



Psychotherapy and Counselling
Federation of Australia

A Resource for Counsellors and Psychotherapists Working with Clients Suffering from Posttraumatic Stress Disorder

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Foreword

This document is a literature review of research prior to 2009 into the effectiveness of therapeutic approaches for posttraumatic stress disorder, intended as a resource for counsellors and psychotherapists. It was written on behalf of the PACFA Research Committee. However, this does not imply that PACFA or its Member Associations endorses any of the particular treatment approaches described.

The PACFA Research Committee recognises that it is important to counsellors and psychotherapists that they have access to recent research evidence that demonstrates the effectiveness of different therapeutic approaches, to assist them in their practice. This document is one of a series of reviews that was commissioned by the PACFA Research Committee to support its Member Associations in their work.

The PACFA Research Committee endorses the American Psychological Association's definition of evidence-based practice as 'the integration of the best available research evidence with clinical expertise in the context of patient characteristics, culture and preferences', although we would prefer to use the word client or consumer rather than 'patient'.

The PACFA Research Committee recognises that there is overwhelming research evidence to indicate that, in general, counselling and psychotherapy is effective and that, furthermore, different methods and approaches show broadly equivalent effectiveness. The strength of evidence for effectiveness of any specific counselling and psychotherapy intervention or approach is a function of the number, independence and quality of available effectiveness studies, and the quality of these studies is a function of study design, measurements used and the ecological validity (i.e. its approximation to real life conditions) of the research.

The PACFA Research Committee acknowledges that an absence of evidence for a particular counselling or psychotherapy intervention does not mean that it is ineffective or inappropriate. Rather, the scientific evidence showing equivalence of effect for different counselling and psychotherapy interventions justifies a starting point assumption of effectiveness.

We recognise the need to improve the evidence-base for the effectiveness of various therapeutic approaches. The PACFA Research Committee is committed to supporting our Member Associations and Registrants to develop research protocols that will help the profession to build the evidence-base to support the known effectiveness of counselling and psychotherapy.

We hope that you will find this document useful and would welcome your feedback.

Dr Sally Hunter
Chair of the PACFA Research Committee, 2011

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1. Introduction

This resource aims to summarise current research related to post-traumatic stress disorder (PTSD) to give counsellors and psychotherapists an overview of currently available and empirically based treatment recommendations and information about best practice for the treatment of PTSD. This covers meta-analyses and clinical trials. The studies included in this resource have been identified through a literature search in PsychINFO, the Cochrane library and in reference lists of significant articles and other guidelines.

2. Types of posttraumatic responses

The definition of a traumatic event has changed over time and the criteria have been loosened since first listed in the DSM-III (McNally, 2003). There has been controversy about the exact definition and interpretation of the term 'traumatic event' (Elhai, Kashdan, & Frueh, 2005). It can sometimes be used incorrectly by health professionals to refer to stressful life events or problematic situations. However, this term refers diagnostically to psychologically overwhelming or traumatic experiences and events that include an element of serious physical threat. Therefore, events such as divorce or loss of job would not be considered as potentially traumatic events. In the DSM-IV-TR (APA, 2000), the list of potentially traumatic events include combat, sexual and physical assault, childhood sexual abuse, robbery, kidnapping, terrorist attacks, torture, disasters, severe accidents, life-threatening illnesses, or witnessing death or serious injury by violent assault, accidents, war or disaster.

Not every individual who experiences a potentially traumatic event reacts with psychological injury or trauma. A traumatic event refers to an event that has resulted in psychological injury or distress. Briere and Scott (2006) have provided a slightly wider definition of traumatic event in their book about principles of trauma therapy. They defined an event as traumatic if "it is extremely upsetting and at least temporarily overwhelms the individual's internal resources" (p. 4). The DSM-IV-TR (APA, 2000) definition of trauma indicates that subjective reaction to the traumatic event is crucial:

Direct personal experience of an event that involves actual or threatened death or serious injury, or other threat to one's physical integrity; or witnessing an event that involves death, injury, or a threat to the physical integrity of another person.... The person's response to the event must involve intense fear, helplessness, or horror (p. 463).

2.1 Diagnostic Criteria for PTSD and ASD

PTSD is a mental disorder that some people develop after an exceptionally threatening or distressing event or series of events. Some individuals respond with psychological symptoms in the first days or weeks after a traumatic event but feel better after this initial period and do not develop PTSD. For a minority of individuals, however, the symptoms persist and develop into PTSD. The term PTSD is relatively new and this disorder was only introduced to the DSM-III in 1980 (APA, 1980). However, a number of other disorders or symptoms can develop after exposure to a traumatic event, disorders such as depression, generalized anxiety, panic, or phobias (Briere & Scott, 2006).

PTSD is classified in the DSM-IV as an anxiety disorder that can develop after exposure to a traumatic event (APA, 1994). The diagnosis of PTSD is used if symptoms persist for more than one month. An acute stress disorder (ASD) is diagnosed if symptoms after exposure to a trauma last for a minimum of 2 days and a maximum of 4 weeks and occur within four weeks of the traumatic event. Chronic PTSD should be diagnosed if symptoms persist for three months or longer. It has been suggested that ASD is a good predictor for the development of PTSD (McNally, Bryant, & Ehlers, 2003). However, a large proportion of individuals with PTSD do not initially have ASD.

PTSD symptoms are clustered in three different categories: (1) recurrent re-experiencing of the traumatic event in the form of flashbacks, nightmares or intrusive thoughts; (2) avoidance of trauma-related stimuli and numbing; and (3) persistent hyperarousal. Table 1 provides the diagnostic criteria for PTSD as described in the DSM-IV-TR (APA, 2000).

A high percentage of clients who suffer from PTSD also suffer from comorbid conditions. The Australian National Comorbidity study (Creamer, Burgess, & McFarlane, 2001) indicated that 88% of the people with PTSD had at least one other disorder. The most common comorbid disorders were alcohol abuse (52%) and depression (48%). Therefore, clients with PTSD often present with a variety of symptoms.

2.2 Complex trauma and DESNOS

There is no category in the current DSM-IV-TR that allows for diagnosing complex forms of PTSD in survivors of prolonged, repeated trauma, or which enables us to differentiate complex forms of PTSD from PTSD after single traumatic events. Complex forms of PTSD are suggested to be related to extended child abuse, torture, captivity as a prisoner of war or in a concentration camp, and chronic spouse abuse (Briere & Scott, 2006). Herman (1992) has suggested the existence of 'complex PTSD' for which the term *disorder of extreme stress not otherwise specified* (DESNOS) is currently used. DESNOS is differentiated from PTSD by more diffuse and complex symptoms including somatic and dissociative problems, difficulties with relatedness or identity, and a vulnerability to

self-harm or re-victimisation (Herman, 1992; van der Kolk, Roth, Pelcovitz, Sunday, & Spinazzola, 2005). Van der Kolk et al. (2005) demonstrated that prolonged trauma, which occurred at an early age or was of an interpersonal nature resulted in symptoms which differed from PTSD symptoms, such as problems with regulation of affect and impulses, memory or attention, self-perception, interpersonal relationships, somatisation and systems of meaning. It is not clear yet if 'complex PTSD' is an independent disorder and a new diagnostic category, or if it just describes associated features of PTSD (Briere & Scott, 2006). A further disorder, shown to be associated with severe and extended childhood trauma or neglect, is borderline personality disorder (Herman, Perry, & van der Kolk, 1989; Ogata et al., 1990) and these symptoms are suggested to be relatively similar to those of 'complex PTSD' (Briere & Scott, 2006).

