unanswered questions, such as the need for medical indications or long-term efficacy. Such methods and programmes – as well as the implementation of the above recommendations – should be subjected to scientific monitoring.

As described in Chapter 4, children are considered a particularly vulnerable group within the refugee population. In addition to traumatisation pre-flight, during and after the flight, children may experience additional distress and violence, because families as a whole are under great strain. Counselling and support services for parents of refugee families could be very useful in order to ease their burden, to help them recognize when their children have experienced trauma that requires treatment and to support them in guiding their children through the German school and care system. Child and parent centres, admission interviews with parents at day nurseries and schools or other education services would make good points of contact. Some such services already exist, but we should aim to provide scientific evidence in support of these efforts and make these services as widely available as possible.

94 Heinz and Schneider (2017).

95 Knaevelsrud et al. (2016); Schneider et al. (2017). See also, for example, http://www.ewi-psy.fu-berlin.de/einrichtungen/arbeitsbereiche/klinisch_psychologische_intervention/forschung/onlineintervention/ilajnafsy/index.html (retrieved: 15.12.2017).

96 Solomon et al. (2015).

97 Schulz et al. (2014).

98 Kennedy et al. (2016).

6.3 Methods for treating post-traumatic disorders

A whole range of effective psychotherapeutic procedures have been developed for treating psychological distress caused by repeated traumatising experiences (see also Box 3).[99] In order to alleviate symptoms temporarily, pharmacological interventions may be used to support treatment. Randomised controlled treatment trials have shown, however, that pharmacological interventions have little lasting efficacy and should therefore not be used as first choice treatment.[100]

Psychotherapeutic treatment methods for post-traumatic disorders that have proven to be effective have two basic characteristics in common.[101] The treatment focus is, firstly, on the structured recollection of traumatising experiences and, secondly, on the importance ascribed to these experiences. This is because traumatising experiences are often not remembered within the actual context but emerge in fragments, suddenly and without the person being able to control them. This means that a remembered threat is perceived to be in the here and now, which can lead to an uncontrollable state of arousal and anxiety.

The focus on the memory itself distinguishes these so-called trauma-focused interventions from symptom-focused interventions, which concentrate on practising coping strategies in order to deal with symptoms when they arise. In addition to the obligatory psycho-education – i.e. an explanation of the disorder, the symptoms and the possible causes – trauma-focused interventions essentially rely on two treatment methods, which are given more or less weight depending on the approach used. These treatment methods are:

- Guided remembering of the traumatising experiences in order to address them verbally. The goal of this method is to contextualize the stressful memories in terms of space and time (what happened where); and

- cognitive processing of the meaning of the memories (what feelings they trigger, et cetera).

Some approaches also include practising how to deal with memories of trauma when they arise in everyday life as well as more general skills for how to handle emotions and interpersonal patterns.

There are two main differences between the two treatment methods: the first is the focus on individual techniques, the second is whether the method focuses solely on the predominant traumatising event (index trauma) or whether it more generally addresses highly emotional events that happen in the course of the patient's life. The latter treatment is often necessary for refugees who have experienced a range of different traumas.

99 Bisson et al. (2013); Schnyder et al. (2015); Schnyder und Cloitre (2015); Watts et al. (2013).

100 Schnyder and Cloitre (2015).

101 Schnyder et al. (2015).

Box 3: Treatment Models[102]

Cognitive therapy (CT) for post-traumatic stress disorder (PTSD) is based in part on correcting inaccurate perceptions of experiences and risks.[103] With the support of their therapist, patients work on gradually engaging in activities and social relationships from the very beginning of treatment. Their memories of trauma are restructured by

1. accessing the memories of the worst – i.e. the most emotionally distressing – moments of the trauma and discussing them in relation to threats in the present;
2. re-evaluating the experiences from their present perspective, taking into account all available information.

The patient learns to distinguish between the triggers for reliving their experiences and the feelings that this creates – enabling them to separate the past and the present. Furthermore, the treatment aims to change the behaviours and cognitive processes that lead to the distressing memories being revived.

- Cognitive therapy requires considerable expertise and is thus suited for the treatment of refugees by professionally trained and licensed psychotherapists.

Narrative exposure therapy (NET)[104] re-embeds memories in the appropriate context in terms of time and space – a context that has been lost as a result of repeated traumatising experiences. NET patients begin by establishing with the help of a *lifeline* a chronological overview of the most significant positive, negative and traumatising life events they have experienced. However, the core element of this treatment requires patients to establish a chronological narrative of their life story, with therapy focusing on the most significant life events. Missing information surrounding the traumatising events is remembered and processed, and its significance is transferred into coherent narratives.

Particularly important are the making of meaning within a person's life story. As far as possible, patients' narratives must therefore cover their biographically relevant and formative life events, in order to help them understand their own story and make sense of the resulting emotions and behaviours. Empathic, supportive therapeutic contact will lead to relationship experiences with a corrective effect as distressing scenes from the past are relived. The attitude of the therapist is one of acceptance and is explicitly oriented towards human rights. This enables the holistic appraisal of the person and their life story.

