

Feasibility of brief intensive exposure therapy for PTSD patients with childhood sexual abuse: a brief clinical report

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Despite the strong empirical support for the effectiveness of exposure-based treatments in ameliorating post-traumatic stress disorder (PTSD), improvement of treatment is wanted given relatively high dropout rates and challenges of treating patients with high comorbidity and treatment-interfering stressors. The purpose of the current paper is to introduce an intensive exposure treatment program, illustrated by four case descriptions of PTSD patients, who suffered multiple (sexual) traumas in childhood, had high levels of comorbidity and psychosocial stressors, and failed to improve during “regular” trauma-focused treatment programs. The program consisted of psychoeducation, prolonged imaginal exposure, exposure *in vivo*, exposure by drawings combined with narrative reconstructing, and writing assignments about central trauma-related cognitions. The treatment included 5 working days with individual sessions (in total 30 h of treatment) provided by a team of four therapists. The PTSD symptoms of all patients decreased substantially and the effect sizes were large (Cohen’s *d* resp. 1.5 [pre–post], 2.4 [pre-FU1 month], and 2.3 [pre-FU3 months]). Also, none of the patients showed symptom worsening or dropped out. The evaluation of these four pilot cases suggests that it is possible to intensify exposure treatment, even for multiple traumatized PTSD patients with high comorbidity. We concluded that the first results of this new, intensive exposure program for PTSD patients with childhood sexual abuse are promising.

Keywords: *PTSD; intensive treatment; treatment outcome; exposure*

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Exposure-based treatments proved to have strong empirical support for their effectiveness in ameliorating PTSD and related psychopathology (Powers, Halpern, Ferenschak, Gillihan, & Foa, 2010) and are recommended worldwide in the official treatment of PTSD guidelines (see e.g., International Society for Traumatic Stress Studies, NICE). However, improvement of treatment is wanted, given for instance relatively high dropout rates (36%; Arntz, Tiesema, & Kindt, 2007) and challenges of treating patients with high comorbidity and treatment-interfering psychosocial stressors.

Several studies showed that comorbidity and trauma-characteristics did not influence exposure treatment outcome (Powers et al., 2010; Van Minnen, Arntz, &

Keijsers, 2002). However, irregular attendance at therapy was related to treatment outcome (Tarrier, Sommerfield, Pilgrim, & Faragher, 2000). This is in line with our clinical experience that patients with high comorbidity and psychosocial stressors can profit from exposure but, due to incompliance and irregular session attendance, the exposure cannot always be properly dosed. That brought us to comprise and intensify the exposure treatment.

Remarkably, although there are intensive brief treatments available for patients with other anxiety disorders like OCD and panic disorder, scarce brief intensive treatments have been developed for PTSD. Recently, intensive cognitive behavioral treatment was shown to be feasible for the treatment of 14 PTSD patients with

single trauma in adulthood (Ehlers et al., 2010). Patients received up to 18 h of therapy over a period of 5–7 working days. No patients dropped out, the treatment was well tolerated and was effective; 85.7% of the patients no longer had the diagnoses PTSD at post-treatment. Also, a non-controlled study of an intensive treatment, including exposure therapy techniques, with multiple traumatized PTSD patients showed good treatment outcome results and low dropout rates (3%; Gantt & Tinnin, 2007).

The present study presents the intensive exposure treatment program illustrated by four case descriptions of PTSD patients who suffered multiple (sexual) traumas in childhood, including childhood sexual abuse, physical abuse, rape, emotional neglect, and had high levels of comorbidity and psychosocial stressors including problems with the primary support group, problems related to the social environment, occupational problems, and economic problems. All patients had failed to improve during “regular” one-session per week trauma-focused treatment programs (Prolonged Exposure or Eye Movement Desensitization and Reprocessing [EMDR]).

The intensive exposure therapy (IET)

The intensive exposure therapy (IET) program included 5 working days with individual sessions from 08:30 a.m. to 16:30 p.m. (with a few breaks, mean of 6 h of treatment a day, in total 30 h, 24 h dedicated to the trauma processing). All four patients were treated by one team of four therapists.

The treatment mainly followed the prolonged exposure principles of Foa’s program (Foa, Rothbaum, Riggs, & Murdock, 1991), including exposure *in vivo* elements, but also included exposure by drawing a narrative (see also Gantt & Tinnin, 2007) and cognitive restructuring.

At the first day, a non-traumatic but anxious childhood event was processed to train the patient in the treatment techniques. Every next day, one concrete traumatic event identified by the patient as most representative for a certain type or period of traumatization, guided by their most intrusive recollections, was selected for processing. For processing, the following treatment techniques were used every day.