Table 1: Summary PTSD

A. The person has been exposed to a traumatic event in which both of the following were present:

1. the person experienced, witnessed, or was confronted with an event or events that involved actual or threatened death or serious injury, or a threat to the physical integrity of self or others; and
2. the person's response involved intense fear, helplessness, or horror. Note: In children, this may be expressed instead by disorganised or agitated behaviour.

B. The traumatic event is persistently re-experienced in one (or more) of the following ways:

1. recurrent and intrusive distressing recollections of the event, including images, thoughts, or perceptions. Note: In young children, repetitive play may occur in which themes or aspects of the trauma are expressed;
2. recurrent distressing dreams of the event. Note: In children, there may be frightening dreams without recognizable content;
3. acting or feeling as if the traumatic event were recurring (includes a sense of reliving the experience, illusions, hallucinations, and dissociative flashback episodes, including those that occur on awakening or when intoxicated). Note: In young children, trauma-specific re-enactment may occur;
4. intense psychological distress at exposure to internal or external cues that symbolize or resemble an aspect of the traumatic event;
5. physiological reactivity on exposure to internal or external cues that symbolize or resemble an aspect of the traumatic event.

C. Persistent avoidance of stimuli associated with the trauma and numbing of general responsiveness (not present before the trauma), as indicated by three (or more) of the following:

1. efforts to avoid thoughts, feelings, or conversations associated with the trauma;
2. efforts to avoid activities, places, or people that arouse recollections of the trauma;

Table 1: Summary PTSD (Cont.)

3. inability to recall an important aspect of the trauma;
4. markedly diminished interest or participation in significant activities;
5. feeling of detachment or estrangement from others;
6. restricted range of affect (e.g., unable to have loving feelings);
7. sense of a foreshortened future (e.g., does not expect to have a career, marriage, children, or a normal life span).

D. Persistent symptoms of increased arousal (not present before the trauma), as indicated by two (or more) of the following:

1. difficulty falling or staying asleep;
2. irritability or outbursts of anger;
3. difficulty concentrating;
4. hyper-vigilance;
5. exaggerated startle response.

E. Duration of the disturbance (symptoms in Criteria B, C, and D) is more than 1 month.

F. The disturbance causes clinically significant distress or impairment in social, occupational, or other important areas of functioning.

Specify if:

Acute: if duration of symptoms is less than 3 months

Chronic: if duration of symptoms is 3 months or more

With Delayed Onset: if onset of symptoms is at least 6 months after the stressor.

Source: DSM-IV-TR Diagnostic Criteria for Posttraumatic Stress Disorder (DSM-IV-TR code 309.81)

3. Prevalence

As shown in Table 2, several representative studies (Frans, Rimmö, Åberg, & Fredrikson, 2005; Hapke, Schumann, Rumpf, John, & Meyer, 2006; Perkonigg, Kessler, Storz, & Wittchen, 2000; Peters, Issakidis, Slade, & Andrews, 2006; Resnick, Kilpatrick, Dansky, Saunders, & Best, 1993) have reported prevalence rates for PTSD. The Australian National Survey of Mental Health and Well-Being with 10,641 participants found that 1.2% of males and 1.4% of females reported PTSD 12 months prior to assessment, if assessed using the DSM-IV criteria (Peters, Issakidis, Slade, & Andrews, 2006). However, ICD-10 PTSD diagnoses were found in 2.3% of the males and 4.2% of the females. Results of this study suggested that gender differences in PTSD depend on the classification system used. In the study by Perkonigg et al. (2000), it has been found that physical attacks (7.5%), serious accidents (5.4%), witnessing traumatic events happen to another person (3.6%), and sexual abuse as a child (2%) were the traumatic events most frequently reported. Significantly more

women than men reported that they had experienced child sexual abuse and rape. The events with the highest probabilities for PTSD to develop for women were rape (44%), child sexual abuse (31%), and experiencing actual sudden death or threat of sudden death of close associates (27%). For men, it was not possible to calculate the conditional probabilities of traumatic events due to a low base rate of PTSD. Furthermore, the comorbidity rate was high with 88% of clients suffering from PTSD reporting at least one other diagnosis and 78% reporting two or more additional diagnoses (Perkonigg et al., 2000). Frans et al. (2005) have found that the type of trauma did not explain gender differences, but the distress experienced did contribute to the explanation of the gender differences. Sexual and physical assault, robbery and multiple trauma experience were the most significant PTSD risk factors.

Table 2: Prevalence of PTSD

| Authors | Country of study | No of participants N | Prevalence of PTSD | Lifetime exposure to trauma | Comments |
|--|------------------|------------------------|---|-------------------------------------|--|
| Peters, Issakidis, Slade, & Andrews (2006) | Australia | 10,641 | 12 months prior to assessment: 1.2% of males and 1.4% of females reported PTSD | — | Higher PTSD prevalence in females than in males. |
| Resnick, Kilpatrick, Dansky, Saunders, & Best (1993) | U. S.A. | 4,008 women | Lifetime prevalence 12.3% | Reported by 69% | |
| Perkonigg, Kessler, Storz, & Wittchen (2000) | Germany | 3,021 aged 14-24 years | Lifetime prevalence 1.3% | 25% of the men and 18% of the women | Higher prevalence of exposure to trauma in males, but higher prevalence of PTSD in females than in males. |
| Hapke, Schumann, Rumpf, John, & Meyer (2006) | Germany | 4,075 | Lifetime prevalence 1.4% | 20%, no gender difference | Risk of developing PTSD after a traumatic event was 6.9%. Risk higher in women than in men. |
| Frans, Rimmö, Åberg, & Fredrikson (2005) | Sweden | 1,824 | Lifetime prevalence 5.6% | 85% of men and 77% of women | Women reported suffering from PTSD twice as often as men, in spite of greater reported trauma exposure by men. |

In summary, results of these studies suggest that there might be a difference in the probability of experiencing a traumatic event depending on the cultural and social factors within the country of origin, as also suggested by Gavranidou and Rosner (2003). The results of most of these studies (Creamer et al., 2001; Frans et al., 2005; Perkonigg et al., 2000) suggest that although women were found in many studies to be less likely to experience a traumatic event than men, women were more likely to develop PTSD. Certain types of trauma such as rape, child sexual abuse and other

personal assaults, are more often experienced by women and have shown to be related to a higher risk to develop PTSD than other traumatic events (Creamer et al., 2001; Gavranidou & Rosner, 2003).

Only a minority of people who are exposed to trauma develop PTSD. Most people exposed to trauma recover from the initial post-trauma reactions (Flouri, 2005) and show resilience (Bonanno, 2004). Bonanno (2004) suggested that hardiness, self-enhancement, repressive coping and positive emotion were related to resilience.

Perkonigg et al. (2000) found that the onset of PTSD was rarely reported to be before the age of eleven. In another study, exposure to interpersonal violence before the age of 14 led to higher prevalence of PTSD or DESNOS than exposure to trauma later in life (van der Kolk et al., 2005).