- Recounting important experiences is inherent to every culture. Several studies carried out in the countries of origin of refugees have shown that NET is a robust method and that even laypeople can be trained as trauma therapists within just a few months. Peer counsellors with NET training could provide valuable assistance to therapists in Germany.

102 A summary and assessment of the effectiveness of the individual processes can be found in Schnyder and Cloitre (2015).

103 Ehlers and Clark (2000).

104 Schauer et al. (2011).

Prolonged exposure therapy (PE)[105] is a method in which the patient confronts their distressing memories in their imagination (imaginative exposure). Patients with PTSD typically avoid this kind of exposure as it triggers feelings of fear and helplessness. With the help of a psychotherapist, they can process and overcome these painful experiences. Noteworthy aspects of their imaginary picture of the experiences, as well as contradictory perceptions and any thoughts and emotions that arise, are discussed with the therapist. The process will also lead the patient to confront emotions such as shame, guilt and anger. Prolonged exposure therapy additionally involves purposefully visiting places or carrying out actions that the patient has been avoiding (*in vivo* exposure).

- PE has not yet been widely used for patient groups with such diverse traumatising experiences as refugees. The method should therefore be evaluated in pilot projects before being widely applied. A major limitation of the method could be its focus on treating a single, particularly distressing trauma (index trauma), because refugees have often had a series of traumatising experiences.

Similarly to cognitive therapy (CT), *cognitive processing therapy* (CPT)[106] works by addressing memories and perceptions that have made patients unable to process and recover from traumatising events (stuck points). Distorted assumptions and beliefs are addressed in a dialogue between the therapist and the patient (Socratic dialogue). Between sessions, patients are given the task of writing a detailed report of their worst traumatising experiences, which they read out to themselves every day in order to develop a more realistic perception of their experiences.

- Studies on CPT show that it is possible for *counsellors* with limited training to treat war populations, albeit using a very simplified version of the method. No studies into its effectiveness for refugees have been completed to date.

In *eye movement desensitisation and reprocessing (EMDR) therapy*,[107] the patient is asked to picture an experience in their imagination and to concentrate on this picture as well as on their current negative beliefs and the location of distressing physical sensations. The unique aspect of this treatment is the systematic combination of the patient's memories with guided eye movements at a particular frequency. The approach is based on the idea that the patient's attention can be controlled and the intensity of their recollections regulated.

- Studies on the effectiveness of EMDR therapy for refugees have not yet shown this method to be successful over the long term. In addition, this method too could be significantly limited by its focus on treating a single, particularly distressing trauma (index trauma), because refugees have often had a series of traumatising experiences.

105 Foa et al. (2007).
106 Resick and Schnicke (1992).
107 Shapiro (2001).

6.4 Treatment of displaced children

Clinical trials have shown that the various forms of so-called trauma psychotherapies for post-traumatic stress disorder (PTSD) are also the treatment of choice for children.[108] However, the evidence base concerning the treatment of children traumatised by war is limited, with available knowledge building on just a few controlled studies. There is evidence supporting trauma-focused *cognitive behavioural therapy* according to the Cohen Handbook.[109] Only one randomised controlled study on the treatment of PTSD in refugee children is available;[110] this study used *narrative exposure therapy* (NET). A recent independent investigation[111] confirmed that, in line with investigations on the efficacy of this approach in adults affected by war, NET is one of the most promising and the most thoroughly investigated approaches for treating children with PTSD as a result of having been affected by war, and that this approach generally led to a clinically significant improvement in these children.

6.5 Evaluation and monitoring of diagnoses and interventions

A range of existing therapeutic approaches have proven effective in treating psychological disorders resulting from traumatising events. It can generally be assumed that such treatments are also appropriate for refugees. However, there are as yet relatively few findings on whether, and if so how, cultural aspects influence the effectiveness of these treatments in refugees.

Despite the urgency of the situation and the shortage of available care, the effectiveness and quality of all methods and tools currently in use should be carefully scientifically monitored. The current screening tools, their application and the work of peer counsellors should all be part of such monitoring.

108 Cohen et al. (2000).
109 Cohen and Mannarino (2008).
110 Ruf et al. (2010).
111 Tyrer and Fazel (2014).

7 References

Abbott A (2016) The mental-health crisis among migrants. Nature 538:158–160. doi: 10.1038/538158a.

Afari N, Ahumada SM, Wright LJ, et al. (2014) Psychological trauma and functional somatic syndromes: a systematic review and meta-analysis. Psychosom Med 76:2–11. doi: 10.1097/PSY.0000000000000010.

Anderson C, Hildreth JAD, Howland L (2015) Is the desire for status a fundamental human motive? A review of the empirical literature. Psychological Bulletin 141:574–601. doi: 10.1037/a0038781.

Bajbouj M, Alabdullah J, Ahmad S, et al. (2018) Psychosoziale Versorgung von Flüchtlingen in Deutschland: Erkenntnisse aus der Not- und Entwicklungshilfe. Der Nervenarzt 89:1-7. doi: 10.1007/s00115-017-0326-y.

Baumeister RF, Leary MR (1995) The need to belong: desire for interpersonal attachments as a fundamental human motivation. Psychol Bull 117:497–529.

Ben-Zeev D, Young MA, Corrigan PW (2010) DSM-V and the stigma of mental illness. J Ment Health 19:318–327. doi: 10.3109/09638237.2010.492484.

