



# Guidance Paper

## **Psychosocial support to tackle trauma-related symptoms and related substance use disorders**

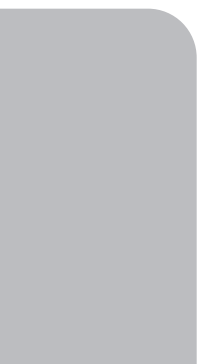
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Klinik für Psychiatrie und Psychotherapie, Universitätsklinikum Hamburg-Eppendorf

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Co-operation Group to Combat Drug Abuse and illicit trafficking in Drugs



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Co-operation Group to Combat Drug Abuse and illicit trafficking in Drugs

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# Executive Summary

Approximately 60%-70% of the general population will experience a traumatic event at some point in their lifetime, which can include forms of violence, abuse, neglect and war. Post-traumatic Stress Disorder (PTSD) and Substance Use Disorders (SUD) are often concurrent and develop as a result of a person being exposed to a traumatic event. In clinical populations (focusing on either disorder), about 25–50% have a lifetime dual diagnosis of PTSD and SUD. Patients with this dual diagnosis have a more severe clinical profile and are more difficult to treat than patients with solely one of the conditions.

Part of providing adequate health service is addressing and responding correctly to the effects of trauma. Given that the dual diagnosis of PTSD and SUD is frequent and causes significant social disabilities, special measures to prevent and treat these disorders need to be taken. There are programs in place to help prevent primary and secondary versions of these disorders, however, more research needs to be conducted on the effectiveness of these programs. Patients with PTSD and SUD should be encouraged to attend interventions that deal with their diagnoses. Further research is needed to evaluate the existing treatment models and to assess patient and clinical acceptability of the various approaches in European countries.

The systematic assessment of trauma exposure, PTSD and SUD is highly recommended in both settings. Health care professionals should have knowledge and skills in the field of trauma inquiry, however, there is a lack of training methods. At present, the limited training available to practitioners is the main barrier to adopting evidence-based treatments for co-occurring PTSD and SUD.

Forced migrants have experiences of trauma and poor mental health that are associated with substance use. However, there is no sound evidence on the prevalence of SUD among refugees in European countries to date. There is a lack of studies examining interventions to prevent or treat both SUD in general, and SUD related to post-traumatic disorders in refugee populations. The existing evidence suggests that interventions to address SUD have to be integrated with interventions addressing other consequences of trauma in refugee populations.

Another group with special treatment needs are veterans from armed conflict, as substance use disorders and PTSD are more frequent among these populations. The social stigma associated with mental illness within military communities veterans is a barrier for veterans receiving appropriate treatment. Trauma-focused therapies for PTSD are effective for veterans, however services that integrate both SUD and PTSD treatment while considering specific war-related traumas should be established for veteran populations.

Given the high prevalence of trauma victims in all social, legal, and health-related services, a trauma-informed approach is required to appropriately respond to the needs of individuals. To be trauma-informed means to recognize that trauma is common, to understand its impact and to respond appropriately to affected people, including referral to trauma-specific interventions for those who need it. Trauma-informed care is an important framework to supporting consumers with PTSD and SUD, however more research on the dissemination of trauma-informed care concepts in Europe is needed.

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# Introduction

Psychological trauma can be a result of exceeding one's ability to cope, or integrate the emotions involved, and lead to lasting adverse effects on the individual's physical, social, or emotional well-being. Such experiences can consist of a single event, multiple events, or a set of harmful or threatening circumstances. Trauma often occurs as a result of violence, abuse, neglect, loss, disaster, war and other emotionally harmful experiences. Traumatic events are frequent and have a pervasive public health impact. The need to address trauma is therefore increasingly viewed as an important component of effective health service delivery (Substance Abuse and Mental Health Services Administration, 2014). In the WHO World Mental Health (WMH) surveys, 70% of the respondents experienced lifetime trauma, with exposure averaging 3.2 lifetime traumatic events per person (Kessler et al., 2017). A representative survey in six European countries (Spain, Italy, Germany, the Netherlands, Belgium, and France) yielded a lifetime prevalence of 64% and a mean number of 1.5 traumatic events (Darves-Bornoz et al., 2008).

The most frequent traumatic events are interpersonal violence (i.e. physical violence or sexual violence) and accidents, which are each reported by up to one third of the population (Darves-Bornoz et al., 2008; Kessler et al., 2017). Another frequent type of trauma exposure is related to war. Lifetime experiences of war are reported by about 13% of the global population (Kessler et al., 2017). In the European survey (Darves-Bornoz et al., 2008), 3.4% of the participants reported to have combat experience, 7.8% had experiences as civilians in a war zone, 2.3% as civilians in a region of terror, and 2.8% had experienced potentially traumatic events as refugees. In 2016, one out of 113 persons in the world has been forcibly displaced, including the Internally Displaced People and refugees, due to armed conflicts, wars, persecution, and human rights violations (UNHCR, 2017).

Among the most frequent mental health consequences of traumatic events are substance use disorders (SUD)<sup>1</sup> and post-traumatic stress disorder (PTSD); Forman-Hoffman et al., 2016). Research indicates that these conditions frequently co-occur, besides other comorbidities, such as anxiety disorders and depression. For individuals seeking treatment for PTSD, the rate of lifetime SUD

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<sup>1</sup> The term „Substance Use Disorder“ is used in this document with reference to harmful use and substance dependence according to ICD-10 as well as the corresponding disorders according to DSM-IV and DSM-5.



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is 21% to 43% (Jacobsen, Southwick, & Kosten, 2001) and the lifetime rate of PTSD individuals with SUD is 26% to 52% (Schäfer & Najavits, 2007). In population-based samples, the rate of co-occurrence of PTSD and SUD is lower, but still substantial (Mills, Teesson, Ross, & Peters, 2006). Both disorders impact each other, as individuals with comorbid PTSD and SUD typically present a more severe symptom profile and a greater social disability. The comorbidity of PTSD and SUD is widely recognized as being difficult to treat and has been associated with poorer treatment completion. In some studies, the overall outcomes are poorer than for the treatment of either condition alone.

The complex needs of patients with PTSD and SUD can prevent them from entering services and receiving the treatment they need. They may find themselves rejected from programs for traumatized individuals, as most services will often provide inadequate care (Gielen, Krumeich, Havermans, Smeets, & Jansen, 2014; Killeen, Back, & Brady, 2015). Integrated approaches for PTSD and SUD have been shown to be more effective, as treatment on both the level of therapeutic interventions (e.g. Mills et al., 2012), and the level of services (e.g. Domino, Morrissey, Nadlicki-Patterson, & Chung, 2005). Integrated approaches are also preferred by a majority of the individuals concerned (Back et al., 2014; Sanford, Donahue, & Cosden, 2014). However, integrated services are still not widely available and the majority of research on the prevention and treatment of co-occurring PTSD and SUD has been conducted outside of Europe to date (Schäfer et al., 2017).



# Aims of the report

The purpose of this report is to provide guidance for services dealing with the prevention and treatment of PTSD and SUD in Europe, through:

- identifying existing interventions and policies and analysing their effectiveness;
- proposing essential interventions and early intervention strategies;
- providing specific information for special groups of individuals with PTSD and SUD, especially refugees and veterans from armed conflict.

# Co-occurrence of PTSD and SUD

## Key Points:

- The highest risk of developing PTSD is related to exposure to human-made trauma, especially sexual assault, and sexual or physical violence in childhood.
- PTSD and SUD often co-occur. In clinical populations (focusing on either disorder), about 25–50% have a lifetime dual diagnosis of PTSD and SUD.
- In patients with SUD, current PTSD is more prevalent in females than in males and some substances of abuse show a higher association with PTSD than others (e.g., “harder drugs” and polydrug use).
- The self-medication model received the strongest empirical support to explain the relationships between PTSD and SUD.
- Patients with both disorders have a more severe clinical profile than those with either disorder alone, lower functioning, and poorer wellbeing. In some studies, they also had poorer treatment outcomes as patients with SUD only.

Post-traumatic stress disorder (PTSD) develops after a stressful event or a situation of an exceptionally threatening or catastrophic nature. These events are likely to cause pervasive distress in almost anyone, such as deliberate acts of interpersonal violence, severe accidents, disasters or military actions (World Health Organization, 1992). Symptoms of PTSD include (1) re-experiencing the trauma through distressing recollections of the event, e.g. flashbacks and nightmares; (2) emotional numbness and avoidance of places, people, and

activities that are reminders of the trauma; and (3) a state of autonomic hyperarousal with difficulties to concentrate and sleeping problems, hypervigilance and an exaggerated startle response. After prolonged or repeated trauma, like sexual or physical violence in childhood or experiences of war and persecution, the clinical picture of PTSD is often complicated. Typically individuals have problems dealing with emotions, difficulties in interpersonal relationships and persistent negative beliefs about themselves. These symptoms will be covered in ICD-11 by the newly introduced diagnosis of “Complex PTSD” (Maercker et al., 2013). The symptoms of PTSD are often associated with significant impairment of social, educational and occupational functioning and have a negative impact on interpersonal relationships. Moreover, sufferers from PTSD are at greater risk of other health problems and medical diseases (Pacella, Hruska, & Delahanty, 2013).

The 12-Month-Prevalence estimates of PTSD across 12 European countries range from 0.56% to 6.67% (Burri & Maercker, 2014; Darves-Bornoz et al., 2008). With the exception of sexual trauma, men experience traumatic events more frequently than women, however women in the general population have a two-fold higher risk of suffering from PTSD. The type of trauma exposure is strongly associated with the risk of subsequent PTSD. Although being involved in a severe accident or witnessing civilian violence are relatively frequent types of exposure, these are not associated with the highest risk of developing PTSD (about 7-12%). The highest risk of developing PTSD is related to exposure to intentional trauma, especially sexual assault, and sexual or physical violence in childhood. About 37% of individuals exposed to intentional trauma develop PTSD, and nearly 40% of these PTSD cases have a chronic course (Santiago et al., 2013). In a European survey, the proportion of all PTSD episodes that could be attributed to specific events was highest for interpersonal violence (37,5%) followed by accidents (12,4%) and war-related trauma (6,4%; Kessler et al., 2017). Symptoms of PTSD are significantly under-reported and many people who experience clinically significant symptoms will not seek support. Most groups may first come into contact with non-specialist psychosocial services. People who do access mental health services often seek initial support for somatic symptoms or psychological symptoms such as anxiety, depression and substance abuse problems that often co-occur with PTSD. In this context, PTSD symptoms are often overlooked, and remain untreated, although a systematic assessment of trauma exposure and PTSD is recommended by international treatment guidelines (e.g. National Institute for Health and Clinical Excellence, 2005).

PTSD frequently co-occurs with Substance Use Disorders (SUD). Among people with PTSD, the rate of lifetime SUD ranges from 21% to 43%, compared to 8% to 25% in those without PTSD (Jacobsen et al., 2001). According to U.S. population data, 28% of women who experience PTSD in their lifetime develop an alcohol use disorder and 27% develop a drug use disorder. Among men, 52% and 35% develop an alcohol or drug use disorder respectively (Kessler, Sonnega, Bromet, Hughes, & Nelson, 1995). Higher rates have been reported for clinical populations. For example, up to 75% of combat veterans with lifetime PTSD also meet criteria for lifetime alcohol abuse or dependence (Jacobsen et al., 2001). In a study among women presenting for treatment with PTSD and other severe consequences of childhood sexual abuse, 33% had a lifetime history of substance abuse (Levitt & Cloitre, 2005). Conversely, the prevalence of PTSD is markedly elevated among individuals with SUD. In clinical SUD samples, the prevalence of lifetime PTSD ranges from 26% to 52% and from 15% to 41% for current PTSD (Schäfer & Najavits, 2007). These rates are considerably higher than those observed in general population surveys, where rates of current PTSD usually do not exceed 9%. The prevalence of PTSD varies per SUD sample. In general population samples, PTSD is more prevalent in females with SUD than in males, typically about twice the rate. Moreover, some substances of abuse show a higher association with PTSD than others (e.g., opiates and polydrug use compared to alcohol or cannabis).