4. Causes and risk factors

The investigation of risk factors is important for the understanding of the PTSD and its development (McNally, 2003). A meta-analysis of 77 studies about risk factors for PTSD reported that factors during or after trauma (such as trauma severity, lack of social support, and additional life stressors) had a slightly stronger influence than pre-trauma factors (Brewin, Andrews, & Valentine, 2000). Pre-trauma factors were not found to be powerful predictors of PTSD. Altogether, fourteen different risk factors were identified: gender; younger age; low socio-economic status; lack of education; lack of intelligence; race; psychiatric history; childhood abuse; previous trauma; general childhood adversity; family psychiatric history; trauma severity; lack of social support; and life stresses. In some meta-analyses gender, age at trauma, and race accounted for only a small proportion of the variance. At this stage it is not completely clear which pre-trauma factors play a role in the development of PTSD, given different traumatic events and methodological differences between studies.

A prospective study (Shalev, Peri, Canetti, & Schreiber, 1996) indicated that dissociative experiences during a traumatic event were strongly associated with the development of PTSD six months later. Similar results have been found in a meta-analysis of 68 studies (Ozer, Best, Lipsey, & Weiss, 2003). Dissociative experiences during or immediately after the traumatic event were the strongest predictor of PTSD out of the seven predictors which all yielded significant effect sizes: prior trauma; prior psychological adjustment; family history of psychopathology; perceived life threat during the trauma; post-trauma social support; peri-traumatic emotional responses; and peri-traumatic dissociation. Briere and Scott (2006) suggested that high levels of peri-traumatic distress might be related to pre-existing problems in stress tolerance or affect regulation, prior trauma exposure, and a tendency to view life events as not controllable. McNally et al. (2003) suggested that negative appraisal of the peri-traumatic dissociation, rather than peri-traumatic dissociation itself, might predict the development of PTSD.

In a review article about the development of PTSD in adult survivors of war trauma and torture, Johnson and Thompson (2008) suggested that preparedness for torture, social support, and religious beliefs may be protective factors against PTSD following war trauma and torture.

In a further study the development of PTSD was related to gender as well as the number and type of trauma (Perkonigg et al., 2000). Several authors have found rape or sexual abuse to be significant predictors of an increased risk to develop PTSD after a traumatic event (Hapke et al., 2006; Perkonigg et al., 2000). Van der Kolk et al. (2005) demonstrated that trauma exposure at an early age, interpersonal trauma and prolonged trauma were associated with more complex posttraumatic psychopathology. Further risk factors were pre-existing anxiety disorders and somatoform disorders. In contrast to Perkonigg et al. (2000), van der Kolk et al. (2005) did not find women to be at higher risk to develop PTSD. They suggested that the gender differences in PTSD related to the fact that women experienced more traumatic events (e.g. sexual violence) and were more likely to have pre-existing anxiety disorders. However, Stein, Walker, and Forde (2000) demonstrated that women were at higher risk of developing PTSD than men, even when sexual trauma was excluded. Nemeroff et al. (2006) reported in their review article that women have about twice the risk to develop PTSD, even when they experienced the same trauma as men. There is a lack of research and of explanatory models about the gender differences in PTSD (Gavranidou & Rosner, 2003; Stein et al., 2000). Our understanding of the influence of risk factors in the development of PTSD is still at an early stage.

5. Therapeutic interventions

There is substantial empirical support for the effectiveness of psychotherapeutic interventions for the treatment of PTSD (Schnyder, 2005). One meta-analysis (Bradley et al., 2005), with 26 studies in which different psychotherapeutic treatments were included ($N = 1535$), found that most of the clients completed treatment (79%) and that 67% of the completers no longer met criteria for PTSD. In a further meta-analysis which included 17 studies with behavioural, cognitive, and psychodynamic treatments ($N = 690$), psychotherapeutic treatment was found to be effective and, at the end of therapy, symptomatology significantly decreased ($d = .52$) (Sherman, 1998).

Treatment of PTSD is challenging for the therapist because it involves containing and dealing with severe distress. Therefore, it is important to have highly developed relational and supportive skills, as well as knowledge about appropriate and effective treatment methods. A positive therapeutic relationship and the client's expectations towards the treatment were found to be positively associated with treatment outcome (Australian Centre for Posttraumatic Mental Health, 2007b). Some studies

reported the influence of pre-treatment factors on treatment outcome (Australian Centre for Posttraumatic Mental Health, 2007b; TARRIER, Sommerfield, Pilgrim, & Faragher, 2000; van Minnen, Arntz, & Keijsers, 2002). It was found that inconsistent attendance of therapy sessions was the best predictor of therapy outcome (TARRIER et al., 2000). Furthermore duration of therapy, gender, and suicide risk were significant predictors of treatment outcome. Another study showed that it was difficult to predict treatment outcome from pre-treatment factors such as trauma characteristics, personality or demographic variables and that these factors were not related to treatment outcome or dropout rate (van Minnen et al., 2002). Depression was not related to the outcome of treatment (TARRIER et al., 2000; van Minnen et al., 2002).

There is a variety of psychotherapeutic treatments for PTSD (Schottenbauer, Arnkoff, Glass, Gray, & Hafter, 2006; Sherman, 1998). Three different types of psychotherapeutic approaches have been reported to be used most frequently: trauma-focused cognitive-behavioural therapy (TFCBT); eye movement desensitization and reprocessing (EMDR); and psychodynamic psychotherapy (Friedman, 2006). Other therapies used for the treatment of PTSD are supportive counselling/therapy, narrative exposure therapy (NET), hypnotherapy, and psychological debriefing (Australian Centre for Posttraumatic Mental Health, 2007b). In over 30 randomized controlled studies the effectiveness of psychological treatments for PTSD has been investigated (Australian Centre for Posttraumatic Mental Health, 2007b; Bisson et al., 2007). In the following section, empirical evidence for several widely used treatment approaches for PTSD is reported.

5.1 Trauma-focused cognitive-behavioural therapy (TFCBT)

TFCBT was the most studied treatment approach for PTSD (Roberts et al., 2008; Solomon & Johnson, 2002; Foa & Meadows, 1997; Friedman, 2006). The effectiveness of this approach for PTSD was reported in several reviews and meta-analyses (APA, 2004; Australian Centre for Posttraumatic Mental Health, 2007b; Livanou, 2001; NICE, 2005; Schnyder, 2005). TFCBT has been shown to be more effective than a waiting list or than usual care (Australian Centre for Posttraumatic Mental Health, 2007b; Bisson & Andrew, 2007; Bisson et al., 2007; NICE, 2005).

Cognitive-behavioural interventions for the treatment of PTSD include exposure, cognitive restructuring, anxiety management, relaxation techniques and a combination of these interventions. Exposure is used for re-experiencing and reactivating the trauma memory in order to stimulate the development of new, corrective information. There is strong evidence for the efficacy of exposure for the treatment of PTSD and its inclusion into trauma treatment has been recommended (Rothbaum, Meadows, Resick, & Foy, 2000). Scott and Stradling (2006) described a cognitive contextual treatment approach, and included case examples and transcripts of sessions in their book *Counselling for Post-traumatic Stress Disorders* to guide therapists in their work with trauma victims.