Bermejo I, Hölzel LP, Schneider F (2017) Transkulturelle Psychiatrie. In Schneider F (Hrsg) Facharztwissen Psychiatrie, Psychosomatik und Psychotherapie, 2. Aufl. Springer, Berlin, S 605–613.

Bhugra D, Tasman A, Pathare S, et al. (2017) The WPA-Lancet Psychiatry Commission on the Future of Psychiatry. The Lancet Psychiatry 4:775–818. doi: 10.1016/S2215-0366(17)30333-4.

Bisson JI, Roberts NP, Andrew M, et al. (2013) Psychological therapies for chronic post-traumatic stress disorder (PTSD) in adults. Cochrane Database Syst Rev CD003388. doi: 10.1002/14651858.CD003388.pub4.

Bogic M, Njoku A, Priebe S (2015) Long-term mental health of war-refugees: a systematic literature review. BMC International Health and Human Rights 15. doi: 10.1186/s12914-015-0064-9.

Bolton P, Lee C, Haroz EE, et al. (2014) A Transdiagnostic Community-Based Mental Health Treatment for Comorbid Disorders: Development and Outcomes of a Randomized Controlled Trial among Burmese Refugees in Thailand. PLoS Medicine 11:e1001757. doi: 10.1371/journal.pmed.1001757.

Bushman BJ (Hrsg) (2017) Aggression and Violence: A Social Psychological Perspective. Routledge, New York.

Catani C, Gewirtz AH, Wieling E, et al. (2010) Tsunami, War, and Cumulative Risk in the Lives of Sri Lankan Schoolchildren: Risk and Adaptation in Sri Lankan Children. Child Development 81:1176–1191. doi: 10.1111/j.1467-8624.2010.01461.x.

Catani C, Kohiladevy M, Ruf M, et al. (2009) Treating children traumatized by war and Tsunami: A comparison between exposure therapy and meditation-relaxation in North-East Sri Lanka. BMC Psychiatry 9. doi: 10.1186/1471-244X-9-22.

Charlson FJ, Baxter AJ, Dua T, et al. (2016) Excess Mortality from Mental, Neurological, and Substance Use Disorders in the Global Burden of Disease Study 2010. In Patel V, Chisholm D, Dua T, et al. (Hrsg) Mental, Neurological, and Substance Use Disorders: Disease Control Priorities, Third Edition (Volume 4). The International Bank for Reconstruction and Development / The World Bank, Washington DC. https://www.ncbi.nlm.nih.gov/books/NBK361935/ doi: 10.1596/978-1-4648-0426-7_ch3 (Stand: 22.02.2018).

Chen W, Hall BJ, Ling L, Renzaho AM (2017) Pre-migration and post-migration factors associated with mental health in humanitarian migrants in Australia and the moderation effect of post-migration stressors: findings from the first wave data of the BNLA cohort study. The Lancet Psychiatry 4:218–229. doi: 10.1016/S2215-0366(17)30032-9.

Chen X, Zhong H (2013) Delinquency and Crime among Immigrant Youth—An Integrative Review of Theoretical Explanations. Laws 2:210–232. doi: 10.3390/laws2030210.

Chrousos GP (2000) The role of stress and the hypothalamic-pituitary-adrenal axis in the pathogenesis of the metabolic syndrome: neuro-endocrine and target tissue-related causes. Int J Obes Relat Metab Disord 24 Suppl 2:50-55.

Coe CL, Kramer M, Kirschbaum C, et al. (2002) Prenatal stress diminishes the cytokine response of leukocytes to endotoxin stimulation in juvenile rhesus monkeys. J Clin Endocrinol Metab 87:675–681. doi: 10.1210/jcem.87.2.8233.

Cohen JA, Berliner L, March JS (2000) Treatment of children and adolescents. In Foa EB, Keane TM, Friedman MJ (Hrsg) Effective treatments for PTSD: Practice guidelines from the International Society for Traumatic Stress Studies. Guilford Press, New York, S 330–332.

Cohen JA, Mannarino AP (2008) Trauma-Focused Cognitive Behavioural Therapy for Children and Parents. Child and Adolescent Mental Health 13:158–162. doi: 10.1111/j.1475-3588.2008.00502.x.

Collier P (2014) Exodus: Warum wir Einwanderung neu regeln müssen, 4. Aufl. Siedler, München.

Correa-Velez I, Gifford SM, Barnett AG (2010) Longing to belong: Social inclusion and wellbeing among youth with refugee backgrounds in the first three years in Melbourne, Australia. Social Science & Medicine 71:1399–1408. doi: 10.1016/j.socscimed.2010.07.018.

Driessen M, Schulte S, Luedecke C, et al. (2008) Trauma and PTSD in patients with alcohol, drug, or dual dependence: a multi-center study. Alcohol Clin Exp Res 32:481–488. doi: 10.1111/j.1530-0277.2007.00591.x.

Edmondson D, Chaudoir SR, Mills MA, et al. (2011) From Shattered Assumptions to Weakened Worldviews: Trauma Symptoms Signal Anxiety Buffer Disruption. J Loss Trauma 16:358–385. doi: 10.1080/15325024.2011.572030.