Several hypotheses have been proposed for the frequent co-occurrence of post-traumatic disorders and SUD. These include: 1.) that individuals with trauma-related symptoms use substances to control their emotional pain and alleviate, for instance, symptoms of re-experiencing or hyperarousal (self-medication hypothesis), 2.) that substance use is a high-risk behaviour leading to a lifestyle that increases the risk for trauma exposure (high-risk hypothesis), and 3.) that substance users are more susceptible to PTSD or other trauma-related disorders following exposure to traumatic events (susceptibility hypothesis). While these models are not mutually exclusive, the self-medication model has the strongest empirical support. In many studies, greater use of substances in patients with co-occurring PTSD was associated with stronger PTSD-symptoms or situations involving unpleasant emotions, physical discomfort and interpersonal conflicts (e.g. Kaysen et al., 2014). Similar relations were found between PTSD status and reasons for relapse in recently abstinent patients (Simpson, Stappenbeck, Varra, Moore, & Kaysen, 2012). Using alcohol or other substances to cope with distressing symptoms puts individuals with PTSD at an increased risk for developing SUD. Additionally, increased substance use may continue even after PTSD symptoms decrease over time (World Health Organization, 2013).

Treatment seeking individuals with both PTSD and SUD have a more severe clinical profile than patients with SUD only, especially when the traumatic events occurred early in their lives. In most studies, patients with co-occurring PTSD had an earlier onset of substance abuse, more years of problematic use, and a greater severity of current substance use than patients with SUD only (Schäfer & Najavits, 2007). They also present with more social instability, including unemployment and unstable relationships (e.g. Drapkin et al., 2011). In population-based studies, individuals with PTSD and SUD were also found to suffer from significantly poorer physical and mental health as well as greater disability than those with SUD alone (Blanco et al., 2013; Mills, Teesson, Ross, & Peters, 2006). In accordance with the findings among patients with other co-occurring disorders, there seems to be a relatively high lifetime utilization rate of SUD services in substance abuse patients with PTSD as compared to SUD patients without PTSD (Najavits, 2004). Although the evidence on relationships of PTSD with SUD outcomes is not consistent (Hildebrand, Behrendt, & Hoyer, 2015), patients with co-occurring PTSD have been found to have a poorer adherence to treatment than SUD patients without PTSD, and a shorter duration of abstinence (Schäfer & Najavits, 2007). Therefore, treating symptoms of PTSD in SUD patients can improve their overall outcome (e.g. Hien, Campbell, Ruglass, Hu, & Killeen, 2010; Ouimette, Moos, & Finney, 2003).

# Psycho-social interventions

## 4.1. Primary prevention

### Key Points:

- At present, there is insufficient body of evidence supporting primary preventive interventions for PTSD that include psycho-education and/or skills-based components.
- Preventing exposure to violence is an important measure to reduce the public health consequences related to it.
- Preventive approaches can target the individual, the family, and societal norms related to violence, but substance abuse as a consequence of interpersonal violence has rarely been addressed. Regardless of the perspective chosen, the effectiveness of most programs is unclear.
- Two specific programs - the Nurse-Family Partnership and Early Start - have been shown to prevent child maltreatment. They could also have positive effects on more distal outcomes, such as PTSD, SUD and other mental health consequences of abuse, but studies with a focus on such long-term effects are missing.

Prevention of the comorbidity of PTSD and SUD can take the perspective of primary prevention (in the case of trauma: interventions before the traumatic event, including prevention of the event itself), secondary prevention (between the traumatic event and the development of PTSD and SUD), and tertiary prevention (after first symptoms of PTSD and SUD become apparent).

One approach for the primary prevention of PTSD is to prepare individuals with an increased risk of experiencing traumatic events, for instance emergency workers, members of the armed forces, or victims of forced displacement due to armed conflicts. This can be successfully executed by creating programs that are meant to build resilience in these groups. Such programs include psycho-education related to stress responses and relevant measures to cope, while some programs use skills-based components and relaxation techniques, or strategies to improve emotion processing and regulation. In a review of the existing programs, Skeffington & Kane (2013) identified only a small number of studies, most of which had a number of methodological problems. The authors came to the conclusion that this field of research is still in its infancy and that currently there is insufficient body of evidence to justify or guide such interventions. Another approach for the primary prevention of the comorbidity of PTSD and SUD is the prevention of interpersonal violence in different settings, including families, intimate relationships, and communities as a whole. Findings suggest that a substantial part of the comorbidity of PTSD and SUD is related to interpersonal violence in different phases of life. About 20% of adult survivors of childhood sexual or physical violence have a lifetime diagnosis of SUD (e.g. Mullen, Martin, Anderson, Romans, & Herbison, 1993) and 24% - 67% of adult patients in treatment for SUD have a history of violence in childhood (e.g. Simpson & Miller, 2002). This makes adult survivors one of the groups with the highest burden of these events in the health care system. Strong links between violence and SUD can also be found in victims of intimate partner violence, and of sexual violence in the community (World Health Organization, 2010). Although comorbid PTSD is frequent in all of these groups, the co-occurrence of SUD and PTSD among victims of violence is complex, and causal associations cannot always be assumed. Nevertheless, preventing the exposure to violence is an important measure to reduce its public health consequences (World Health Organization, 2010). The risk of experiencing interpersonal violence can be reduced by preventive approaches that target the individual, the family, and societal norms related to violence (World Health Organization, 2010; Wurtele, 2009). These actions may include awareness campaigns for the public, appropriate training of all persons who work with individuals at high risk of trauma, or the provision of information kits to support the media in reporting abuse cases (Collin-Vézina, Daigneault, & Hébert, 2013). A broad range of prevention programs have been developed for various target groups, e.g. programs for public education, training sessions for teachers, parenting education classes, and home-visiting programs. However, substance abuse as a consequence of interpersonal violence has rarely been addressed by these approaches and the effectiveness of most programs is unclear (MacMillan et al., 2009).



With regard to the prevention of childhood sexual or physical abuse, there are universal educational programs available in schools that are effective in increasing knowledge about childhood abuse, changing attitudes and improving preventive skills. (Anderson & Whiston, 2005; Davis & Gidycz, 2000; Walsh, Zwi, Woolfenden, & Shlonsky, 2015) Longer programs that repeat important concepts and provide opportunities to actively practice the learned behavior and skills are more effective. (Davis & Gidycz, 2000). The provision of knowledge and skills about abuse among children seem to be more effective in an average socio-economic environment and less effective in a low socio-economic environment. Parents' participation is important for a successful prevention, as parents may support their children's acquisition of preventive abilities. Evidence regarding the effectiveness of educational programs to reduce rates of abuse, however, is limited to very few studies (Gibson & Leitenberg, 2000). Indicated prevention may take the form of home-visiting programs. Two specific programs - the Nurse-Family Partnership (best evidence) and Early Start - have been shown to prevent child maltreatment and associated outcomes such as injuries (MacMillan et al., 2009). It could be argued that such programs might also potentially influence more distal outcomes, such as PTSD, SUD and other mental health consequences of abuse. Longitudinal studies with a focus on such outcomes are missing to date.

Guidelines to identify, prevent and reduce domestic violence and abuse in partnerships (National Institute for Health and Care Excellence, 2014) recommend that local strategic partnerships should be formed with all relevant institutions, including health services, local authorities, housing schools and colleges, police and crime commissioners, criminal justice agencies and private sector organizations. These local strategic partnerships on domestic violence and abuse should establish an integrated commissioning strategy. This should include input from domestic violence and abuse services, as well as other relevant services in a participatory approach with people who have experienced domestic violence and abuse. Commissioners of health and social care services should establish integrated care pathways for identifying, referring and providing interventions to support people exposed to domestic violence and abuse, and to manage those who perpetrate it (National Institute for Health and Care Excellence, 2014). People affected by domestic violence and abuse that have additional treatment needs such as substance use disorders or other mental health problems should be referred to the relevant health services. A routine part of good clinical practice should be the inquiry of violence and abuse on a regular basis, even when there are no current indicators of violence and abuse. Health professionals should be trained to detect the indicators of

domestic violence and abuse, and should have the specific knowledge and skills to inquire into violence and abuse. Staff should also have knowledge about alcohol or drug misuse and other mental health problems, as well as knowledge about the relevant services, policies and procedures for people who experience or perpetrate domestic violence and abuse (National Institute for Health and Care Excellence, 2014).

**Practice example:**

**Against Violence & Abuse Stella Project Young Women's Initiative**

The aim of the Stella Project Young Women's Initiative (SPMHI; <https://www.mdx.ac.uk/our-research/research-groups/forensic-psychology-group/stella-project-young-womens-initiative>) was to empower service providers across the three sectors of substance use, mental health and violence against women in two London boroughs. The project's goal was to improve services for women affected by overlapping domestic violence and problematic substance use. 126 practitioners from 49 agencies, working with young women experiencing interpersonal violence and/or problematic substance use, were trained and consulted regarding violence and substance misuse intersecting issues. After the training, the practitioners felt more comfortable asking questions about sexual violence and having knowledge about how to effectively share information about young women's experiences of both violence and problematic substance use. Effects on the practitioners' behaviour were not assessed. On the basis of the results, the project recommended that practitioners should receive further training and support that focuses on how to identify and act on the intersecting issues of interpersonal violence and problematic substance use, including appropriate referral pathways and regularly updated directory of relevant agencies.

Programs on the community level with a perspective on building resilience in communities or addressing specific target groups could also hold some promise. One such strategy is the Communities that Care (CTC) approach to reduce drug use and prevent delinquent and violent behaviours in adolescents. It is based on the premise that the prevalence of adolescent health and behaviour problems in a community can be reduced by identifying risk factors

and protective factors experienced in the respective community and by implementing prevention and early intervention programmes that address these specific risk and protective factors. A recent review of the evidence on the CTC approach came to the result that the effectiveness of the program still needs to be assessed in a European context (EMCDDA 2017).

## 4.2. Secondary prevention

### Key Points:

- The evidence on secondary prevention approaches for traumatised individuals is limited.
- Psychological Debriefing is not supported by the evidence and should not be used.
- Brief trauma-focused CBT in the first months after a traumatic event seems to be effective to reduce PTSD symptom severity, but SUD outcomes have not been examined.
- A short video-based intervention and a collaborative care approach were effective to reduce both, PTSD and substance abuse in special populations (rape victims and injured trauma survivors).
- More research on integrative approaches that focus both, PTSD and SUD after traumatic events, is needed.

Secondary prevention refers to psychological interventions shortly after exposure to a traumatic event. In the initial phase after a traumatic event, a large majority of individuals will have symptoms of PTSD (e.g. recollections of the trauma, avoidance of reminders and hyperarousal symptoms). In many, these symptoms will spontaneously improve over time and eventually disappear. In a subgroup of individuals, however, the symptoms will persist and will be related to impairment in functioning, which leads to a diagnosis of PTSD. Unfortunately, there is still a paucity of convincing evidence regarding interventions that can prevent trauma survivors from developing PTSD (Canadian Agency for Drugs and Technologies in Health, 2015; Gartlehner et al., 2013; Kearns, Ressler, Zatzick, & Rothbaum, 2012).