Table 3: Meta-analyses and reviews of psychotherapeutic approaches to PTSD

| Study | Title | Approaches | No. of Studies | No. of Patients N | Outcome |
|--------------------------------|---|---|----------------|----------------------|---|
| Benish, Imel & Wampold (2008) | The relative efficacy of bona fide psychotherapies for treating post-traumatic stress disorder (PTSD): A meta-analysis of direct comparisons. | Different bona fide psychotherapies | 15 | 958 | There was no evidence for outcome differences between bona fide psychotherapies in the treatment of PTSD. |
| Bisson & Andrew (2007) | Psychological treatment of post-traumatic stress disorder (PTSD) | TFCBT, group TFCBT, EMDR, SM, waiting list/ usual care, other therapies | 33 | - | TFCBT, EMDR, SM, and group TFCBT were effective in the treatment of PTSD. TFCBT, EMDR and SM were more effective than other therapies. There was some evidence that individual TFCBT and EMDR are superior to SM at 2 and 5 months following treatment. |
| Bisson et al. (2007) | Psychological treatments for chronic post-traumatic stress disorder (PTSD) | TFCBT, EMDR, stress management, group CBT, other therapies | 38 | - | Treatments were more effective than waiting list or usual care. Inconclusive evidence regarding other therapies. TFCBT and EMDR were equally effective and both treatments were superior to stress management and other therapies. Stress management was superior to other therapies. |
| Bradley et al. (2005) | A multidimensional meta-analysis of psychotherapy for PTSD. | Exposure based therapies, CBT other than exposure, CBT with exposure, EMDR, other, control condition waiting list | 26 | 1535 | 67% of completers no longer met criteria for PTSD after treatment. Comparable effectiveness across CBT treatments with or without exposure, and between CBT and EMDR were found. |
| Chemtob et al. (2000) | Eye movement desensitization and reprocessing (EDMR) | EMDR vs. waiting list, standard care, muscle relaxation | 8 | - | EMDR was more effective than waiting list, routine-care, and active-treatment controls. EMDR treatments yielded large effect sizes. |
| Davidson & Parker (2001) | Eye movement desensitization and reprocessing (EMDR): A meta-analysis. | EMDR vs. no treatment, therapies not using exposure, therapies with exposure | 34 | - | EMDR was more effective than no treatment and treatments without exposure but equally as effective as treatments with exposure techniques. |
| Everly, Boyle, & Lating (1999) | The effectiveness of psychological debriefing with vicarious trauma: A meta-analysis. | Psychological debriefing | 10 | 698 | Beneficial outcome after psychological debriefing ($d = 0.54$). |

| Study | Title | Approaches | No. of Studies | No. of Patients N | Outcome |
|--|---|---|----------------|----------------------|--|
| Mendes et al. (2008). | A systematic review on the effectiveness of cognitive behavioural therapy for posttraumatic stress disorder (PTSD) | CBT vs. EMDR, supportive therapies plus 'other therapies', exposure therapy, CT | 23 | 1923 | CBT had better remission rates than EMDR and supportive therapies plus other therapies (relaxation, counselling and psychoeducation) for the completers, but this difference was not confirmed in the intention-to-treat analysis. CBT was equally as effective as CT and exposure therapy. |
| Rose, Bisson, Churchill & Wessely (2002) | Psychological debriefing for preventing post-traumatic stress disorder (PTSD) | Psychological debriefing | 15 | - | Debriefing did not prevent the onset of PTSD nor reduce psychological distress. There was no evidence about the usefulness of this treatment for the prevention of PTSD. |
| Seidler & Wagner (2006) | Comparing the efficacy of EMDR and trauma-focused cognitive-behavioural therapy in the treatment of PTSD: a meta-analytic study. | EMDR vs. TF CBT | 7 | 209 | TF CBT and EMDR were equally effective. |
| Shepherd, Stein & Milne (2000) | Eye movement desensitization and reprocessing (EMDR) in the treatment of post-traumatic stress disorder: a review of an emerging therapy. | EMDR vs. delayed treatment, relaxation training, exposure therapies | 16 | - | EMDR was superior to relaxation training and delayed treatment and equally effective as exposure therapies. Symptom reduction up to 3 month after EMDR treatment. |
| Sherman (1998) | Effects of psychotherapeutic treatments for PTSD: A meta-analysis of controlled clinical trials. | BT, CBT, psychodynamic therapy (one study) | 17 | 690 | Overall, for all treatments together, the impact of treatment on PTSD was significant ($d = .52$). |
| Van Etten & Taylor (1998) | Comparative efficacy of treatments for post-traumatic stress disorder (PTSD): A meta-analysis. | Drug therapies, BT, EMDR, relaxation training, hypnotherapy, dynamic therapy | 61 | - | Psychological therapies had significantly lower drop-out rates than drug therapies. Psychological therapies were more effective than drug therapies, and both were more effective than controls. Among the psychological therapies, BT and EMDR were most and equally effective. The most effective psychological therapies and drug therapies were generally equally effective. |
| Van Emmerik, Kamphuis, Hulsbosch, & Emmelkamp (1999) | Single session debriefing after psychological trauma: a meta-analysis. | CISD, other interventions, controls | 29 | - | CISD was not effective in reducing symptoms of PTSD. CISD did not lead to significant improvement, whereas other interventions and no intervention indicated improvement in symptoms. Results suggested that CISD did not improve psychological outcome after traumatic events. |

TF CBT = Trauma-focused cognitive-behavioural therapy, EMDR = Eye movement desensitisation and reprocessing, BT = Behaviour therapy, CISD = Critical incident stress debriefing, SM = Stress management

In a further meta-analysis, EMDR and behaviour therapy were found to be the most effective psychotherapies for the treatment of PTSD compared to relaxation training, drug therapy, hypnotherapy, and dynamic therapy (van Etten & Taylor, 1998). More details about the comparison of bona fide treatments are reported in a later section.

Internet-based CBT treatments were shown to be practical treatment alternatives (Knaevelsrud & Maercker, 2007; Lanche, Perkins, & Stolzfoos, 2008). In their randomized controlled study ($N = 96$), Knaevelsrud and Maercker (2007) demonstrated that their internet-based CBT treatment yielded large effect size, significant reduction of comorbid depression and anxiety, with sustained effects at a 3-month follow-up.

5.2 Eye movement desensitisation and reprocessing (EMDR)

EMDR was developed by Shapiro in 1987 as a treatment for traumatic memories (Shapiro, 1989, 1995). During EMDR the client performs rhythmic eye movements while concentrating on a traumatic memory. The eye movements are part of the structured, multistage treatment. Desensitisation and reprocessing through eye movement is a critical stage of the treatment in which the client is asked to hold a traumatic image, negative cognition, and bodily sensations in mind whilst tracking the moving fingers of the therapist. A detailed description of EMDR can be found in the EMDR treatment manual (Shapiro, 1995).

EMDR was shown to be more effective than no treatment and more effective than treatments not using exposure in a meta-analysis with 34 studies (Davidson & Parker, 2001). Chemtob, Tolin, van der Kolk, and Pitman (2000) reviewed eight studies and found EMDR to be more effective than a waiting list, routine-care, and active-treatment controls. They reported that EMDR generally yielded large effect sizes. In the NICE guidelines (2005) EMDR was described as more effective than a waiting list at reducing the severity of PTSD symptoms.

There are differing opinions about how EMDR works and what the underlying mechanisms are. It has been argued by some researchers (Seidler & Wagner, 2006) that EMDR might be understood as an exposure or imaginal flooding technique. Others (Lee, Taylor, & Drummond, 2006) have suggested that EMDR and exposure are two different processes and that with EMDR treatment, trauma is processed in a more detached manner. Davidson and Parker (2001) concluded in their study that eye movements might even be unnecessary for a positive outcome.