Ehlers A, Clark DM (2000) A cognitive model of posttraumatic stress disorder. Behav Res Ther 38:319–345.

Elbert T, Hinkel H, Maedl A, et al. (2013) Sexual and gender-based violence in the Kivu provinces of the Democratic Republic of Congo: insights from former combatants. Washington DC. World Bank Group. http://documents.worldbank.org/curated/en/795261468258873034/Sexual-and-gender-based-violence-in-the-Kivu-Provinces-of-the-Democratic-Republic-of-Congo-insights-from-former-combatants (Stand: 22.02.2018).

Elbert T, Rockstroh B, Kolassa I-T, et al. (2006) The Influence of Organized Violence and Terror on Brain and Mind: A Co-Constructive Perspective. In Baltes, PB (Hrsg) Lifespan Development and the Brain: The Perspective of Biocultural Co-Constructivism. Cambridge University Press, New York. S 326-349. doi: 10.1017/CBO9780511499722.017.

Elbert T, Schauer M (2014) Wenn Gegenwart zur Illusion wird. Spuren belastender Lebenserfahrungen in Genom, Gehirn und Geist. In Güntürkün O und Hacker J (Hrsg) Geist – Gehirn – Genom – Gesellschaft. Nova Acta Leopoldina BD 120 Nr. 405, Wissenschaftliche Verlagsgesellschaft, Stuttgart, S 63–79.

Elbert T, Schauer M, Moran JK (2018) Two pedals drive the bi-cycle of violence: reactive and appetitive aggression. Current Opinion in Psychology 19:135–138. doi: 10.1016/j.copsyc.2017.03.016.

Elbert T, Wilker S, Schauer M, Neuner F (2017) Dissemination psychotherapeutischer Module für traumatisierte Geflüchtete: Erkenntnisse aus der Traumaarbeit in Krisen- und Kriegsregionen. Der Nervenarzt 88:26–33. doi: 10.1007/s00115-016-0245-3.

Entringer S, Buss C, Wadhwa PD (2010) Prenatal stress and developmental programming of human health and disease risk: concepts and integration of empirical findings: Current Opinion in Endocrinology, Diabetes and Obesity 17:507–516. doi: 10.1097/MED.0b013e3283405921.

Ertl V, Pfeiffer A, Schauer E, et al. (2011) Community-Implemented Trauma Therapy for Former Child Soldiers in Northern Uganda: A Randomized Controlled Trial. JAMA 306:503–512. doi: 10.1001/jama.2011.1060.

Fazel M, Reed RV, Panter-Brick C, Stein A (2012) Mental health of displaced and refugee children resettled in high-income countries: risk and protective factors. The Lancet 379:266–282. doi: 10.1016/S0140-6736(11)60051-2

Fazel M, Wheeler J, Danesh J (2005) Prevalence of serious mental disorder in 7000 refugees resettled in western countries: a systematic review. The Lancet 365:1309–1314. doi: 10.1016/S0140-6736(05)61027-6.

Foa EB, Hembree EA, Rothbaum BO (2007) Prolonged exposure therapy for PTSD: emotional processing of traumatic experiences. Oxford University Press, Oxford, UK.

Gäbel U, Ruf M, Schauer M, et al. (2006) Prävalenz der Posttraumatischen Belastungsstörung (PTSD) und Möglichkeiten der Ermittlung in der Asylverfahrenspraxis. Zeitschrift für Klinische Psychologie und Psychotherapie 35:12–20. doi: 10.1026/1616-3443.35.1.12.

Gold PW, Loriaux DL, Roy A, et al. (1986) Responses to corticotropin-releasing hormone in the hypercortisolism of depression and Cushing's disease. Pathophysiologic and diagnostic implications. N Engl J Med 314:1329–1335. doi: 10.1056/NEJM198605223142101.

Gorst-Unsworth C, Goldenberg E (1998) Psychological sequelae of torture and organised violence suffered by refugees from Iraq. Trauma-related factors compared with social factors in exile. The British Journal of Psychiatry 172:90–94. doi: 10.1192/bjp.172.1.90.

Gouzoulis-Mayfrank E, Schmitz-Buhl M, Schaffrath J, Pollmächer T (2017) Die aktuelle Situation der Versorgung von Flüchtlingen in psychiatrischen Kliniken in Deutschland – Eine Bestandsaufnahme der BDK. Psychiat Prax 44:7–9. doi: 10.1055/s-0042-121777.

Green JG, McLaughlin KA, Berglund PA, et al. (2010) Childhood adversities and adult psychopathology in the National Comorbidity Survey Replication (NCS-R) I: Associations with first onset of DSM-IV disorders. Arch Gen Psychiatry 67:113. doi: 10.1001/archgenpsychiatry.2009.186.Gupta MA (2013) Review of somatic symptoms in post-traumatic stress disorder. Int Rev Psychiatry 25:86–99. doi: 10.3109/09540261.2012.736367.

Hecker T, Hermenau K, Isele D, Elbert T (2014) Corporal punishment and children's externalizing problems: a cross-sectional study of Tanzanian primary school aged children. Child Abuse Negl 38:884–892. doi: 10.1016/j.chiabu.2013.11.007.