An intervention that has been widely disseminated is Psychological Debriefing, for instance Critical Incident Stress Debriefing (CISD; Mitchell, 1983). This type of intervention is conducted in the days after the traumatic event, typically in groups, and follows defined phases. However, debriefing interventions where victims are encouraged to talk about details of their experience and their emotional response do not seem to prevent the development of PTSD. In fact, several studies have found that psychological debriefing may actually interfere with the natural recovery process and may lead to an increased rate of subsequent PTSD. Systematic Reviews and Guidelines therefore discourage the use of such interventions (Gartlehner et al., 2013; Nash & Watson, 2012; National Institute for Health and Clinical Excellence, 2005).

Several other brief psychosocial interventions have been developed for defined target groups. Some of these explicitly address the prevention of substance abuse after traumatic events. Resnick et al. (1999) developed a prevention approach specifically for sexual assault survivors. This video-based intervention aims at reducing stress from the forensic exam procedure, providing information on common reactions to rape, and teaching ways to reduce and avoid drug and alcohol abuse. The intervention was shown to reduce psychopathology, PTSD symptoms and marijuana abuse after rape experiences. (Resnick, Acierno, Kilpatrick, & Holmes, 2005). The initial results are promising, and the brief video-based approach could be easily adapted to other target groups. However, more findings and replication studies are needed. Zatzick et al. (2004) reported on a collaborative care approach that consisted of case management, motivational interviews targeting alcohol abuse and dependence, and evidence-based cognitive-behavioural therapy and/or pharmacotherapy for patients in the weeks and months following trauma exposure. Treatment was delivered in acute care settings, in the community, or over the telephone. An initial study demonstrated that the program was feasible and that it reduced alcohol problems in the intervention group, but only small effects on PTSD symptoms were reported. A larger trial among more than 200 injured trauma survivors demonstrated significant reductions in PTSD symptom levels over the course of the year following the injury, and effects on alcohol consumption on trend level (Zatzick et al., 2013).

The best evidence to date exists for the early administration of trauma-focused cognitive behavioural therapy (TF-CBT) for PTSD, which focuses on the patients' trauma-related memories and the personal meaning of the traumatic events by using techniques with proven efficacy (see section 4.4.1). According

to DSM-IV, most studies have tested protocols that consist of 4–5 CBT sessions in the first weeks or months after exposure to trauma in patients with Acute Stress Disorder (American Psychological Association, 2017). There was evidence that individual TF-CBT was effective for people with acute traumatic stress symptoms, compared to both waiting list and supportive counselling interventions (Roberts, Kitchiner, Kenardy, & Bisson, 2010). The results of some studies could suggest that exposure yields better outcomes than cognitive restructuring approaches (Bryant et al., 2008), but there was considerable clinical heterogeneity in the included studies and additional high quality trials with longer follow up periods required (Roberts et al., 2010). Nevertheless, the current evidence suggests that CBT interventions delivered individually in multiple sessions to patients with PTSD symptoms in the early weeks after trauma exposure are more effective at reducing the incidence of PTSD compared to no treatment or supportive counselling control groups.

Zatzick et al. (2009) developed an epidemiological model to compare the breadth of applicability, the treatment effects, and the overall population impact indices from their stepped collaborative care effectiveness trial (Zatzick et al., 2004) and a cognitive behavioural psychotherapy efficacy trial, with four to six office-based psychotherapy sessions (Wagner, Zatzick, Ghesquiere, & Jurkovich, 2007). Their analysis suggested a reciprocal relationship between effect size and breadth of applicability. The CBT trial yielded a larger effect size (50% PTSD prevention), but limited breadth of applicability. The stepped collaborative care yielded a smaller effect size (7% PTSD prevention), but a markedly higher breadth of applicability. On the basis of their results, the authors suggest that the collaborative care early intervention would reach a much larger proportion of the target population at risk for PTSD.

The evidence supporting the effectiveness of most interventions used to prevent PTSD is weak. Debriefing seems to be potentially harmful and should not be used. If available, brief trauma-focused CBT seems to be effective to reduce symptom severity in persons with acute stress disorder. However, the public health impact of a collaborative care approach might be higher, at least, in accidentally injured patients. A general shortcoming of the existing approaches is that, with few exceptions (Resnick et al., 2005; Zatzick et al., 2004), they do not address comorbid SUD. More research on integrative approaches that focus both, PTSD and SUD, therefore seems necessary.

### 4.3. Interventions to detect individuals with PTSD and SUD

#### Key Points:

- Given the high comorbidity of PTSD and SUD, systematic assessment of trauma exposure, PTSD and SUD by means of validated measures is highly recommended in both, trauma specific treatment settings and SUD settings.
- Health care professionals of all health care settings should have knowledge and skills in trauma inquiry.

Given the high comorbidity of PTSD and SUD, systematic screening of trauma exposure for PTSD and SUD is recommended in both SUD settings and trauma specific treatment settings (Substance Abuse and Mental Health Services Administration, 2014). Other comorbidity, such as anxiety disorders and depression should also be considered, as well as the social and occupational functional capacity and quality of life (Australian Center for Posttraumatic Health, 2013; Department of Veterans Affairs Department of Defense, 2017). For the assessment of PTSD and SUD, it is recommended that practitioners should use validated self-reports and/or structured clinical interviews (Australian Center for Posttraumatic Health, 2013). Despite the high prevalence of PTSD in patients with SUD and the obvious need for specific treatment (Henslee & Coffey, 2010), few diagnostic instruments have been evaluated for their utility in diagnosing PTSD in SUD populations.

Extant studies yield inconsistent results regarding the psychometric properties of well-established measures of PTSD in patients with SUD. Whereas, Kimerling et al. (2006) found that a 4-Item-Screener for PTSD had a comparable sensitivity and a specificity to detect PTSD in patients with SUD as compared to a primary care sample. Several other studies report weaker psychometric properties of established measures of PTSD in patients with SUD and suggest a lower cut-score for screening purposes in patients with SUD (Harrington & Newman, 2007; Rash, Coffey, Baschnagel, Drobos, & Saladin, 2008). Lower cut-scores might be necessary as the degree of symptoms in the three symptom clusters of PTSD (i.e. intrusions, avoidance, and hyperarousal) seem to differ between patients with and without SUD, even between SUD patients with different types of substance abuse (Saladin, Brady, Dansky, & Kilpatrick, 1995).

Another open question is: How accurately can a diagnosis of PTSD be made when self-reported questionnaires are used by patients in detoxification treatments? The issue of accuracy stems from the fact that there is a high overlap of PTSD-symptoms with acute withdrawal (e.g. feeling irritable or having trouble to fall asleep) and depression. Depressive symptoms are present in many patients when entering detoxification treatment, but patients remit many symptoms in the treatment course (Davidson, 1995). Even if PTSD-symptoms remained stable over time, the changes in comorbid symptoms or medication effects could influence the assessment. Taken together, the existing findings underline the need to evaluate the psychometric properties of established instruments used for PTSD patients with comorbid SUD.

Screening for trauma exposure is not only recommended for SUD and PTSD treatment settings, but also in other relevant health care settings, such as primary care. Screening can involve, but should not be limited to, administering screening questionnaires in this context. It has been recommended that “primary care teams should ask patients with symptoms often related to PTSD (e.g. drug or alcohol misuse, depression, inappropriate use of prescribed drugs) in a sensitive manner whether or not they have suffered a traumatic experience (which might have occurred many months or years before), giving specific examples of traumatic events (for example, assaults, rape, road traffic accidents, childhood sexual abuse and traumatic childbirth).” (National Institute for Health and Clinical Excellence, 2005).

However, although a systematic assessment of trauma exposure is effective and recommended by international treatment guidelines for patients with PTSD and SUD, this method is rarely conducted by health care professionals, due to lack of knowledge and skills to trauma inquiry and response (Courtois & Gold, 2009; Forensic Psychosocial Services at Middlesex University, 2013). Training of health care professionals, including raising awareness for trauma and improving practitioners’ skills in trauma inquiry and response, is urgently needed to improve systematic detection of traumatic events and their consequences.

**Practice example:****“Learning how to ask” – a training for SUD practitioners**

From 2012-2016, the German Federal Ministry of Education and Research (BMBF) has funded a nation-wide research network to gain a better understanding of the relationships between early traumatic events and SUD, to provide evidence-based treatments and to increase the awareness for early abuse and neglect in patients with SUD (“Substance use disorders as a cause and consequence of childhood abuse”, CANSAS-Network; Schäfer et al., 2017). In one of the projects (“Learning how to ask”), a one-day training in trauma inquiry and appropriate response for health care providers was adapted to the German context and evaluated in a randomized controlled trial in 25 SUD outpatient services. The training was effective in changing health care professionals’ attitudes towards trauma inquiry, in improving their knowledge about trauma inquiry and response, and in increasing the professionals’ trauma inquiry behaviour in their routine counselling practice (Lotzin et al., 2017). According to these first results, a structured training in trauma inquiry and response is effective in increasing the expertise of SUD practitioners and may enhance the rate of trauma inquiry in substance abuse settings.



## 4.4. Treatment of individuals with PTSD and SUD

### 4.4.1. Psychological treatments for co-occurring PTSD and SUD

#### Key Points:

- Patients with PTSD and SUD should be offered interventions that integrate trauma-focused PTSD treatment and SUD interventions, as they showed differential benefit regarding PTSD outcomes.
- There is weak evidence that non-trauma-focused interventions for PTSD and SUD have some benefit regarding substance use outcomes, and they may have some benefit regarding further outcomes (e.g. risk behaviours).
- More research is needed to optimize the existing treatment models and to assess patient and clinical acceptability of the various approaches in European countries.

For the treatment of PTSD, international guidelines strongly recommend psychological interventions as first-line treatments (Australian Center for Post-traumatic Health, 2013; Department of Veterans Affairs Department of Defense, 2017; National Institute for Health and Clinical Excellence, 2005). The strongest effects have been reported for trauma-focused psychological treatments, such as trauma-focused cognitive behavioural therapy, cognitive processing therapy, prolonged exposure therapy, eye movement desensitization and reprocessing (EMDR). These treatments have in common a focus on the patients' trauma-related memories and the personal meaning of the traumatic events. Studies have consistently found that there is no difference in the efficacy of different forms of trauma-focused treatments (Australian Center for Posttraumatic Health, 2013; Bisson & Andrew, 2005; Bisson et al., 2013; Bradley, Greene, Russ, Dutra, & Westen, 2005). Non-trauma-focused treatments for PTSD include stress-management programs, supportive therapy or skills trainings to manage the symptoms of PTSD. Meta-analyses have concluded that non-trauma-focused treatments are less efficacious in treating PTSD than trauma-focused treatments, or their effects have not been sufficiently studied (Bisson & Andrew, 2005; Bisson et al., 2013; Bradley et al., 2005). Most of the trials on the efficacy of treatments for PTSD, however, systematically excluded individuals with SUD (Gartlehner et al., 2013; Ronconi, Shiner, & Watts, 2014). In the last two decades, a growing number of studies have specifically targeted individuals with co-occurring PTSD and SUD. The findings indicate that patients

with this comorbidity also benefit from psychological treatments, and can be administered safely to this group. In PTSD patients without comorbid SUD, both trauma-focused and non-trauma-focused treatments have been studied in patients with comorbid PTSD and SUD. Interventions for PTSD were in most studies integrated with interventions that also addressed the substance use disorder. For example, sessions to address substance use by means of cognitive-behavioural therapy strategies were included in a standard exposure-based, trauma-focused intervention ("Concurrent Treatment of PTSD and Substance Use Disorders Using Prolonged Exposure"; Back et al., 2014). In another example, cognitive-behavioural strategies to address both post-traumatic symptoms and substance use were integrated in every session of a frequently studied non-trauma-focused treatment for PTSD and SUD ("Seeking Safety"; Najavits, 2002).