EMDR was found to be equally effective as other exposure treatments (Bisson et al., 2007; Davidson & Parker, 2001; Seidler & Wagner, 2006; van Etten & Taylor, 1998). In their meta-analysis of 7 studies ($N = 209$), Seidler and Wagner (2006) showed that EMDR was equally effective as TF-CBT. In a further meta-analysis (Shepherd, Stein, & Milne, 2000), in which 16 studies were included, EMDR has found to be superior to relaxation training (three studies) and delayed treatment (three studies) and similarly

effective as exposure therapies (two studies). Van Etten and Taylor (1998) showed that EMDR was equally effective as behaviour therapy. Bisson and Andrew (2007) have also found in their meta-analysis that EMDR was significantly better than a waiting list or than usual care, and was better than other therapies (except TFCBT and stress management). EMDR was equally effective as TFCBT and stress management. In a meta-analysis in which only comparison studies were included (Benish, Imel, & Wampold, 2008), no differences between several bona fide psychotherapies for the treatment of PTSD were found.

5.3 Psychodynamic psychotherapy

The goal of psychodynamic treatment is the integration of the traumatic experience by gaining insight into the conscious and unconscious meaning of the symptoms. Techniques used in psychodynamic therapy for PTSD varied greatly with regard to how various concepts are applied (e.g. defense mechanisms, transference, countertransference, the therapeutic relationship etc.). Horowitz (1999) has described psychodynamic psychotherapy for PTSD and a sequence of a time-limited treatment strategies, however, there is a lack of meta-analyses or randomized clinical trials relating to psychodynamic psychotherapy. Therefore only limited evidence about its effectiveness for PTSD is available (Australian Centre for Posttraumatic Mental Health, 2007b; Friedman, 2006; Schnyder, 2005).

Brom, Kleber, and Defares (1989) conducted a study with 112 individuals suffering from PTSD and compared three brief psychotherapies: trauma desensitization; hypnotherapy; and psychodynamic psychotherapy. Symptoms were more significantly reduced in all three treatment groups than in the waiting list control group and differences between the three therapeutic approaches were small. The psychodynamic psychotherapy approach involved a higher number of sessions but showed the least improvement in relation to intrusion symptoms at the end of therapy. However, there was an improvement between the end of therapy and a 3-month follow-up in the psychodynamic group and, therefore, the overall outcome was comparable to the other two treatment groups at the 3-month follow-up.

Most of the research literature relating to the psychodynamic psychotherapy approach for PTSD was presented as case studies (Kudler, Blank, & Krupnick, 2000; Shalev, Bonne, & Eth, 1996). In the APA guideline (2004) it has been suggested that psychodynamic psychotherapy might be helpful for ameliorating developmental, interpersonal or intrapersonal problems relating to PTSD, which can be difficult to treat.

5.4 Critical incident stress debriefing (CSID)

Psychological debriefing was widely used in crisis intervention. It was designed to reduce initial distress and to prevent the development of psychopathology or PTSD (Bisson, McFarlane, & Rose, 2000; Flouri, 2005; Rose, Bison, Churchill, & Wessely,

2002). One of the first forms of psychological debriefing was critical incident stress debriefing (CISD) as first described by Mitchell (1983). This intervention was provided shortly after a traumatic event and was used with survivors of trauma, emergency care workers, and providers of psychological care (Bisson et al., 2000). It aimed to provide psychosocial support and an opportunity for those affected to express their feelings and thoughts about the trauma. The approach also included psycho-education about coping, reactions after trauma or stress, and its management.

However, results relating to CSID were contradictory and there was a controversy over its effectiveness (Gist & Deville, 2002; McNally et al., 2003). Earlier meta-analyses (e.g., Everly, Boyle, & Lating, 1999) suggested that psychological debriefing resulted in positive outcomes with a medium effect size ($d = 0.54$), but a more recent meta-analysis by van Emmerik, Kamphuis, Hulsbosch, & Emmelkamp (2002) reported that a single session of debriefing, offered within one month after trauma, did not improve symptoms. In a further meta-analysis, Rose et al. (2002) found that debriefing did not prevent the onset of PTSD, nor reduce psychological distress compared to controls. The authors concluded that there was no evidence that psychological debriefing was effective in preventing PTSD.

While it has been well received by clients (Bisson et al., 2000), there is no convincing evidence of the effectiveness of CSID (Gist & Deville, 2002; McNally et al., 2003; Roberts, Kitchiner, Kenardy, & Bisson, 2008; Rose et al., 2002; van Emmerik et al., 2002). Single-session interventions of this kind are no longer recommended as a routine practice (NICE, 2005).

5.5 Comparison between psychotherapeutic approaches

A number of meta-analyses have found no differences in outcomes between different psychotherapeutic approaches, concluding that the efficacy of different psychotherapeutic approaches was comparable (Benish et al., 2008; Bradley et al., 2005; Seidler & Wagner, 2006). These results suggest that common factors which are significant to all treatment approaches might be responsible for similar outcomes between different therapeutic approaches. Other studies found differences between different psychotherapeutic approaches (Bisson & Andrew, 2007; Mendes, Feijo Mello, Bentura, De Medeiros Passarela, & De Jesus Mari, 2008; van Etten & Taylor, 1998), and yet others reported that the results were inconclusive, or that there was limited evidence available (Australian Centre for Posttraumatic Mental Health, 2007b). These contradictory results could be due, in part, to different methodological conditions. For example, some authors (Benish et al., 2008) included only 'bona fide' psychotherapies and did not have a category "other therapies" (e.g. a mixture of therapeutic approaches or combined approaches). Other authors (Mendes et al., 2008) however combined different therapeutic approaches with relaxation and psycho-education into one category.

A further reason why some psychotherapeutic approaches have been found to be less effective could also be related to a lack of empirical data. Several authors (Bisson et al., 2007; Van Etten and Taylor, 1998) suggested in their meta-analyses that, although some psychotherapeutic approaches, such as dynamic therapy and hypnotherapy, were considered less effective than others, the results were often based on single trials. There was not much research about the efficacy of psychodynamic and humanistic/experiential psychotherapy available (Bradley et al., 2005; Foa & Meadows, 1997) and therefore their ability to draw conclusions about the effectiveness of these approaches was limited.

Another important issue in relation to the methodological conditions of outcome trials was exclusion and dropout rates. Exclusion rates for clinical trials for PTSD treatment were reported to be about 30% of clients who have been referred for treatment (Bradley et al., 2005). Another review article found that non-response and dropout rates were often high, with some studies reporting dropout rates as high as 54% (Schottenbauer, Glass, Arnkoff, Tendick & Gray, 2008). This begs the question as to whether or not the results from some clinical trials can be generalised to a naturalistic community setting. Furthermore, it was not clear to what extent outcomes can be maintained after treatment because few follow-up results were available (van Etten & Taylor, 1998).

5.6 Pharmacology

Pharmacological interventions have been used to reduce PTSD symptoms, based on the concept that some individuals are vulnerable to extreme stress (Charney, 2004). It has been suggested that psychobiological abnormalities might be associated with PTSD and that certain drugs might be effective as treatment, by normalizing these psychobiological abnormalities (Friedman, Davidson, Mellman, & Southwick, 2000).