Heim C, Binder EB (2012) Current research trends in early life stress and depression: Review of human studies on sensitive periods, gene–environment interactions, and epigenetics. Experimental Neurology 233:102–111. doi: 10.1016/j.expneurol.2011.10.032.

Heinz A, Schneider F (2017) Psychiatrische und psychotherapeutische Versorgung geflüchteter Personen: Herausforderungen und Perspektiven. Der Nervenarzt 88:1–2. doi: 10.1007/s00115-016-0257-z.

Hendrickson CM, Neylan TC, Na B, et al. (2013) Lifetime trauma exposure and prospective cardiovascular events and all-cause mortality: findings from the Heart and Soul Study. Psychosom Med 75:849–855. doi: 10.1097/PSY.0b013e3182a88846.

Hensel-Dittmann D, Schauer M, Ruf M, et al. (2011) Treatment of traumatized victims of war and torture: a randomized controlled comparison of narrative exposure therapy and stress inoculation training. Psychother Psychosom 80:345–352. doi: 10.1159/000327253.

Hollifield M, Verbillis-Kolp S, Farmer B, et al. (2013) The Refugee Health Screener-15 (RHS-15): development and validation of an instrument for anxiety, depression, and PTSD in refugees. General Hospital Psychiatry 35:202–209. doi: 10.1016/j.genhosppsych.2012.12.002.

Jablensky A, Marsella AJ, Ekblad S, et al. (1992) Conference and Symposium Reports: The International Conference on the Mental Health and Wellbeing of the World's Refugees and Displaced Persons, Stockholm, Sweden, 6–11 October, 1991. J Refug Stud 5:172–184. doi: 10.1093/jrs/5.2.172.

Jacob N, Neuner F, Maedl A, et al. (2014) Dissemination of Psychotherapy for Trauma Spectrum Disorders in Postconflict Settings: A Randomized Controlled Trial in Rwanda. Psychotherapy and Psychosomatics 83:354–363. doi: 10.1159/000365114.

Janoff-Bulman R (2010) Shattered Assumptions: Towards a New Psychology of Trauma. Simon and Schuster, New York.

Jasinskaja-Lahti I, Liebkind K, Solheim E (2009) To Identify or Not To Identify? National Disidentification as an Alternative Reaction to Perceived Ethnic Discrimination. Applied Psychology 58:105–128. doi: 10.1111/j.1464-0597.2008.00384.x.

Kaltenbach E, Härdtner E, Hermenau K, et al. (2017) Efficient identification of mental health problems in refugees in Germany: the Refugee Health Screener. European Journal of Psychotraumatology 8:1389205. doi: 10.1080/20008198.2017.1389205.

Kennedy AJ, Versace VL, Brumby SA (2016) Research protocol for a digital intervention to reduce stigma among males with a personal experience of suicide in the Australian farming community. BMC Public Health 16:1204. doi: 10.1186/s12889-016-3874-3.

Kizilhan JI (2009) Interkulturelle Aspekte bei der Behandlung somatoformer Störungen Intercultural aspects of the treatment of somatoform disorders. Psychotherapeut 54:281–288. doi: 10.1007/s00278-009-0656-8.

Knaevelsrud C, Wagner B, Böttche M (2016) Online-Therapie und -Beratung: ein Praxisleitfaden zur online-basierten Behandlung psychischer Störungen, 1. Aufl. Hogrefe, Göttingen.

Knudsen EI (2004) Sensitive periods in the development of the brain and behavior. J Cogn Neurosci 16:1412–1425. doi: 10.1162/0898929042304796.

Kolassa I-T, Ertl V, Eckart C, et al. (2010) Spontaneous remission from PTSD depends on the number of traumatic event types experienced. Psychological Trauma: Theory, Research, Practice, and Policy 2:169–174. doi: 10.1037/a0019362.

Landolt MA, Cloitre M, Schnyder U (Hrsg) (2017) Evidence-Based Treatments for Trauma Related Disorders in Children and Adolescents. Springer International Publishing, Cham.

Li SSY, Liddell BJ, Nickerson A (2016) The Relationship Between Post-Migration Stress and Psychological Disorders in Refugees and Asylum Seekers. Current Psychiatry Reports 18. doi: 10.1007/s11920-016-0723-0.

Maercker A (Hrsg) (2013) Posttraumatische Belastungsstörungen: mit 40 Tabellen, 4. vollst. überarb. und aktualisierte Aufl. Springer, Berlin.

McMullen J, O'Callaghan P, Shannon C, et al. (2013) Group trauma-focused cognitive-behavioural therapy with former child soldiers and other war-affected boys in the DR Congo: a randomised controlled trial. Journal of Child Psychology and Psychiatry 54:1231–1241. doi: 10.1111/jcpp.12094.

Messinger AM, Nieri TA, Villar P, Luengo MA (2012) Acculturation Stress and Bullying Among Immigrant Youths in Spain. Journal of School Violence 11:306–322. doi: 10.1080/15388220.2012.706875.

Metzner F, Reher C, Kindler H, Pawils S (2016) Psychotherapeutische Versorgung von begleiteten und unbegleiteten minderjährigen Flüchtlingen und Asylbewerbern mit Traumafolgestörungen in Deutschland. Bundesgesundheitsbl 59:642–651. doi: 10.1007/s00103-016-2340-9.