A review of treatment studies focussing on patients with PTSD and SUD (Roberts, Roberts, Jones, & Bisson, 2015) concluded that, as for PTSD patients without SUD, trauma-focused treatments are more effective to reduce PTSD severity than the treatments usually offered in addiction services in patients with comorbid SUD. However, trauma-focused treatments are associated with poorer treatment retention. The effects on drug or alcohol use post-treatment were not superior to treatment as usual, but there was evidence for positive effects about 6 months after treatment. Non-trauma-focused therapies did not perform better than treatment as usual regarding PTSD severity. One study suggested better drug and alcohol outcomes for a specific program at the end of treatment ("Seeking Safety"; Najavits, 2002). A recent critical review (Simpson, Lehavot, & Petrakis, 2017) highlighted that in all studies among individuals with co-occurring PTSD and SUD, the participants showed significant treatment gains over time in both SUD and PTSD outcomes when they were provided access to an active, manualised SUD treatment matched for time and attention. The authors note however, that by participating in these studies, patients assigned to the control conditions might have been sensitized to the importance of PTSD, which may not be the case in typical practice settings where trauma exposure and PTSD status are often not assessed and addressed during SUD treatment. Moreover, manualised state-of the art therapies for SUD do not represent the treatment standard in all SUD settings. Studies indicate that SUD patients with early and complex trauma (i.e. repeated exposure or exposure to different forms of interpersonal violence during their childhood) not only suffer from the core symptoms of PTSD but also from a range of additional problems including difficulties in emotional regulation, interpersonal problems, self-destructive behaviours, and vulnerability to

revictimisation (Hien, Cohen, & Campbell, 2005). Non-trauma-focused therapies with a broader scope on the consequences of complex trauma might have beneficial effects in these patients on domains other than PTSD, e.g. global psychopathology or risk behaviours (Najavits & Hien, 2013).

Taken together, there is evidence that both trauma-focused and non-trauma-focused interventions can be safely administered to patients with the comorbidity of PTSD and SUD. The existing studies suggest promising outcomes of interventions that integrate trauma-focused PTSD treatment and SUD interventions on symptoms of PTSD. However, the existing models did not show convincing effects on SUD outcomes and the evidence regarding benefits of non-trauma-focused treatments is weak. Moreover, almost all treatment studies were performed outside of Europe, mainly in the United States. More research is needed to optimize the existing treatment models and to assess patient and clinical acceptability of the various approaches in the European countries, given that there are substantial differences between patients in European treatment facilities and the patients included in some of the existing studies (e.g. veterans), but also between the respective health care systems.

#### 4.4.2. Integration of interventions for PTSD and SUD

##### **Key Points:**

- Patients with PTSD and SUD should be offered evidence-based treatment for both disorders. Having one disorder should not be a barrier to receiving treatment for the other.
- Patients with PTSD and SUD should be treated with models that address both disorders at the same time (parallel or integrative treatment models).
- The limited training of practitioners is a main barrier to the adoption of evidence-based treatments for co-occurring PTSD and SUD; there is a need of innovative approaches to training.

Experts agree that patients with the comorbidity of PTSD and SUD, symptoms of both disorders should be specifically addressed (e.g. Dass-Brailsford & Myrick, 2010; Mills, 2015). However, there is some disagreement on the order and the timing of the respective interventions for treatment. While 'sequential' treatment models first treat one disorder and then the other, 'parallel' treatment models treat each disorder separately but simultaneously, for instance, through collaborative treatment by trauma services and substance misuse services. "Integrated" models treat both disorders at the same time by the same provider. Guidelines favour a parallel or integrated treatment approach (Australian Center for Post-traumatic Health, 2013; Department of Veterans Affairs Department of Defense, 2017), although patients' preferences and their prior treatment experiences, provider experience, severity of the conditions, and the availability of resources have to be considered (Department of Veterans Affairs Department of Defense, 2017). Models that address both disorders at the same time share a number of advantages. They help to engage clients in treatment and prevent them from dropping out of treatment due to an exacerbation in the symptoms of one disorder when the other is being addressed (Dass-Brailsford & Myrick, 2010). Patients with SUD and PTSD may be at greater risk for relapse during early abstinence compared to SUD patients without comorbid PTSD, since relapses may be "triggered" in part by traumatic memories and other PTSD symptoms. Health care professionals should therefore closely monitor clients during this phase of treatment. The client should be educated about how PTSD and SUD interact to worsen the course of either disorder alone, and should be prepared for possible short-term worsening of PTSD symptoms. Patients should also be helped to develop strategies for managing symptoms and urges to drink or use (Department of Veterans Affairs Department of Defense, 2017). The response to interventions for SUD should be reassessed continually over the course of treatment, using standardized and valid self-report measures and laboratory tests and should include ongoing substance use, craving, and side effects of medication (Department of Veterans Affairs Department of Defense, 2017).

Severe substance dependence (i.e. withdrawal symptoms, tolerance) that requires medical detoxification should be treated before the patient can benefit from trauma-focused psychological treatments (Department of Veterans Affairs Department of Defense, 2017). Trauma-focused PTSD treatment should not commence until the person has demonstrated a capacity to manage distress without recourse to substance misuse and to attend sessions without being drug or alcohol affected (Australian Center for Post-traumatic Health, 2013;

Flatten et al., 2011). If it is necessary, detoxification should be part of a comprehensive plan to treat both disorders. During detoxification, interventions to educate patients about trauma and motivate them are beneficial as a “stepping stone” to further trauma treatment and to prevent early drop-out, even if patients have not yet been engaged in treatment for both disorders (Mills et al., 2014; Odenwald & Semrau, 2012).

It has also been suggested that one disorder might be treated first, i.e. a ‘sequential’ model can be applied, when it is reasonable that the secondary disorder, which will in most cases be the substance use disorder, may improve as well (Department of Veterans Affairs Department of Defense, 2017) or when the risk of treatment drop-out during treatment of one disorder is low. For example, co-occurring mild substance use can also be effectively treated in the context of PTSD treatment (Department of Veterans Affairs Department of Defense, 2017) and patients with good capacities to self-regulate can be able to tolerate a longer phase of stabilization of their SUD before PTSD is treated. Thus, when determining optimal treatment approach for a certain patient, the severity of the PTSD and SUD should be considered, in addition to the local availability of service options and the patient preference. Finally, the level of provider experience in treating PTSD and/or SUD has to be considered. Both disorders should be treated by providers with experience in treating these conditions (Department of Veterans Affairs Department of Defense, 2017) and the limited cross-training of practitioners in both, the PTSD and the SUD field is a main barrier to the adoption of evidence-based treatments for co-occurring PTSD and SUD (Gielen et al., 2014; Killeen et al., 2015).

# Strategies on the level of service systems

## 5.1. Trauma-informed services

### Key Points:

- Given the high prevalence of trauma victims in all social, legal, and health-related services, a trauma-informed approach is required to appropriately respond to the needs of individuals exposed to traumatic events.
- To be trauma-informed means to recognise that trauma is common, to be aware of the impact of trauma on the services delivered and to respond appropriately to affected individuals, including referral to trauma specific interventions for those who need it.
- Trauma-informed care seems to be an important framework to improve care for individuals with PTSD and SUD, but more research on the dissemination of trauma-informed care concepts in Europe is needed.

Given the high prevalence of trauma victims in all social, legal, and health-related services, a “trauma-informed approach” has been proposed to appropriately respond to the needs of individuals exposed to traumatic events. Such a trauma-informed approach aims to design services to be responsive to the effects of trauma regarding all aspects of program culture and service delivery. A trauma-informed approach recognises the high rates of trauma exposure in the individuals they serve, provides a safe environment, and provides services that accommodate the needs of survivors of traumatic events (Mills, 2015).

A trauma-informed approach is not designed to treat trauma-related symptoms. Rather, it is an approach that acknowledges that trauma is common, and that services have to be adapted to the needs of survivors, including appropriate trauma-informed response and referral to trauma-specific interventions for those who need it. Furthermore, a trauma-informed approach should become an integrated component of not only mental health practice but also general medical practice, considering the high prevalence of trauma in physically ill populations.

Common principles of trauma-informed care and other trauma-informed systems (Substance Abuse and Mental Health Services Administration, 2014) include:

- (I) Trauma awareness - staff training to promote a basic understanding and awareness of the prevalence of traumatic events and their consequences; systematic trauma screening and assessment; referral to evidence-based trauma-specific services.
- (II) Promotion of safety - creation of an atmosphere of safety, respect, acceptance and predictability; establishment of authentic and respectful relationships with clear boundaries; procedures to avoid situations that remind individuals of previous traumatic situations; trauma policies and services that respect culture, race, ethnicity, gender, age, sexual orientation, disability, and socioeconomic status;
- (III) Promotion of choice and empowerment - maximization of consumer choice and control; prioritization of consumer empowerment, skill-building, and growth; involvement of consumers in design and evaluation of services; and
- (IV) Resource orientation - focus on consumers' strengths, resources and resiliencies.

At present, most services in Europe and worldwide are far from being "trauma-informed".

Despite of the high number of trauma survivors in all settings, trauma remains undetected in a majority of traumatized clients (Mills, 2015). As trauma survivors are unlikely to spontaneously report their traumatic experiences without being specifically asked, the magnitude of the problem is often underestimated, and providers are missing important information that are necessary to meet the service needs of a health care consumer with trauma exposure.

First attempts to develop and implement a trauma informed approach in health care on a large scale have been made in the United States. In 2005, the Substance Abuse and Mental Health Services Administration (SAMHSA) of the U.S. Department of Health and Human Services promoted a trauma-informed approach as the necessary shift that all mental health service systems should undergo and established the “National Center for Trauma-Informed Care”. As part of this program, a first longitudinal multicentre trial (Women, Co-Occurring Disorders, and Violence Study; McHugo et al., 2005) was conducted that evaluated the effectiveness of a trauma-informed care approach. The intervention consisted of the implementation of trauma-informed principles in routine service provision, staff training about trauma, an integrated treatment of trauma, substance use disorders, and other mental disorders, as well as the involvement of consumers in service planning and provision. The study results indicated that women who received trauma-informed services showed significant improvements in PTSD symptoms and other mental health outcomes relative to treatment as usual at comparable costs (Domino et al., 2005; Morrissey et al., 2005). There are early attempts to promote trauma-informed approaches also in Europe. For instance, a trauma informed care approach has been promoted for women with drug problems in Europe in a policy and practice briefing of the European Monitoring Centre for Drugs and Addiction (EMCDDA; [http://www.emcdda.europa.eu/best-practice/briefings/women-drug-problems\\_en](http://www.emcdda.europa.eu/best-practice/briefings/women-drug-problems_en)). It acknowledges that women with drug problems may often have experienced violence and trauma-informed services should therefore be provided for this group. The briefing emphasizes the importance of key principles of trauma-informed care for this target group, including staff training in trauma-informed care in addiction care settings to promote appropriate attitudes, knowledge and skills and participation of care consumers in the planning and development of policies and programmes. It also highlights that co-ordinated and integrated services with mental health and children’s services are needed, as well as coordination with policies to address issues beyond drug use. Moreover, strategies to integrate the trauma-informed approach and services in general mental health practice should be promoted. However, research on the efficacy of trauma-informed service frameworks is scarce and they have not been evaluated or implemented in large-scale initiatives in Europe. Further research on this issue is urgently needed to create an evidence base for the important perspective of trauma-informed care.