The efficacy of pharmacological treatment of PTSD has been investigated in several meta-analyses (Stein, Ipser, & Seedat, 2006; van Etten & Taylor, 1998) and reviews (Shalev, Bonne, et al., 1996). In one study (van Etten & Taylor, 1998), psychotherapeutic approaches were found to be more effective and to result in lower drop-out rates than drug therapies (14% versus 32%). The most effective drug therapies were treatments with selective serotonin reuptake inhibitors (SSRIs) and carbamazepine.

Friedman et al. (2000) reported on the effectiveness of pharmacotherapy for PTSD and concluded that dramatic responses to medication were the exception, and that monoamine oxidase inhibitors (MAOIs) and SSRIs were more successful than other drugs. Stein et al. (2006) concluded in their Cochrane review of pharmacotherapy for PTSD that if different medication classes were compared, evidence about the long-term efficacy of SSRIs was the most convincing. In the APA guideline (2004) SSRIs have also been reported to decrease PTSD symptoms and to show some therapeutic benefit in clients with PTSD. Shalev, Bonne et al. (1996) concluded in their review that

pharmacotherapy was rarely sufficient for the treatment of PTSD. The NICE guideline (2005) for the treatment of PTSD and the Australian Guidelines for the Treatment of Adults with ASD and PTSD (2007) both recommended the use of psychotherapeutic approaches over pharmacological treatments. In summary, pharmacotherapy should not be used as a first line treatment for PTSD. If medication is chosen as a treatment, SSRI antidepressants should be considered.

Table 4: Overview of guidelines for treatment of PTSD

| Authors/Organisation | Title |
|--|---|
| American Psychiatric Association (2004) | <i>Practice Guideline for the Treatment of Patients with Acute Stress Disorder and Posttraumatic Stress Disorder.</i> |
| Australian Centre for Posttraumatic Mental Health (2007) | <i>Australian Guidelines for the Treatment of Adults with Acute Stress Disorder and Posttraumatic Stress Disorder: Practitioner Guide.</i> |
| Australian Centre for Posttraumatic Mental Health (2007) | <i>Australian Guidelines for the Treatment of Adults with Acute Stress Disorder and Posttraumatic Stress Disorder.</i> |
| National Institute for Clinical Excellence (NICE) (2005) | <i>Clinical Guideline 26. Post-traumatic Stress Disorder (PTSD): the Management of PTSD in Adults and Children in Primary and Secondary Care.</i> |

6. Summary and conclusion

Some general principles for effective trauma-focused treatment have been summarised below from different guidelines and reviews (APA, 2004; Australian Centre for Posttraumatic Mental Health, 2007b; Briere & Scott, 2006; Friedmann, 2006; NICE, 2005).

Basic treatment principles include: a safe therapeutic environment; stability (e.g. stable living conditions, emotional stability); the maintenance of a positive and consistent therapeutic relationship; and a therapy that is tailored to the client and considers the client's social status, cultural background and gender (Biere & Scott, 2006).

Psychoeducation is also recommended as an important part of trauma therapy (Biere & Scott, 2006). An initial step in treatment is the assessment and establishment of a safe physical and psychological environment (e.g. assessment of risk for suicide) and basic care (APA, 2004).

Friedman (2006) suggested that working with clients suffering from PTSD might evoke distress or intense emotions in the health professional. Self-care in the form of regular supervision, developing a supportive work environment, engaging in activities such as exercise or hobbies, and making time for personal life and relationships can be important to prevent secondary traumatisation. The importance of self-care in the form

of a balanced and healthy lifestyle, appropriate emotional boundaries with clients, regular supervision and professional development has also been reported in the Australian Guidelines for the Treatment of Adults with ASD and PTSD (2007).

The main treatment goals are: reducing the severity of PTSD symptoms; treating comorbid disorders; improving the client's overall functioning; regaining of a sense of safety and trust; and preventing relapse (APA, 2004). For the planning of treatment and the formulation of treatment goals it has been recommended that besides a thorough assessment before and throughout treatment, comorbidities should be considered and the development of a positive and robust therapeutic relationship should be a central aim.

The NICE guideline (2005) recommends that the impact of the traumatic event on all family members be considered. The counsellor or psychotherapist should also keep in mind that adequate practical and social support might be significant factors for the client's recovery. The counsellor or psychotherapist should also know about the cultural background of the client. If a client suffers from PTSD and depression, PTSD should be given priority, as the depression will often improve through the PTSD treatment. However, if the client suffers from severe depression, alcohol or drug dependency, these comorbidities should be treated first (NICE, 2005). If the client does not respond to treatment, it is important to review and evaluate factors that may contribute to non-response such as the relevance of the treatment goals, problems in the therapeutic relationship, psychosocial difficulties interfering with the treatment, or comorbid disorders (APA, 2004).

For the treatment of PTSD, trauma-focused psychotherapeutic interventions should be offered to the client (Australian Centre for Posttraumatic Mental Health, 2007a). Trauma-focused treatments have two key elements: the memory of the traumatic experience is confronted in a safe environment; and exposure to situations, people or places that the client has previously avoided is gradually increased. A strong, safe therapeutic relationship that is tailored to the client is essential and is related to therapeutic outcomes.

TFCBT and EMDR have the strongest evidence base (Roberts et al., 2008) and have been shown to be effective treatments for PTSD (Bisson & Andrew, 2007). They have been recommended as treatment of choice in the NICE guideline (2005), the review of Bisson et al. (2007), Bisson and Andrew (2007) and the Australian Guidelines for the Treatment of Adults with ASD and PTSD (2007b). These two treatment approaches have been shown to be effective for the treatment of PTSD, and for the treatment of comorbid anxiety and depression (Australian Centre for Posttraumatic Mental Health, 2007b).

It is important to note that the absence of evidence does not allow the conclusion that other therapeutic approaches are not effective. Further research is needed to find out more about the effectiveness of humanistic therapies, psychodynamic therapy, hypnotherapy and other modalities for the treatment of PTSD. Research suggests that

many psychotherapeutic approaches may be equally effective. Common factors may be more significant to therapy outcomes than specific techniques.

Table 5: Internet Resources

Australian Centre for Posttraumatic Mental Health:

<http://www.acpmh.unimelb.edu.au/resources/resources-guidelines.html>

American Psychiatric Association:

http://www.psychiatryonline.com/pracGuide/loadGuidelinePdf.aspx?file=ASD_PTSD_05-15-06