Miller GA, Elbert T, Rockstroh B (2005) Judging psychiatric disorders in refugees. The Lancet 366:1604–1605. doi: 10.1016/S0140-6736(05)67655-6.

Miller KE, Weine SM, Ramic A, et al. (2002a) The relative contribution of war experiences and exile-related stressors to levels of psychological distress among Bosnian refugees. J Trauma Stress 15:377–387. doi: 10.1023/A:1020181124118.

Miller KE, Worthington GJ, Muzurovic J, et al. (2002b) Bosnian refugees and the stressors of exile: a narrative study. Am J Orthopsychiatry 72:341–354. doi: http://psycnet.apa.org/doi/10.1037/0002-9432.72.3.341.

Mnookin S (2016) Out of the shadows: making mental health a global development priority. Washington DC. World Bank Group. http://documents.worldbank.org/curated/en/270131468187759113/Out-of-the-shadows-making-mental-health-a-global-development-priority (Stand: 22.02.2018).

Mollica RF, Cui X, Mcinnes K, Massagli MP (2002) Science-based policy for psychosocial interventions in refugee camps: a Cambodian example. J Nerv Ment Dis 190:158–166.

Mollica RF, McInnes K, Poole C, Tor S (1998) Dose-effect relationships of trauma to symptoms of depression and post- traumatic stress disorder among Cambodian survivors of mass violence. The British Journal of Psychiatry 173:482–488. doi: 10.1192/bjp.173.6.482.

Mueller-Bamouh V, Ruf-Leuschner M, Dohrmann K, et al. (2016) Are experiences of family and of organized violence predictors of aggression and violent behavior? A study with unaccompanied refugee minors. Eur J Psychotraumatol 7. doi: 10.3402/ejpt.v7.27856.

Nandi C, Crombach A, Bambonye M, et al. (2015) Predictors of posttraumatic stress and appetitive aggression in active soldiers and former combatants. European Journal of Psychotraumatology 6:26553. doi: 10.3402/ejpt.v6.26553.

Nandi C, Elbert T, Bambonye M, et al. (2017) Predicting domestic and community violence by soldiers living in a conflict region. Psychol Trauma 9:663–671. doi: 10.1037/tra0000262.

Nationale Akademie der Wissenschaften Leopoldina, acatech – Deutsche Akademie der Technikwissenschaften, Union der deutschen Akademien der Wissenschaften (2014) Frühkindliche Sozialisation: biologische, psychologische, linguistische, soziologische und ökonomische Perspektiven, Halle (Saale).

Neuner F, Onyut PL, Ertl V, et al. (2008) Treatment of posttraumatic stress disorder by trained lay counselors in an African refugee settlement: A randomized controlled trial. Journal of Consulting and Clinical Psychology 76:686–694. doi: 10.1037/0022-006X.76.4.686.

Neuner F, Schauer M, Karunakara U, et al. (2004a) Psychological trauma and evidence for enhanced vulnerability for posttraumatic stress disorder through previous trauma among West Nile refugees. BMC Psychiatry 4. doi: 10.1186/1471-244X-4-34.

Neuner F, Schauer M, Klaschik C, et al. (2004b) A comparison of narrative exposure therapy, supportive counseling, and psychoeducation for treating posttraumatic stress disorder in an african refugee settlement. J Consult Clin Psychol 72:579–587. doi: 10.1037/0022-006X.72.4.579.

Nickerson A, Bryant RA, Steel Z, et al. (2010) The impact of fear for family on mental health in a resettled Iraqi refugee community. Journal of Psychiatric Research 44:229–235. doi: 10.1016/j.jpsychires.2009.08.006.

O'Callaghan P, McMullen J, Shannon C, et al. (2013) A Randomized Controlled Trial of Trauma-Focused Cognitive Behavioral Therapy for Sexually Exploited, War-Affected Congolese Girls. Journal of the American Academy of Child & Adolescent Psychiatry 52:359–369. doi: 10.1016/j.jaac.2013.01.013.

Paras ML, Murad MH, Chen LP, et al. (2009) Sexual abuse and lifetime diagnosis of somatic disorders: a systematic review and meta-analysis. JAMA 302:550–561. doi: 10.1001/jama.2009.1091.

Pasquali R, Cantobelli S, Casimirri F, et al. (1993) The hypothalamic-pituitary-adrenal axis in obese women with different patterns of body fat distribution. J Clin Endocrinol Metab 77:341–346. doi: 10.1210/jcem.77.2.8393881.

Penka S, Schouler-Ocak M, Heinz A, Kluge U (2012) Interkulturelle Aspekte der Interaktion und Kommunikation im psychiatrisch/psychotherapeutischen Behandlungssetting. Bundesgesundheitsbl 55:1168–1175. doi: 10.1007/s00103-012-1538-8.

Radtke KM, Ruf M, Gunter HM, et al. (2011) Transgenerational impact of intimate partner violence on methylation in the promoter of the glucocorticoid receptor. Transl Psychiatry 1:e21. doi: 10.1038/tp.2011.21.