**Practice example:****Scottish National Trauma Training Framework**

The Scottish Government has developed and implemented a National Trauma Training Framework (<http://www.nes.scot.nhs.uk/education-and-training/bydiscipline/psychology/multiprofessional-psychology/national-trauma-training-framework.aspx>) to improve outcomes for victims of trauma as part of the “SurvivorScotland Strategic Outcomes and Priorities (2015-2017)”. The goal of the framework is to support the strategic planning and delivery of training for professionals who have contact with survivors of trauma across all parts of the Scottish Workforce, because it was assumed that exposure to traumatic events has a wide range of adverse physical health, mental health and social outcomes. The NHS Education for Scotland (NES) has been commissioned to deliver the framework until 2019. In 2017, a ‘Skills and Knowledge Framework for The Scottish Workforce’ was launched, which has the goal of achieving excellence in outcomes for people affected by trauma in Scotland.

# Special Populations

## 6.1. Refugees and Internally displaced people

### Key Points:

- Given the high prevalence of trauma victims in all social, legal, and health-related services, a trauma-informed approach is required to appropriately respond to the needs of individuals exposed to traumatic events.
- To be trauma-informed means to recognise that trauma is common, to be aware of the impact of trauma on the services delivered and to respond appropriately to affected individuals, including referral to trauma specific interventions for those who need it.
- Trauma-informed care seems to be an important framework to improve care for individuals with PTSD and SUD, but more research on the dissemination of trauma-informed care concepts in Europe is needed.

The number of people seeking protection in the European Union (EU) from armed conflicts and other forms of violence has grown considerably in recent years. There was a gradual increase in the number of asylum applications through to 2012, after which the number of asylum seekers rose more rapidly. Since 2013, Syria was the main country of citizenship of asylum seekers in the EU Member States, a position it has held each year since. In 2015 and 2016, about 1.3 million people applied for asylum in the EU each year. In 2017 more than 700,000 asylum seekers applied for protection in the Member States of the EU (Eurostat, 2018). Forced displacement bears a high risk of stress and trauma, including experiences of loss for an unknown future, different forms of human-made violence in the pre-displacement process, during displacement and post-displacement and family separation. Accordingly, refugees<sup>2</sup> suffer from

<sup>2</sup> The term „refugee“ is used in this document with reference to asylum seekers and refugees as defined by the 1951 UN convention, but also with reference to irregular migrants (i.e. migrants not possessing a legal residency permit in the host country).

a high burden of mental health problems. One of the most prevalent conditions is PTSD, which is far more frequent in refugees than in the European general population. A systematic review (Fazel, Wheeler, & Danesh, 2005) concluded that about 9% of refugees resettled in western countries are diagnosed with post-traumatic stress disorder as compared to 1-3% of the host country populations. There is evidence that the rate of PTSD is even higher in not yet resettled asylum seekers (Priebe, Giacco, & El-Nagib, 2016) and larger, more rigorously designed studies in this population yielded estimates for PTSD of about 15% (Silove, Ventevogel, & Rees, 2017). While there is substantial evidence for the cross-cultural validity of PTSD, there is variability regarding some of its symptoms and a need for further research in this area (Hinton & Lewis-Fernández, 2010). Some studies stressed the role of post-migration factors in moderating the effect of pre-migration trauma, where a continued stress in exile may prevent the process of recovery from psychological problems, thus maintaining a high load of mental ill-health over time (Montgomery, 2011). For instance, the degree of stigmatisation and discrimination faced by the refugees in the receiving country has been emphasized as a strong mediating factor in developing mental health consequences of forced displacement (Küey, 2015).

SUD have long been neglected in refugee populations (Weaver & Roberts, 2010), but more evidence on its relevance in refugees has become available in the last years. In a recent systematic review, the highest-quality prevalence estimates of hazardous/harmful alcohol use ranged from 17%-36% in camp settings and 4%-7% in community settings (Horyniak, Melo, Farrell, Ojeda, & Strathdee, 2016). Evidence on drug related disorders is still scarce (Lemmens, Dupont, & Roosen, 2017) and most studies on substance use disorders in refugee populations have been conducted outside Europe (Priebe et al., 2016). Refugees seem to be particularly vulnerable to substance use for a number of reasons. In addition to the high rate of potentially traumatic events, refugees are exposed to economic hardship, social disadvantages and often also discrimination in the host country, which can further increase stress and feelings of powerlessness. Moreover, the availability of substances and social norms in the host countries increases the risk of SUD (Priebe et al., 2016). This is of particular concern in European countries, where substance use, particularly alcohol consumption, is part of daily culture, especially because rates of use tend to be much lower in the refugees' countries of origin. Research shows that newcomers tend to adopt local substance use patterns (World Health Organization, 2011; United Nations Office On Drugs And Crime, 2012).

Emerging literature suggests that post-traumatic disorders and SUD are also related to each other in refugee populations. In their comprehensive review, Horyniak et al. (2016) identified several studies in samples of refugees or internally displaced people where trauma exposure and/or symptoms of mental illness were positively associated with substance use. In one study from the European region, Kozaric-Kovacic et al. (2000) examined camp residents in Croatia which had been displaced by the conflict in the former Yugoslavia. In this study, the prevalence of PTSD was 61% in men and 8% in women, and alcohol dependence was highly comorbid with PTSD, particularly among men. A range of qualitative studies also identified coping with trauma and loss as reasons underlying the use of alcohol and drugs. In a study from the Netherlands, Dupont et al. (2005) conducted interviews with 21 asylum seekers from a range of different countries. Their reasons for using substances included boredom and “killing time”, but also to cope with distressing memories. Horyniak et al. (2016) came to the conclusion that, as in the general population, male gender, experiences of trauma and poor mental health are associated with substance use among forced migrants. A further risk factor, especially for harmful use and dependence on prescribed medications, is chronic pain, which is highly prevalent in traumatised refugees (Teodorescu et al., 2015). Both, a history of trauma and substance use of the parents are important risk factors for family related violence in refugee families (Timshel, Montgomery, & Dalgaard, 2017).

Trauma-focused therapies for PTSD have been shown to be effective in refugee populations. In their meta-analysis on the effects of trauma-focused therapies for refugees, Lambert & Alhassoon (2015) report large effect sizes when therapies were compared to treatment as usual, but, similar to the findings in other populations, effect sizes significantly decreased when trauma-focused therapies were compared to other active treatments, e.g. supportive counselling. Nickerson et al. (2011) highlighted the need for the further adaptation of therapies to meet the specific clinical and cultural needs of refugees, and the examination of possible additive effects of components currently included in so-called multimodal interventions. Such interventions encompass a range of components in addition to psychotherapeutic interventions, including access to social services, coordination of resettlement needs, and referral for medical care. It has been suggested that such a range of interventions is required to adequately meet the spectrum of needs that may occur following exposure to multiple traumatic events, as well as subsequent psychosocial stressors and challenges in the host country (Nickerson et al., 2011).

There is also an urgent need of research to assess the effects of treatments on the complex constellations of symptoms found in refugees. As other populations exposed to repeated, human-made violence, refugees frequently suffer from symptoms of depression, anxiety and emotional dysregulation in addition to PTSD and potential substance abuse (ter Heide, Mooren, & Kleber, 2016). In recent years, there have been attempts to address this spectrum of symptoms using transdiagnostic psychotherapeutic approaches, like the “Common Elements Treatment Approach (CETA)” (Bolton et al., 2014). However, while positive effects of this approach were reported regarding the reduction of PTSD symptoms, depression and anxiety, no effects were apparent on problematic alcohol use. Very few studies specifically addressed the treatment of SUD in refugee populations. Currently only two intervention studies specifically addressed substance use among forced migrants, and both were conducted outside of Europe (Ezard, Debakre, & Catillon, 2010; Widmann et al., 2017). A recent RCT among Somali refugees living in Kenya suggested small effects for a standardized brief intervention to reduce Khat use in forced migrants (Widmann et al., 2017), but the intervention was less effective in participants with comorbid psychopathology, particularly in patients with PTSD. Finally, there is a lack of data regarding the reliability and validity of instruments measuring SUD in refugees and other groups of forced migrants (Weaver & Roberts, 2010) and interventions that might be promising to promote mental health in general in refugee populations. Such models often focus on concepts of vulnerability and stress, and measures to increase resilience through individual strategies and social support (e.g. Laban, 2015).

Another challenge is to reach refugees with comorbid post-traumatic disorders and SUD, and engage them in treatment. Refugees with SUD are less likely to access services for a variety of cultural, economic, and legal reasons (Welbel et al., 2013). These include cultural barriers for help-seeking, e.g. differing concepts and explanatory models for substance abuse, and a lack of knowledge of the health care system in the host country, which is also relevant for health problems other than SUD (Priebe et al. 2016). Other reasons lie within the health care system itself, for instance a lack of culture-specific knowledge and skills in professionals, legal and economic barriers, as well as language barriers. Finally, the stigma related to SUD may contribute to both reluctance to seek treatment in refugees and problems to access services due to barriers and negative attitudes in the health care system. Components of good practice for refugees with SUD that have been identified across many European countries are similar to those for other marginalised groups (Welbel et al., 2013). These should include outreach programs, access to integrative health services, collaboration and co-ordination of services, and disseminating

information on services (Priebe et al., 2016; Welbel et al., 2013). Research has also shown positive effects of cultural adaptations of services and interventions, although the evidence in this field is not consistent (Healey et al., 2017). Taken together, although refugees represent one of the largest at-risk groups for PTSD worldwide, there is a striking lack of studies examining interventions to prevent or treat both SUD in general, and SUD related to posttraumatic disorders in refugee populations. On the basis of the existing evidence, neither a brief SUD treatment alone nor a psychotherapeutic approach without SUD treatment had a sufficient effect on both problematic substance use and comorbid psychological symptoms, suggesting a need to integrate special interventions for SUD with interventions to address other consequences of trauma in refugee populations. Moreover, to meet the complex needs of refugees with SUD and PTSD, but also other consequences of trauma, it will clearly be important for substance use services and mental health services to be integrated with each other to make special efforts to reach this population, and to employ a trauma-informed care perspective (Horyniak et al., 2016).

## 6.2. Veterans of armed conflicts

### Key Points:

- Substance use disorders and PTSD are more frequent in veteran populations than the general population.
- An important barrier for veterans to receive appropriate treatment is the social stigma associated with mental illness within military communities.
- PTSD or SUD treatment services for veterans are available that consider the specific war-related traumas and military culture.
- Trauma-focused therapies for PTSD have been shown to be effective also in veteran populations.
- Services that integrate both SUD and PTSD treatment should be established for veteran populations.