References

- American Psychiatric Association (1980). *Diagnostic and statistical manual of mental disorders* (3rd. ed.). Washington DC: Author.
- American Psychiatric Association (1994). *Diagnostic and statistical manual of mental disorders* (4th ed.). Washington DC: Author.
- American Psychiatric Association (2000). *Diagnostic and statistical manual of mental disorders* (4th ed., Text Revision). Washington DC: Author.
- American Psychiatric Association (2004). Practice guideline for the treatment of patients with acute stress disorder and posttraumatic stress disorder. Retrieved 13th of March, 2009, from http://www.psychiatryonline.com/pracGuide/pracGuideTopic_11.aspx
- Australian Centre for Posttraumatic Mental Health (2007a). *Australian Guidelines for the Treatment of Adults with Acute Stress Disorder and Posttraumatic Stress Disorder: Practitioner Guide*. ACPMH, Melbourne, Victoria. Retrieved 13th of March, 2009, from www.acpmh.unimelb.edu.au.
- Australian Centre for Posttraumatic Mental Health (2007b). *Australian Guidelines for the Treatment of Adults with Acute Stress Disorder and Posttraumatic Stress Disorder*. ACPMH, Melbourne, Victoria. Retrieved 11th of May, 2009, from www.nhmrc.gov.au.
- Benish, S. G., Imel, Z. E., & Wampold, B. E. (2008). The relative efficacy of bona fide psychotherapies for treating post-traumatic stress disorder: A meta-analysis of direct comparisons. *Clinical Psychology Review, 28*, 746-758.
- Bisson, J., & Andrew, M. (2007). Psychological treatment of post-traumatic stress disorder (PTSD) (Review). *Cochrane Database of Systematic Reviews, 3*. Art. No.: CD003388. DOI: 10.1002/14651858.CD003388.pub3.
- Bisson, J. I., Ehlers, A., Matthews, R., Pilling, S., Richards, D., & Turner, S. (2007). Psychological treatments for chronic post-traumatic stress disorder. *British Journal of Psychiatry, 190*, 97-104.
- Bisson, J. I., McFarlane, A. C., & Rose, S. (2000). Psychological debriefing. In E. B. Foa, T. M. Keane, & M. J. Friedman (Eds.), *Effective treatments for PTSD. Practice Guidelines from the International Society for Traumatic Stress Studies* (39-59). New York: Guilford.
- Bonanno, G. A. (2004). Loss, trauma, and human resilience. Have we underestimated the human capacity to thrive after extremely aversive events? *American Psychologist, 59*, 20-28.
- Bradley, R., Greene, J., Russ, E., Dutra, L., & Westen, D. (2005). A multidimensional meta-analysis of psychotherapy for PTSD. *American Journal of Psychiatry, 162*, 214-227.
- Brewin, C. R., Andrews, B., & Valentine, J. D. (2000). Meta-analysis of risk factors for posttraumatic stress disorder in trauma-exposed adults. *Journal of Consulting and Clinical Psychology, 68*, 748-766.

- Briere, J., & Scott, C. (2006). *Principles of trauma therapy. A guide to symptoms, evaluation, and treatment*. Thousand Oaks, CA: Sage.
- Brom, D., Kleber, R. J., & Defares, P. B. (1989). Brief psychotherapy for posttraumatic stress disorders. *Journal of Consulting and Clinical Psychology, 57*, 607-612.
- Charney, D. S. (2004). Psychological mechanisms of resilience and vulnerability: Implications for successful adaption to extreme stress. *American Journal of Psychiatry, 161*, 195-216.
- Chemtob, C. M., Tolin, D. F., van der Kolk, B. A., & Pitman, R. K. (2000). Eye movement desensitization and reprocessing. In E. B. Foa, T. M. Keane, & M. J. Friedman (Eds.), *Effective treatments for PTSD. Practice Guidelines from the International Society for Traumatic Stress Studies* (139-154). New York, NY: The Guilford Press.
- Creamer, M., Burgess, P., & McFarlane, A. C. (2001). Post-traumatic stress disorder: findings from the Australian National Survey of Mental Health and Well-being. *Psychological Medicine, 31*, 1237-1247.
- Davidson, P. R., & Parker, K. C. H. (2001). Eye movement desensitization and reprocessing (EMDR): A meta-analysis. *Journal of Consulting and Clinical Psychology, 69*, 305-316.
- Elhai, J. D., Kashadn, T. B., & Frueh, B. C. (2005). What is a traumatic event? *British Journal of Psychiatry, 187*, 189-190.
- Everly, G. S., Boyle, S. H, & Lating, J. M. (1999). The effectiveness of psychological debriefing with vicarious trauma: A meta-analysis. *Stress Medicine, 15*, 229-233.
- Flouri, E. (2005). Post-traumatic stress disorder (PTSD). What we have learned and what we still have not found out. *Journal of Interpersonal Violence, 20*, 373-379.
- Foa, E. B., & Meadows, E. A. (1997). Psychosocial treatments for posttraumatic stress disorder: A critical review. *Annual Review of Psychology, 48*, 449-480.
- Frans, Ö, Rimmö, P.-A., Åberg, L., & Fredrikson, M. (2005). Trauma exposure and post-traumatic stress disorder in the general population. *Acta Psychiatrica Scandinavica, 111*, 291-299.
- Friedman, M. (2006). *Post-traumatic and acute stress disorder. The latest assessment and treatment strategies* (4th ed.). Kansas City, MO: Compact Clinicals.
- Friedman, M. J., Davidson, J. R. T., Mellman, T. A., & Southwick, S. M. (2000). Pharmacotherapy. In E. B. Foa, T. M. Keane, & M. J. Friedman (Eds.), *Effective treatments for PTSD. Practice Guidelines from the International Society for Traumatic Stress Studies* (pp. 84-105). New York: Guilford.
- Gavranidou, M., & Rosner, R. (2003). The weaker sex? Gender and post-traumatic stress disorder. *Depression and Anxiety, 17*, 130-139.
- Gist, R., & Devilly, G. J. (2002). Post-trauma debriefing: The road too frequently travelled. *The Lancet, 360*, 741-742.
- Hapke, U., Schumann, A., Rumpf, H. J., John, U., & Meyer, C. (2006). Post-traumatic stress disorder. The role of trauma, pre-existing psychiatric disorders, and gender. *European Archives of Psychiatry and Clinical Neuroscience, 256*, 299-306.

- Herman, J. L. (1992). Complex PTSD: A syndrome in survivors of prolonged and repeated trauma. *Journal of Traumatic Stress, 5*, 377-391.
- Herman, J. L., Perry, J. C., & van der Kolk, B. A. (1989). Childhood trauma in borderline personality disorder. *American Journal of Psychiatry, 146*, 490-495.
- Horowitz, M. J. (1999). Dynamic psychotherapy. In M. Hersen, & A. S. Bellack (Eds.), *Handbook of comparative interventions for adult disorders* (pp. 417-432). New York: Wiley & Sons.
- Johnson, H., & Thompson, A. (2008). The development and maintenance of post-traumatic stress disorder (PTSD) in civilian adult survivors of war trauma and torture: A review. *Clinical Psychology Review, 28*, 36-47.
- Knaevelsrud, C., & Maercker, A. (2007). Internet-based treatment for PTSD reduces distress and facilitates the development of a strong therapeutic alliance: a randomized controlled trial. *BMC Psychiatry, 7*, 13.
- Kudler, H. S., Blank Jr., A. S., & Krupnick, J. L. (2000). Psychodynamic therapy. In E. B. Foa, T. M. Keane, & M. J. Friedman (Eds.), *Effective treatments for PTSD. Practice Guidelines from the International Society for Traumatic Stress Studies* (pp. 177-198). New York: Guilford.
- Lanche, M., Perkins, C. Jr., & Stolzfoos, L. (2008). Live, online CBT helps service members with PTSD. *Primary Psychiatry, 15*, 20.
- Lee, C. W., Taylor, G., & Drummond, P. D. (2006). The active ingredient in EMDR: Is it traditional exposure or dual focus of attention? *Clinical Psychology and Psychotherapy, 13*, 97-107.
- Livanou, M. (2001). Psychological treatments for posttraumatic stress disorder: An overview. *International Review of Psychiatry, 13*, 181-188.
- McNally, R. J. (2003). Progress and controversy in the study of posttraumatic stress disorder. *Annual Review of Psychology, 54*, 229-252.
- McNally, R. J., Bryant, R., & Ehlers, A. (2003). Does early psychological intervention promote recovery from posttraumatic stress? *Psychological Science in the Public Interest, 4*, 45-79.
- Mendes, D. D., Feijo Mello, M., Ventura, P., De Medeiros Passarela, C., & De Jesus Mari, J. (2008). A systematic review on the effectiveness of cognitive behavioral therapy for posttraumatic stress disorder. *International Journal of Psychiatry in Medicine, 38*, 241-259.
- Mitchell, J. T. (1983). When disaster strikes. *Journal of Emergency Medical Services, 8*, 36-39.
- National Institute for Clinical Excellence (NICE) (2005). Clinical Guideline 26. Post-traumatic stress disorder (PTSD): the management of PTSD in adults and children in primary and secondary care. Retrieved 13th of March, 2009, from <http://www.nice.org.uk/CG026NICEguideline>.
- Nemeroff, C. B., Bremner, J. D., Foa, E. B., Mayberg, H. S., North, C. S., & Stein, M. B. (2006). Posttraumatic stress disorder: A state-of-the-science review. *Journal of Psychiatric Research, 40*, 1-21.