Radtke KM, Schauer M, Gunter HM, et al. (2015) Epigenetic modifications of the glucocorticoid receptor gene are associated with the vulnerability to psychopathology in childhood maltreatment. Translational Psychiatry 5:e571. doi: 10.1038/tp.2015.63.

Resick PA, Schnicke MK (1992) Cognitive processing therapy for sexual assault victims. J Consult Clin Psychol 60:748–756.

Rieder H, Elbert T (2013) The relationship between organized violence, family violence and mental health: findings from a community-based survey in Muhanga, Southern Rwanda. Eur J Psychotraumatol 4. doi: 10.3402/ejpt.v4i0.21329.

Roy MS, Roy A, Gallucci WT, et al. (1993) The ovine corticotropin-releasing hormone-stimulation test in type I diabetic patients and controls: suggestion of mild chronic hypercortisolism. Metab Clin Exp 42:696–700.

Ruf M, Schauer M, Neuner F, et al. (2010) Narrative exposure therapy for 7- to 16-year-olds: A randomized controlled trial with traumatized refugee children. J Traum Stress 23:437–445. doi: 10.1002/jts.20548.

Ruf-Leuschner M, Roth M, Schauer M (2014) Traumatisierte Mütter – traumatisierte Kinder?: Eine Untersuchung des transgenerationalen Zusammenhangs von Gewalterfahrungen und Traumafolgestörungen in Flüchtlingsfamilien. Zeitschrift für Klinische Psychologie und Psychotherapie 43:1–16. doi: 10.1026/1616-3443/a000237.

Sack WH, Him C, Dickason D (1999) Twelve-Year Follow-up Study of Khmer Youths Who Suffered Massive War Trauma as Children. Journal of the American Academy of Child & Adolescent Psychiatry 38:1173–1179. doi: 10.1097/00004583-199909000-00023.

Saile R, Ertl V, Neuner F, Catani C (2014) Does war contribute to family violence against children? Findings from a two-generational multi-informant study in Northern Uganda. Child abuse & neglect 38:135–146. doi: 10.1016/j.chiabu.2013.10.007.

Salman R (2015) Gesundheit mit Migranten für Migranten – die MiMi Präventionstechnologie als interkulturelles Health-Literacy-Programm. Public Health Forum 23:109–112. doi: 10.1515/pubhef-2015-0040.

Santa Mina EE, Gallop RM (1998) Childhood sexual and physical abuse and adult self-harm and suicidal behaviour: a literature review. Can J Psychiatry 43:793–800. doi: 10.1177/070674379804300803.

Schaffrath J, Schmitz-Buhl M, Gün AK, Gouzoulis-Mayfrank E (2017) Psychiatrisch-psychotherapeutische Versorgung von Geflüchteten am Beispiel eines großen psychiatrischen Versorgungskrankenhauses im Rheinland. Psychother Psych Med 67:126–133. doi: 10.1055/s-0042-116081.

Schauer M (2016) The mass refugee movement – better reframed as mental health crisis? In International Society for Traumatic Stress Studies: StressPoints – a quarterly eNewsletter. http://sherwood-istss.informz.net/admin31/content/template.asp?sid=48039&brandid=4463&uid=1019025605&mi=5471628&mfqid=26491997&ptid=0&ps=48039. (Stand: 23.10.2017).

Schauer M, Elbert T (2010) Dissociation Following Traumatic Stress. Zeitschrift für Psychologie/ Journal of Psychology 218:109–127. doi: 10.1027/0044-3409/a000018.

Schauer M, Neuner F, Elbert T (2011) Narrative exposure therapy: a short-term treatment for traumatic stress disorders, 2., erweiterte Aufl. Hogrefe, Cambridge, Mass.

Schauer M, Neuner F, Karunakara UK, et al. (2003) PTSD and the "building block" effect of psychological trauma amon West Nile Africans. Bulletin 10:5–6.

Schneider F, Bajbouj M, Heinz A (2017) Psychische Versorgung von Flüchtlingen in Deutschland: Modell für ein gestuftes Vorgehen. Der Nervenarzt 88:10–17. doi: 10.1007/s00115-016-0243-5.

Schnyder U, Cloitre M (Hrsg) (2015) Evidence Based Treatments for Trauma-Related Psychological Disorders. Springer International Publishing, Cham.

Schnyder U, Ehlers A, Elbert T, et al. (2015) Psychotherapies for PTSD: what do they have in common? Eur J Psychotraumatol 6. doi: 10.3402/ejpt.v6.28186.

Schock K, Böttche M, Rosner R, et al. (2016) Impact of new traumatic or stressful life events on pre-existing PTSD in traumatized refugees: results of a longitudinal study. Eur J Psychotraumatol 7:32106.

Schulz A, Stolz T, Berger T (2014) Internet-based individually versus group guided self-help treatment for social anxiety disorder: protocol of a randomized controlled trial. BMC Psychiatry 14:115. doi: 10.1186/1471-244X-14-115.

Serpeloni F, Radtke K, de Assis SG, et al. (2017) Grandmaternal stress during pregnancy and DNA methylation of the third generation: an epigenome-wide association study. Translational Psychiatry 7:e1202. doi: 10.1038/tp.2017.153.