Among veteran populations, substance misuse is a major concern (Fear et al., 2007; Thomas et al., 2010), and is related to a wide range of adverse outcomes (Graham & Livingston, 2011; McFarlane, 1998). For instance, in a study from the United States, one in two military personnel who had actively participated in combat reported binge drinking, and one in five reported alcohol use problems (Jacobson et al., 2008). Veterans are also at high risk of suffering from war-related trauma exposure, with rates of PTSD as high as 70% in some studies (Van Hoorn et al., 2013). Prevalence rates of PTSD are also high in older veterans who were involved in World War II (Glaesmer, Brähler, Gündel, & Riedel-Heller, 2011), a group of veterans that should not be overlooked. In addition, it is increasingly seen that mental health problems in veterans might not only be caused by war-related difficulties, but also by early life difficulties (Iversen et al., 2007).

There is evidence that PTSD and SUD are closely interrelated in veterans of both genders, but most studies have been conducted outside of Europe (Jacobson et al., 2008; Kessler et al., 1995). In these studies, 12% to 48% of veterans with PTSD also had comorbid SUD (Jacobson et al., 2008). In SUD treatment settings for veterans, up to 63% fulfilled a PTSD diagnosis (Seal et al., 2011). Patients diagnosed with both PTSD and SUD tend to have poorer long-term prognoses for each condition than do those with one diagnosis without the other (Department of Veterans Affairs Department of Defense, 2017).

Many countries offer specialized veteran mental health services including PTSD and/or SUD treatment programs. Those PTSD or SUD programs offer mental health assessment, one-to-one or group psychotherapy that focus on specific conflicts or specific war-related traumas. Specialized veteran mental health services may have the advantage that mental health professionals have an understanding of, and sensitivity towards, military life and culture (Ben-Zeev, Corrigan, Britt, & Langford, 2012). In the U.S. Department of Veteran Affairs, a specialized treatment programs for veterans with substance use and PTSD has been established, but no such services seem to be available in European countries so far.

Veterans face specific barriers to accessing services (Reisman, 2016). For instance, the stigma associated with mental illness within military communities is an important barrier for veterans to access and receive appropriate treatment. Although many service members and veterans seek help for their PTSD or SUD symptoms, many do not, because they do not perceive their symptoms as a mental health problem that can be treated, or they are reluctant to be labeled as being mentally ill by their peers (Mittal et al., 2013). Interventions to reduce stigma related to mental conditions in the military therefore seem to be needed. The US Department of Veterans Affairs has developed an extensive evidence-based clinical practice guideline for the treatment of PTSD in veterans (Department of Veterans Affairs Department of Defense, 2017) that includes recommendations for the treatment of the comorbidity of PTSD and SUD. This guideline suggests an assessment and treatment approach that is consistent with other international clinical practice guidelines for PTSD for non-veteran patient groups with PTSD and SUD (see 4.4.1, 4.4.2). It is recommended that all veterans diagnosed with PTSD should receive a comprehensive assessment for SUD (Department of Veterans Affairs Department of Defense, 2017). For those veterans diagnosed with PTSD and SUD, evidence-based treatments should be offered for both disorders, including nicotine dependence (Department of Veterans Affairs Department of Defense, 2017). To address PTSD symptoms, evidence-based trauma-focused psychotherapeutic interventions that include components of exposure and/or cognitive restructuring should be used. The presence of an SUD should not prevent the concurrent treatment with evidence-based, trauma-focused therapy for PTSD. These recommendations are informed by meta-analytic evidence suggesting that veterans with PTSD and SUD who received trauma-focused psychotherapy for PTSD combined with SUD psychotherapy showed a greater reduction in their PTSD symptoms and substance use than patients who received SUD treatment alone or treatment as usual (Kaysen et al., 2014).

Non-trauma-focused psychotherapies that focused on improving coping skills did not have better PTSD or SUD outcomes than SUD only treatment among veterans. For example, Seeking Safety, an established and widely used integrated SUD and PTSD treatment approach that focuses on improving coping skills is only comparably effective to SUD treatment alone for reducing symptoms of PTSD and substance use (Boden et al., 2012).



# References

American Psychological Association. (2017). Clinical Practice Guideline for the Treatment of Posttraumatic Stress Disorder.

Anderson, L. A., & Whiston, S. C. (2005). Sexual assault education programs: A meta-analytic examination of their effectiveness. *Psychology of Women Quarterly*, 29(4), 374–388. <https://doi.org/10.1111/j.1471-6402.2005.00237.x>

Australian Center for Posttraumatic Health. (2013). Australian guidelines for the treatment of acute stress disorder and posttraumatic stress disorder. Melbourne, VIC: ACPMH.

Back, S. E., Killeen, T. K., Teer, A. P., Hartwell, E. E., Federline, A., Beylotte, F., & Cox, E. (2014). Substance use disorders and PTSD: An exploratory study of treatment preferences among military veterans. *Addictive Behaviors*, 39(2), 369–373. <http://dx.doi.org/10.1016/j.addbeh.2013.09.017>

Ben-Zeev, D., Corrigan, P. W., Britt, T. W., & Langford, L. (2012). Stigma of mental illness and service use in the military. *Journal of Mental Health*, 21(3), 264–273. <http://dx.doi.org/10.3109/09638237.2011.621468>

Bisson, J., & Andrew, M. (2005). Psychological treatment of post-traumatic stress disorder (PTSD). The Cochrane Library. Retrieved from [http://onlinelibrary.wiley.com/doi/10.1002/14651858.CD003388.pub2/fullBisson, J. I., Roberts, N. P., Andrew, M., Cooper, R., Lewis, C. \(2013\). Psychological therapies for chronic post-traumatic stress disorder \(PTSD\) in adults. Cochrane Database Syst Rev. 2013, Issue 12. Art. No.: CD003388. DOI: 10.1002/14651858.CD003388.pub4](http://onlinelibrary.wiley.com/doi/10.1002/14651858.CD003388.pub2/fullBisson, J. I., Roberts, N. P., Andrew, M., Cooper, R., Lewis, C. (2013). Psychological therapies for chronic post-traumatic stress disorder (PTSD) in adults. Cochrane Database Syst Rev. 2013, Issue 12. Art. No.: CD003388. DOI: 10.1002/14651858.CD003388.pub4)

Blanco, C., Xu, Y., Brady, K., Pérez-Fuentes, G., Okuda, M., & Wang, S. (2013). Comorbidity of posttraumatic stress disorder with alcohol dependence among US adults: results from National Epidemiological Survey on Alcohol and Related Conditions. *Drug & Alcohol Dependence*, 132(3), 630–638.

Boden, M. T., Kimerling, R., Jacobs-Lentz, J., Bowman, D., Weaver, C., Carney, D., Trafton, J. A. (2012). Seeking Safety treatment for male veterans with a substance use disorder and post-traumatic stress disorder symptomatology. *Addiction*, 107(3), 578–586.

- Bolton, P., Lee, C., Haroz, E. E., Murray, L., Dorsey, S., Robinson, C., Bass, J. (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(11), e1001757. <https://doi.org/10.1371/journal.pmed.1001757>
- Bradley, R., Greene, J., Russ, E., Dutra, L., & Westen, D. (2005). A multidimensional meta-analysis of psychotherapy for PTSD. *The American Journal of Psychiatry*, 162(2), 214–227. <https://doi.org/10.1176/appi.ajp.162.2.214>
- Bryant, R. A., Mastrodomenico, J., Felmingham, K. L., Hopwood, S., Kenny, L., Kandris, E., Creamer, M. (2008). Treatment of acute stress disorder: a randomized controlled trial. *Archives of General Psychiatry*, 65(6), 659–667. <https://doi.org/10.1001/archpsyc.65.6.659>
- Burri, A., & Maercker, A. (2014). Differences in prevalence rates of PTSD in various European countries explained by war exposure, other trauma and cultural value orientation. *BMC Research Notes*, 7, 407. <https://doi.org/10.1186/1756-0500-7-407>
- Canadian Agency for Drugs and Technologies in Health. (2015). Treatment for Post-Traumatic Stress Disorder, Operational Stress Injury, or Critical Incident Stress: A Review of Guidelines. Ottawa (ON): Canadian Agency for Drugs and Technologies in Health. Retrieved from <http://www.ncbi.nlm.nih.gov/books/NBK304757/>
- Collin-Vézina, D., Daigneault, I., & Hébert, M. (2013). Lessons learned from child sexual abuse research: Prevalence, outcomes, and preventive strategies. *Child and Adolescent Psychiatry and Mental Health*, 7(1), 22. <https://doi.org/10.1186/1753-2000-7-22>
- Courtois, C. A., & Gold, S. N. (2009). The need for inclusion of psychological trauma in the professional curriculum: A call to action. *Psychological Trauma: Theory, Research, Practice, and Policy*, 1(1), 3.
- Darves-Bornoz, J.-M., Alonso, J., de Girolamo, G., de Graaf, R., Haro, J.-M., Kovess-Masfety, V., ESEMeD/MHEDEA 2000 Investigators. (2008). Main traumatic events in Europe: PTSD in the European study of the epidemiology of mental disorders survey. *Journal of Traumatic Stress*, 21(5), 455–462. <https://doi.org/10.1002/jts.20357>
- Dass-Brailsford, P., & Myrick, A. C. (2010). Psychological trauma and substance abuse: The need for an integrated approach. *Trauma, Violence, & Abuse*, 11(4), 202–213. <https://doi.org/10.1177/1524838010381252>

Davidson, K. M. (1995). Diagnosis of depression in alcohol dependence: changes in prevalence with drinking status. *The British Journal of Psychiatry*, 166(2), 199–204. <http://dx.doi.org/10.1192/bjp.166.2.199>

Davis, M. K., & Gidycz, C. A. (2000). Child sexual abuse prevention programs: a meta-analysis. *Journal of Clinical Child Psychology*, 29(2), 257–265. [https://doi.org/10.1207/S15374424jccp2902\\_11](https://doi.org/10.1207/S15374424jccp2902_11)

Department of Veterans Affairs Department of Defense. (2017). VA/DoD Clinical practice guideline for management of post-traumatic stress. Retrieved from <https://www.healthquality.va.gov/guidelines/MH/ptsd/>

Domino, M., Morrissey, J. P., Nadlicki-Patterson, T., & Chung, S. (2005). Service costs for women with co-occurring disorders and trauma. *Journal of Substance Abuse Treatment*, 28(2), 135–143. <https://doi.org/10.1016/j.jsat.2004.08.011>

Drapkin, M. L., Yusko, D., Yasinski, C., Oslin, D., Hembree, E. A., & Foa, E. B. (2011). Baseline functioning among individuals with posttraumatic stress disorder and alcohol dependence. *Journal of Substance Abuse Treatment*, 41(2), 186–192. <https://doi.org/10.1016/j.jsat.2011.02.012>

Dupont, H. J., Kaplan, C. D., Verbraeck, H. T., Braam, R. V., & van de Wijngaart, G. F. (2005). Killing time: drug and alcohol problems among asylum seekers in the Netherlands. *International Journal of Drug Policy*, 16(1), 27–36.

Eurostat. (2018). Asylum statistics - Statistics Explained. Retrieved April 7, 2018, from [http://ec.europa.eu/eurostat/statistics-explained/index.php/Asylum\\_statistics](http://ec.europa.eu/eurostat/statistics-explained/index.php/Asylum_statistics)

Ezard, N., Debakre, A., & Catillon, R. (2010). Screening and brief intervention for high-risk alcohol use in Mae La refugee camp, Thailand: a pilot project on the feasibility of training and implementation: *Intervention*, 8(3), 223–232. <https://doi.org/10.1097/WTF.0b013e3283413134>

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(9467), 1309–1314.