- Ogata, S. N., Silk, K. R., Goodrich, S., Lohr, N. E., Westen, D., & Hill, E. M. (1990). Childhood sexual and physical abuse in adult patients with borderline personality disorder. *American Journal of Psychiatry*, *147*, 1008-1013.
- Ozer, E. J., Best, S. R., Lipsey, T. L., & Weiss, D. S. (2003). Predictors of posttraumatic stress disorder and symptoms in adults: A meta-analysis. *Psychological Bulletin*, *129*, 52-73.
- Perkonig, A., Kessler, R. C., Storz, S., & Wittchen, H.U. (2000). Traumatic events and post-traumatic stress disorder in the community: prevalence, risk factors and comorbidity. *Acta Psychiatrica Scandinavica*, *101*, 46-59.
- Peters, L., Issakidis, C., Slade, T., & Andrews, G. (2006). Gender differences in the prevalence of DSM-IV and ICD-10 PTSD. *Psychological Medicine*, *36*, 81-89.
- Resnick, H. S., Kilpatrick, D. G., Dansky, B. S., Saunders, B. E., & Best, C. L. (1993). Prevalence of civilian trauma and posttraumatic stress disorder in a representative national sample of women. *Journal of Consulting and Clinical Psychology*, *61*, 984-991.
- Roberts, N. P., Kitchiner, N. J., Kenardy, J., Bisson, J. (2008). Multiple session early psychological intervention to prevent and treat post-traumatic stress disorder (Protocol). *Cochrane Database of Systematic Reviews*, *1*. Art. No.: CD006869. DOI: 10.1002/14651858.CD006869.
- Rothbaum, B. O., Meadows, E. A., Resick, P., & Foy, D. W. (2000). Cognitive-behavioural therapy. In E. B. Foa, T. M. Keane, & M. J. Friedman (Eds.), *Effective treatments for PTSD. Practice Guidelines from the International Society for Traumatic Stress Studies* (60-83). New York: Guilford.
- Rose, S. C., Bisson, J., Churchill, R., Wessely, S. (2002). Psychological debriefing for preventing post traumatic stress disorder (PTSD). *Cochrane Database of Systematic Reviews*, *2*, Art. No.: CD000560. DOI: 10.1002/14651858.CD000560.
- Schnyder, U. (2005). Why new psychotherapies for posttraumatic stress disorder? *Psychotherapy and Psychosomatics*, *74*, 199-201.
- Schottenbauer, M. A., Arnkoff, D. B., Glass, C. R., & Gray (2006). Psychotherapy for PTSD in the community: Reported prototypical treatments. *Clinical Psychology & Psychotherapy*, *13*, 108-122.
- Schottenbauer, M. A., Glass, C. R., Arnkoff, D. B., Tendick, V., & Gray, S. H. (2008). Nonresponse and dropout rates in outcome studies on PTSD: Review and methodological considerations. *Psychiatry*, *71*, 134-168.
- Scott, M. J., & Stradling, S. G. (2006). *Counselling for post-traumatic stress disorder* (3rd ed.). London: Sage.
- Seidler, G. H., & Wagner, F. E. (2006). Comparing the efficacy of EMDR and trauma-focused cognitive-behavioral therapy in the treatment of PTSD: a meta-analytic study. *Psychological Medicine*, *36*, 1515-1522.
- Shalev, A. Y., Bonne, O., & Eth, S. (1996). Treatment of posttraumatic stress disorder: A review. *Psychosomatic Medicine*, *58*, 165-182.

- Shalev, A. Y., Peri, T., Canetti, L., & Schreiber, S. (1996). Predictors of PTSD in injured trauma survivors: A prospective study. *American Journal of Psychiatry*, *153*, 219-225.
- Shapiro, F. (1995). *Eye movement desensitization and reprocessing: Basic principles, protocols, and procedures*. New York: Guilford.
- Shapiro, F. (1989). Eye movement desensitization: A new treatment for post-traumatic stress disorder. *Journal of Behavior Therapy & Experimental Psychiatry*, *20*, 211-217.
- Shepherd, J., Stein, K., & Milne, R. (2000). Eye movement desensitization and reprocessing in the treatment of post-traumatic stress disorder: a review of an emerging therapy. *Psychological Medicine*, *30*, 863-871.
- Sherman, J. J. (1998). Effects of psychotherapeutic treatments for PTSD: A meta-analysis of controlled clinical trials. *Journal of Traumatic Stress*, *11*, 413-435.
- Solomon, S. D., & Johnson, D. M. (2002). Psychosocial treatment of posttraumatic stress disorder: A practice-friendly review of outcome research. *Journal of Clinical Psychology*, *58*, 947-959.
- Stein, D. J., Ipser, J. C., & Seedat, S. (2006). Pharmacotherapy for post traumatic stress disorder (PTSD). *Cochrane Database of Systematic Reviews*, *1*. Art. No.: CD002795. DOI: 10.1002/14651858.CD002795.pub2.
- Stein, M. B., Walker, J. R., & Forde, D. R. (2000). Gender differences in susceptibility to posttraumatic stress disorder. *Behaviour Research and Therapy*, *38*, 619-628.
- Tarrier, N., Sommerfield, C., Pilgrim, H., & Faragher, B. (2000). Factors associated with outcome of cognitive-behavioural treatment of chronic post-traumatic stress disorder. *Behaviour Research and Therapy*, *38*, 191-202.
- Van der Kolk, B. A., Roth, S., Pelcovitz, D., Sunday, S., & Spinazzola, J. (2005). Disorders of extreme stress: The empirical foundation of a complex adaption to trauma. *Journal of Traumatic Stress*, *18*, 389-399.
- Van Etten, M. L., & Taylor, S. (1998). Comparative efficacy of treatments for post-traumatic stress disorder: A meta-analysis. *Clinical Psychology and Psychotherapy*, *5*, 126-144.
- Van Emmerik, A. A. P., Kamphuis, J. H., Hulsbosch, A. M., & Emmelkamp, P. M. G. (2002). Single session debriefing after psychological trauma: a meta-analysis. *The Lancet*, *360*, 766-771.
- Van Minnen, A., Arntz, A., & Keijsers, G. P. J. (2002). Prolonged exposure in patients with chronic PTSD: predictors of treatment outcome and dropout. *Behaviour Research and Therapy*, *40*, 439-457.