Shapiro F (2001) Eye movement desensitization and reprocessing (EMDR): basic principles, protocols, and procedures, 2. Aufl. Guilford Press, New York.

Singh-Manoux A, Adler NE, Marmot MG (2003) Subjective social status: its determinants and its association with measures of ill-health in the Whitehall II study. Social Science & Medicine 56:1321–1333. doi: 10.1016/S0277-9536(02)00131-4.

Solomon D, Proudfoot J, Clarke J, Christensen H (2015) e-CBT (myCompass), Antidepressant Medication, and Face-to-Face Psychological Treatment for Depression in Australia: A Cost-Effectiveness Comparison. J Med Internet Res 17. doi: 10.2196/jmir.4207.

Sommershof A, Aichinger H, Engler H, et al. (2009) Substantial reduction of naïve and regulatory T cells following traumatic stress. Brain, Behavior, and Immunity 23:1117–1124. doi: 10.1016/j.bbi.2009.07.003.

Spitzer C, Barnow S, Völzke H, et al. (2009) Trauma, posttraumatic stress disorder, and physical illness: findings from the general population. Psychosom Med 71:1012–1017. doi: 10.1097/PSY.0b013e3181bc76b5.

Steel Z, Chey T, Silove D, et al. (2009) Association of torture and other potentially traumatic events with mental health outcomes among populations exposed to mass conflict and displacement: a systematic review and meta-analysis. JAMA 302:537–549. doi: 10.1001/jama.2009.1132.

Straus MA (2010) Prevalence, societal causes, and trends in corporal punishment by parents in world perspective. Law and Contemporary Problems 73:1–30.

Sulaiman-Hill CMR, Thompson SC (2012) Afghan and Kurdish refugees, 8–20 years after resettlement, still experience psychological distress and challenges to well being. Australian and New Zealand Journal of Public Health 36:126–134. doi: 10.1111/j.1753-6405.2011.00778.x.

Tafjel H, Turner J (1979) An Integrative Theory of Intergroup Conflict. In Austin WG, Worchel S (Hrsg), The Social Psychology of Intergroup Relations The social psychology of intergroup relations. Brooks/Cole Pub. Co, Monterey, Calif, S 33–47.

Tam SY, Houlihan S, Melendez-Torres GJ (2017) A Systematic Review of Longitudinal Risk and Protective Factors and Correlates for Posttraumatic Stress and Its Natural History in Forcibly Displaced Children. Trauma, Violence, & Abuse 18:377–395. doi: 10.1177/1524838015622437.

Tyrer RA, Fazel M (2014) School and Community-Based Interventions for Refugee and Asylum Seeking Children: A Systematic Review. PLoS ONE 9:e89359. doi: 10.1371/journal.pone.0089359.

Ullmann E, Bornstein SR, Lanzman RS, et al. (2017) Countering posttraumatic LHPA activation in refugee mothers and their infants. Molecular Psychiatry. doi: 10.1038/mp.2017.235.

Underwood E (2017) Surviving genocide: Storytelling and ritual help communities heal. Science. doi: 10.1126/science.aal1190.

van Straten A, Hill J, Richards DA, Cuijpers P (2015) Stepped care treatment delivery for depression: a systematic review and meta-analysis. Psychological Medicine 45:231–246. doi: 10.1017/S0033291714000701.

Warfa N, Curtis S, Watters C, et al. (2012) Migration experiences, employment status and psychological distress among Somali immigrants: a mixed-method international study. BMC Public Health 12:749. doi: 10.1186/1471-2458-12-749.

Watts BV, Schnurr PP, Mayo L, et al. (2013) Meta-analysis of the efficacy of treatments for posttraumatic stress disorder. J Clin Psychiatry 74:e541-550. doi: 10.4088/JCP.12r08225.

Webb RT, Antonsen S, Carr MJ, et al. (2017) Self-harm and violent criminality among young people who experienced trauma-related hospital admission during childhood: a Danish national cohort study. The Lancet Public Health 2:e314–e322. doi: 10.1016/S2468-2667(17)30094-4.

Weinstock M (2008) The long-term behavioural consequences of prenatal stress. Neuroscience & Biobehavioral Reviews 32:1073–1086. doi: 10.1016/j.neubiorev.2008.03.002.

Wilker S, Pfeiffer A, Kolassa S, et al. (2015) How to quantify exposure to traumatic stress? Reliability and predictive validity of measures for cumulative trauma exposure in a post-conflict population. Eur J Psychotraumatol 6. doi: 10.3402/ejpt.v6.28306.

Willems H (1995) Development, patterns and causes of violence against foreigners in Germany: Social and biographical characteristics of perpetrators and the process of escalation. Terrorism and Political Violence 7:162–181. doi: 10.1080/09546559508427288.

Yirmiya R, Goshen I (2011) Immune modulation of learning, memory, neural plasticity and neurogenesis. Brain, Behavior, and Immunity 25:181–213. doi: 10.1016/j.bbi.2010.10.015.

Zhang T-Y, Meaney MJ (2010) Epigenetics and the Environmental Regulation of the Genome and Its Function. Annual Review of Psychology 61:439–466. doi: 10.1146/annurev.psych.60.110707.163625.

8 Appendix

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