Fear, N. T., Iversen, A., Meltzer, H., Workman, L., Hull, L., Greenberg, N., Horn, O. (2007). Patterns of drinking in the UK Armed Forces. *Addiction*, 102(11), 1749–1759. <http://dx.doi.org/10.1111/j.1360-0443.2007.01978.x>

Flatten, G., Gast, U., Hofmann, A., Knaevelsrud, C., Lampe, A., Liebermann, P., Wöller, W. (2011). S3 - Leitlinie posttraumatische Belastungsstörung. *Trauma & Gewalt*, (3), 202–210.

Forensic Psychosocial Services at Middlesex University. (2013). *Evaluating the Stella Project Mental Health Initiative*. London, England.

Forman-Hoffman, V. L., Bose, J., Batts, K. R., Glasheen, C., Hirsch, E., Karg, R. S., Huang, L. H., & Hedden, S. L. (2016). Correlates of Lifetime Exposure to One or More Potentially Traumatic Events and Subsequent Posttraumatic Stress among Adults in the United States: Results from the Mental Health Surveillance Study, 2008-2012. CBHSQ Data Review. Rockville (MD): Substance Abuse and Mental Health Services Administration (US).

Gartlehner, G., Forneris, C. A., Brownley, K. A., Gaynes, B. N., Sonis, J., Coker-Schwimmer, E., Lohr, K. N. (2013). *Interventions for the Prevention of Posttraumatic Stress Disorder (PTSD) in Adults After Exposure to Psychological Trauma*. Rockville (MD): Agency for Healthcare Research and Quality (US). Retrieved from <http://www.ncbi.nlm.nih.gov/books/NBK133344/>

Gibson, L. E., & Leitenberg, H. (2000). Child sexual abuse prevention programs: do they decrease the occurrence of child sexual abuse? *Child Abuse & Neglect*, 24(9), 1115–1125. [https://doi.org/10.1016/S0145-2134\(00\)00179-4](https://doi.org/10.1016/S0145-2134(00)00179-4)

Gielen, N., Krumeich, A., Havermans, R. C., Smeets, F., & Jansen, A. (2014). Why clinicians do not implement integrated treatment for comorbid substance use disorder and posttraumatic stress disorder: A qualitative study. *European Journal of Psychotraumatology*, 5(1), 22821. <https://doi.org/10.3402/ejpt.v5.22821>

Glaesmer, H., Brähler, E., Gündel, H., & Riedel-Heller, S. G. (2011). The association of traumatic experiences and posttraumatic stress disorder with physical morbidity in old age: a German population-based study. *Psychosomatic Medicine*, 73(5), 401–406. <http://dx.doi.org/10.1097/PSY.0b013e31821b47e8>

Graham, K., & Livingston, M. (2011). The relationship between alcohol and violence: population, contextual and individual research approaches. *Drug and Alcohol Review*, 30(5), 453–457. <https://doi.org/10.1111/j.1465-3362.2011.00340.x>

Harrington, T., & Newman, E. (2007). The psychometric utility of two self-report measures of PTSD among women substance users. *Addictive Behaviors*, 32(12), 2788–2798. <http://dx.doi.org/10.1016/j.addbeh.2007.04.016>

Healey, P., Stager, M. L., Woodmass, K., Dettlaff, A. J., Vergara, A., Janke, R., & Wells, S. J. (2017). Cultural adaptations to augment health and mental health services: a systematic review. *BMC Health Services Research*, 17(1), 8. <https://doi.org/10.1186/s12913-016-1953-x>

Henslee, A. M., & Coffey, S. F. (2010). Exposure therapy for posttraumatic stress disorder in a residential substance use treatment facility. *Professional Psychology: Research and Practice*, 41(1), 34.

Hien, D. A., Campbell, A. N., Ruglass, L. M., Hu, M.-C., & Killeen, T. (2010). The role of alcohol misuse in PTSD outcomes for women in community treatment: A secondary analysis of NIDA's Women and Trauma Study. *Drug & Alcohol Dependence*, 111(1), 114–119. <http://dx.doi.org/10.1016/j.drugalcdep.2010.04.011>

Hien, D., Cohen, L., & Campbell, A. (2005). Is traumatic stress a vulnerability factor for women with substance use disorders? *Clinical Psychology Review*, 25(6), 813–823. <https://doi.org/10.1016/j.cpr.2005.05.006>

Hildebrand, A., Behrendt, S., & Hoyer, J. (2015). Treatment outcome in substance use disorder patients with and without comorbid posttraumatic stress disorder: A systematic review. *Psychotherapy Research*, 25(5), 565–582.

Hinton, D.E., Lewis-Fernández, R. (2011). The cross-cultural validity of posttraumatic stress disorder: implications for DSM-5. *Depression and Anxiety*, 28(9), 783–801.

Horyniak, D., Melo, J. S., Farrell, R. M., Ojeda, V. D., & Strathdee, S. A. (2016). Epidemiology of substance use among forced migrants: a global systematic review. *PLoS One*, 11(7), e0159134. <https://doi.org/10.1371/journal.pone.0159134>

Iversen, A. C., Fear, N. T., Simonoff, E., Hull, L., Horn, O., Greenberg, N., Wessely, S. (2007). Influence of childhood adversity on health among male UK military personnel. *The British Journal of Psychiatry*, 191(6), 506–511. <http://dx.doi.org/10.1192/bjp.bp.107.039818>

Jacobsen, L. K., Southwick, S. M., & Kosten, T. R. (2001). Substance use disorders in patients with posttraumatic stress disorder: A review of the literature. *American Journal of Psychiatry*, 158(8), 1184–1190. <https://doi.org/10.1176/appi.ajp.158.8.1184>

Jacobson, I. G., Ryan, M. A., Hooper, T. I., Smith, T. C., Amoroso, P. J., Boyko, E. J., Bell, N. S. (2008). Alcohol use and alcohol-related problems before and after military combat deployment. *Jama*, 300(6), 663–675. <https://doi.org/10.1001/jama.300.6.663>

Kaysen, D., Schumm, J., Pedersen, E. R., Seim, R. W., Bedard-Gilligan, M., & Chard, K. (2014). Cognitive processing therapy for veterans with comorbid PTSD and alcohol use disorders. *Addictive Behaviors*, 39(2), 420–427.

- Kearns, M. C., Ressler, K. J., Zatzick, D., & Rothbaum, B. O. (2012). Early interventions for PTSD: a review. *Depression and Anxiety*, 29(10), 833–842.
- Kessler, R. C., Aguilar-Gaxiola, S., Alonso, J., Benjet, C., Bromet, E. J., Cardoso, G., Koenen, K. C. (2017). Trauma and PTSD in the WHO World Mental Health Surveys. *European Journal of Psychotraumatology*, 8(sup5), 1353383. <https://doi.org/10.1080/20008198.2017.1353383>
- Kessler, R. C., Sonnega, A., Bromet, E., Hughes, M., & Nelson, C. B. (1995). Posttraumatic stress disorder in the National Comorbidity Survey. *Archives of General Psychiatry*, 52(12), 1048–1060. [https://doi.org/10.1002/1099-1298\(200011/12\)10:6<475::AID-CASP578>3.0.CO;2-F](https://doi.org/10.1002/1099-1298(200011/12)10:6<475::AID-CASP578>3.0.CO;2-F)
- Killeen, T. K., Back, S. E., & Brady, K. T. (2015). Implementation of integrated therapies for comorbid post-traumatic stress disorder and substance use disorders in community substance abuse treatment programs. *Drug and Alcohol Review*, 34(3), 234–241. <https://doi.org/10.1111/dar.12229>
- Kimerling, R., Trafton, J. A., & Nguyen, B. (2006). Validation of a brief screen for post-traumatic stress disorder with substance use disorder patients. *Addictive Behaviors*, 31(11), 2074–2079. <http://dx.doi.org/10.1016/j.addbeh.2006.02.008>
- Kozarić-Kovacic, D., Ljubin, T., & Grappe, M. (2000). Comorbidity of posttraumatic stress disorder and alcohol dependence in displaced persons. *Croatian Medical Journal*, 41(2), 173–178.
- Küey, L. (2015). Trauma and Migration: The Role of Stigma. In: *Trauma and Migration*. Ed: M. Schouler-Ocak. Springer: Heidelberg, Berlin; 57-69.
- Laban, C. (2015). Good news for the traumatized and their helpers. Incorporating resilience in the treatment of asylum seekers and refugees. *Practical Papers. MTb - Bulletin of Netherlands Society for Tropical Medicine and International Health*. June 02; 9-11. [https://issuu.com/nvtg\\_mt/docs/nvtg\\_mt\\_2015\\_2\\_web](https://issuu.com/nvtg_mt/docs/nvtg_mt_2015_2_web)
- Lambert, J. E., & Alhassoon, O. M. (2015). Trauma-focused therapy for refugees: meta-analytic findings. *Journal of Counseling Psychology*, 62(1), 28–37. <https://doi.org/10.1037/cou0000048>
- Lemmens, P., Dupont, H., & Roosen, I. (2017). Migrants, asylum seekers and refugees: an overview of the literature relating to drug use and access to services. *European Monitoring Centre for Drugs and Drug Addiction*.
- Levitt, J. T., & Cloitre, M. (2005). A clinician's guide to STAIR/MPE: Treatment for PTSD related to childhood abuse. *Cognitive and Behavioral Practice*, 12(1), 40–52. [https://doi.org/1077-7229/05/40-52\\$1.00/0](https://doi.org/1077-7229/05/40-52$1.00/0)

- Lotzin, A., Buth, S., Sehner, S., Hiller, P., Martens, M.-S., Pawils, S., Group, C. S. (2017). "Learning how to ask": Effectiveness of a training for trauma inquiry and response in substance use disorder healthcare professionals. *Psychological Trauma: Theory, Research, Practice, & Policy*. <https://doi.org/10.1037/tra0000269>
- MacMillan, H. L., Wathen, C. N., Barlow, J., Fergusson, D. M., Leventhal, J. M., & Taussig, H. N. (2009). Interventions to prevent child maltreatment and associated impairment. *The Lancet*, 373(9659), 250–266. [https://doi.org/10.1016/S0140-6736\(08\)61708-0](https://doi.org/10.1016/S0140-6736(08)61708-0)
- Maercker, A., Brewin, C. R., Bryant, R. A., Cloitre, M., Ommeren, M., Jones, L. M., others. (2013). Diagnosis and classification of disorders specifically associated with stress: Proposals for ICD-11. *World Psychiatry*, 12(3), 198–206.
- McFarlane, A. C. (1998). Epidemiological evidence about the relationship between PTSD and alcohol abuse: The nature of the association. *Addictive Behaviors*, 23(6), 813–825. [https://doi.org/10.1016/S0306-4603\(98\)00098-7](https://doi.org/10.1016/S0306-4603(98)00098-7)
- McHugo, G. J., Kammerer, N., Jackson, E. W., Markoff, L. S., Gatz, M., Larson, M. J., Hennigan, K. (2005). Women, co-occurring disorders, and violence study: evaluation design and study population. *Journal of Substance Abuse Treatment*, 28(2), 91–107. <https://doi.org/10.1016/j.jsat.2004.08.009>
- Mills, K. L., Teesson, M., Ross, J., & Peters, L. (2006). Trauma, PTSD, and substance use disorders: findings from the Australian National Survey of Mental Health and Well-Being. *Am J Psychiatry*, 163(4), 652–658. <https://doi.org/10.1176/appi.ajp.163.4.652>
- Mills, Katherine L. (2015). The importance of providing trauma-informed care in alcohol and other drug services. *Drug and Alcohol Review*, 34(3), 231–233.
- Mills, Katherine L., Ewer, P., Dore, G., Teesson, M., Baker, A., Kay-Lambkin, F., & Sannibale, C. (2014). The feasibility and acceptability of a brief intervention for clients of substance use services experiencing symptoms of post traumatic stress disorder. *Addictive Behaviors*, 39(6), 1094–1099.
- Mills, Katherine L., Teesson, M., Back, S. E., Brady, K. T., Baker, A. L., Hopwood, S., Ewer, P. L. (2012). Integrated exposure-based therapy for co-occurring posttraumatic stress disorder and substance dependence: A randomized controlled trial. *Journal of the American Medical Association*, 308(7), 690–699. <https://doi.org/10.1001/jama.2012.9071>
- Mills, Katherine L., Teesson, M., Ross, J., & Peters, L. (2006). Trauma, PTSD, and Substance Use Disorders: Findings from the Australian National Survey of Mental Health and Well-Being. *American Journal of Psychiatry*, 163(4), 652–658. <http://dx.doi.org/10.1176/ajp.2006.163.4.652>

Mitchell, J. T. (1983). When disaster strikes...the critical incident stress debriefing process. *JEMS: A Journal of Emergency Medical Services*, 8(1), 36–39.

Mittal, D., Drummond, K. L., Blevins, D., Curran, G., Corrigan, P., & Sullivan, G. (2013). Stigma associated with PTSD: perceptions of treatment seeking combat veterans. *Psychiatric Rehabilitation Journal*, 36(2), 86–92.  
<https://doi.org/10.1037/h0094976>

Montgomery, E. (2011). Trauma, exile and mental health in young refugees. *Acta Psychiatrica Scandinavica. Suppl.*, 1–46.

Morrissey, J. P., Jackson, E. W., Ellis, A. R., Amaro, H., Brown, V. B., & Najavits, L. M. (2005). Twelve-month outcomes of trauma-informed interventions for women with co-occurring disorders. *Psychiatric Services*, 56(10), 1213–1222.  
<https://doi.org/10.1176/appi.ps.56.10.1213>

Mota, N., Tsai, J., Kirwin, P. D., Harpaz-Rotem, I., Krystal, J. H., Southwick, S. M., & Pietrzak, R. H. (2016). Late-life exacerbation of PTSD symptoms in US veterans: results from the National Health and Resilience in Veterans Study. *The Journal of Clinical Psychiatry*, 77(3), 348–354.  
<https://doi.org/10.4088/JCP.15m10101>

Mullen, P. E., Martin, J. L., Anderson, J. C., Romans, S. E., & Herbison, G. P. (1993). Childhood sexual abuse and mental health in adult life. *The British Journal of Psychiatry*, 163(6), 721–732.

Najavits, L. M. (2004). Treatment for the dual diagnosis of posttraumatic stress and substance use disorders. *Directions in Addiction Treatment and Prevention*, 8, 1–11.

Najavits, Lisa M. (2002). Clinicians' views on treating posttraumatic stress disorder and substance use disorder. *Journal of Substance Abuse Treatment*, 22(2), 79–85. [https://doi.org/10.1016/S0740-5472\(02\)00219-2](https://doi.org/10.1016/S0740-5472(02)00219-2)

Najavits, Lisa M., & Hien, D. (2013). Helping vulnerable populations: A comprehensive review of the treatment outcome literature on substance use disorder and PTSD. *Journal of Clinical Psychology*, 69(5), 433–479.  
<https://doi.org/doi:10.1002/jclp.21980>

Nash, W. P., & Watson, P. J. (2012). Review of VA/DOD Clinical Practice Guideline on management of acute stress and interventions to prevent posttraumatic stress disorder. *Journal of Rehabilitation Research and Development*, 49(5), 637–648. <https://doi.org/10.1682/JRRD.2011.10.0194>

National Institute for Health and Care Excellence. (2014). Domestic violence and abuse: multi-agency working | Guidance and guidelines | NICE. Retrieved from <https://www.nice.org.uk/guidance/ph50>



National Institute for Health and Clinical Excellence. (2005). Post-traumatic stress disorder (PTSD). The management of PTSD in adults and children in primary and secondary care. NICE Clinical Guidelines, No. 26. Author. Retrieved from <https://www.nice.org.uk/guidance/cg26/evidence>

Nickerson, A., Bryant, R. A., Silove, D., & Steel, Z. (2011). A critical review of psychological treatments of posttraumatic stress disorder in refugees. *Clinical Psychology Review*, 31(3), 399–417. <https://doi.org/10.1016/j.cpr.2010.10.004>

Odenwald, M., & Semrau, P. (2012). Reducing dropout among traumatized alcohol patients in detoxification treatment: a pilot intervention study. *European Addiction Research*, 18(2), 54–63. <https://doi.org/10.1159/000333336>

Ouimette, P., Moos, R. H., & Finney, J. W. (2003). PTSD treatment and 5-year remission among patients with substance use and posttraumatic stress disorders. *Journal of Consulting and Clinical Psychology*, 71(2), 410–414. <https://doi.org/10.1037/0022-006X.71.2.410>

Pacella, M. L., Hruska, B., & Delahanty, D. L. (2013). The physical health consequences of PTSD and PTSD symptoms: a meta-analytic review. *Journal of Anxiety Disorders*, 27(1), 33–46. <https://doi.org/10.1016/j.janxdis.2012.08.004>

Plummer, C., & Klein, A. (2013). Using policies to promote child sexual abuse prevention: What is working. Harrisburg, PA: VAWnet, a Project of the National Resource Center on Domestic Violence.

Priebe, S., Giacco, D., & El-Nagib, R. (2016). Public Health Aspects of Mental Health Among Migrants and Refugees: A Review of the Evidence on Mental Health Care for Refugees, Asylum Seekers and Irregular Migrants in the WHO European Region. Copenhagen: WHO Regional Office for Europe. Retrieved from <http://www.ncbi.nlm.nih.gov/books/NBK391045/>

Rash, C. J., Coffey, S. F., Baschnagel, J. S., Drobos, D. J., & Saladin, M. E. (2008). Psychometric properties of the IES-R in traumatized substance dependent individuals with and without PTSD. *Addictive Behaviors*, 33(8), 1039–1047.

Reisman, M. (2016). PTSD treatment for veterans: What's working, what's new, and what's next. *Pharmacy and Therapeutics*, 41(10), 623–634.

Resnick, H., Acierno, R., Holmes, M., Kilpatrick, D. G., & Jager, N. (1999). Prevention of post-rape psychopathology: preliminary findings of a controlled acute rape treatment study. *Journal of Anxiety Disorders*, 13(4), 359–370. [http://dx.doi.org/10.1016/S0887-6185\(99\)00010-9](http://dx.doi.org/10.1016/S0887-6185(99)00010-9)

Resnick, Heidi, Acierno, R., Kilpatrick, D. G., & Holmes, M. (2005). Description of an early intervention to prevent substance abuse and psychopathology in recent rape victims. *Behavior Modification*, 29(1), 156–188.  
<https://doi.org/10.1177/0145445504270883>

Roberts, N. P., Kitchiner, N. J., Kenardy, J., & Bisson, J. I. (2010). Early psychological interventions to treat acute traumatic stress symptoms. *The Cochrane Library*. <https://doi.org/10.1002/14651858.CD007944.pub2>.

Roberts, N. P., Roberts, P. A., Jones, N., & Bisson, J. I. (2015). Psychological interventions for post-traumatic stress disorder and comorbid substance use disorder: a systematic review and meta-analysis. *Clinical Psychology Review*, 38, 25–38. <https://doi.org/10.1016/j.cpr.2015.02.007>

Ronconi, J. M., Shiner, B., & Watts, B. V. (2014). Inclusion and exclusion criteria in randomized controlled trials of psychotherapy for PTSD. *Journal of Psychiatric Practice*, 20(1), 25–37. <http://dx.doi.org/10.1097/01.pra.0000442936.23457.5b>

Saladin, M. E., Brady, K. T., Dansky, B. S., & Kilpatrick, D. G. (1995). Understanding comorbidity between PTSD and substance use disorders: Two preliminary investigations. *Addictive Behaviors*, 20(5), 643–655.  
[https://doi.org/10.1016/0306-4603\(95\)00024-7](https://doi.org/10.1016/0306-4603(95)00024-7)

Sanford, A., Donahue, M., & Cosden, M. (2014). Consumer perceptions of trauma assessment and intervention in substance abuse treatment. *Journal of Substance Abuse Treatment*, 47(3), 233–238.

Santiago, P. N., Ursano, R. J., Gray, C. L., Pynoos, R. S., Spiegel, D., Lewis-Fernandez, R., Fullerton, C. S. (2013). A systematic review of PTSD prevalence and trajectories in DSM-5 defined trauma exposed populations: intentional and non-intentional traumatic events. *PloS One*, 8(4), e59236.  
<https://doi.org/10.1371/journal.pone.0059236>

Schäfer, I., & Najavits, L. M. (2007). Clinical challenges in the treatment of patients with posttraumatic stress disorder and substance abuse: Current Opinion in Psychiatry, 20(6), 614–618. <https://doi.org/10.1097/YCO.0b013e3282f0ffd9>

Schäfer, I., Pawils, S., Härter, M., Hillemecher, T., Klein, M., Muehlhan, M., Barnow, S. (2017). Understanding the role of childhood abuse and neglect as a cause and consequence of substance abuse: The German CANSAS-Network. *European Journal of Psychotraumatology*.  
<https://doi.org/10.1080/20008198.2017.1304114>

Seal, K. H., Cohen, G., Waldrop, A., Cohen, B. E., Maguen, S., & Ren, L. (2011). Substance use disorders in Iraq and Afghanistan veterans in VA healthcare, 2001–2010: Implications for screening, diagnosis and treatment. *Drug & Alcohol Dependence*, 116(1), 93–101.

Silove, D., Ventevogel, P., & Rees, S. (2017). The contemporary refugee crisis: an overview of mental health challenges. *World Psychiatry*, 16(2), 130–139. <https://doi.org/10.1002/wps.20438>

Simpson, T. L., Lehavot, K., & Petrakis, I. L. (2017). No wrong doors: Findings from a critical review of behavioral randomized clinical trials for individuals with co-occurring alcohol/drug problems and PTSD. *Alcoholism: Clinical and Experimental Research*. <https://doi.org/10.1111/acer.13325>

Simpson, T. L., & Miller, W. R. (2002). Concomitance between childhood sexual and physical abuse and substance use problems: A review. *Clinical Psychology Review*, 22(1), 27–77. [https://doi.org/10.1016/S0272-7358\(00\)00088-X](https://doi.org/10.1016/S0272-7358(00)00088-X)

Simpson, T. L., Stappenbeck, C. A., Varra, A. A., Moore, S. A., & Kaysen, D. (2012). Symptoms of posttraumatic stress predict craving among alcohol treatment seekers: results of a daily monitoring study. *Psychology of Addictive Behaviors: Journal of the Society of Psychologists in Addictive Behaviors*, 26(4), 724–733. <https://doi.org/10.1037/a0027169>

Skeffington, P. M., Rees, C. S., & Kane, R. (2013). The primary prevention of PTSD: a systematic review. *Journal of Trauma & Dissociation*, 14(4), 404–422. <https://doi.org/10.1080/15299732.2012.753653>

Substance Abuse and Mental Health Services Administration. (2014). Trauma-informed care in behavioral health services. Treatment improvement protocol (TIP) Series 57. Rockville, MD: Substance Abuse and Mental Health Services Administration. Retrieved from <https://www.google.de/search?q=Trauma->



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