The first technique was psychoeducation about relevant trauma-related subjects, respectively, trauma responses including tonic immobility; memory including amnesia, dissociation including some grounding techniques; comorbidity including the relationship with PTSD-symptoms; and life after treatment. The second technique was prolonged imaginal exposure (60–90 min) in which the patient was asked to imagine the traumatic event as vividly as possible, with closed eyes, in the present time, and as detailed as possible. The third technique was exposure by drawings combined with narrative recon-

structing. The patient drew a picture story (a graphic narrative) of the trauma in which each scene was drawn on a separate sheet of paper. Most attention was paid to the drawings of the “hotspots” of the traumatic memory, and patients were instructed to include all details of the trauma within the drawings. Besides the drawings of the scenes of the trauma, the patient made a pre- and post-traumatic event drawing, in which the patient was relaxed, to bracket the actual trauma. Afterward, one of the therapists attached the drawings to a display board and “re-presented” the narrative to the patient and therapist team. In addition, as the fourth technique, the patients were *in vivo* exposed to trauma-related material including, for instance, their diaries, pictures, books, movies, clothes, and so on. The final part of treatment consisted of a writing assignment about the trauma, especially about central trauma-related cognitions such as “I am a weak person” or “It was my fault that this happened.” New views concerning the traumatic event were imparted to regain a sense of control and patients were asked to write advice to themselves.

During the evenings and nights, the patients stayed in a hotel to help them in limiting interference of psychosocial stressors in the context of their home environment. However, there were no restrictions with regard to contact with family members or friends.

The four described cases were regular referrals to the Centre for Anxiety Disorders. Prior to the baseline measures, the patients were assessed with the Mini-International Neuropsychiatric Interview (M.I.N.I.; Sheehan et al., 1998) and the Dutch version of the Structural Clinical Interview for DSM-IV Axis II disorders (SCID II; First, Gibbon, Spitzer, Williams, & Benjamin, 1997) to verify diagnoses. Trauma characteristics, psychiatric treatment history, and psychosocial stressors were inquired during a structured interview. The patients completed the PTSD symptom scale self-report (PSS-SR; Foa, Riggs, Dancu, & Rothbaum, 1993) at pretreatment (day one), after the therapy (1 week after day one), and at two follow-ups (after 1 month and after 3 months). Every treatment day, patients rated their level of anxiety concerning the recollection processed that day on a 10-point scale (1 = no anxiety, 10 = extreme anxiety) at the start of that day and at the end of that day. Furthermore, patients rated the experienced burden at the end of every treatment day on a 10-point scale (1 = not at all, 10 = extreme high).

Case examples

Table 1 shows the results for the PSS-SR at pre-treatment, post-treatment and follow-ups after 1 and 3 months for the four cases.

Table 1. Statistics for the total PSS-SR and the three PSS-SR subscales (recollections, avoidance, and arousal) at pre-treatment, post-treatment, and follow-up after 1 and 3 months for the four cases

	Pre-treatment	Post-treatment	1 M	3 M
Case one				
PSS-SR	19	27	18	14
Recollections	9	12	3	0
Avoidance	4	7	8	10
Arousal	6	8	7	4
Case two				
PSS-SR	37	10	17	21
Recollections	12	4	3	5
Avoidance	14	2	6	8
Arousal	11	4	8	8
Case three				
PSS-SR	36	8	11	19
Recollections	15	1	4	6
Avoidance	13	3	4	8
Arousal	8	4	3	5
Case four				
PSS-SR	39	27	19	12
Recollections	11	8	7	3
Avoidance	12	11	7	4
Arousal	16	8	5	5
Means (SD)				
PSS-SR	32.8 (9.25)	18.0 (10.42)	16.3 (3.59)	16.5 (4.20) ^a
Recollections	11.8 (2.50)	6.3 (4.79)	4.3 (1.89)	3.5 (2.65)
Avoidance	10.8 (4.57)	5.8 (4.11)	6.3 (1.71)	7.5 (2.52)
Arousal	10.3 (4.35)	6.0 (2.31)	5.8 (2.22)	5.5 (1.73)

^aCohen's d resp. 1.5 (pre-post), 2.4 (pre-1 M) and 2.3 (pre-3 M).

Note. 1 M, follow-up after 1 month; 3 M, follow-up after 3 months; SD, standard deviation.

Case one

Diagnostic details

Case one was a 30-year-old woman who reported repeated sexual abuse in childhood (starting when she was a 3-year-old until she was a 5-year-old) by her stepfather, emotional neglect by her mother who was alcohol addicted (starting when she was an 11-year-old), threat with a knife in childhood (10-year-old), and a physical assault during adulthood (17-year-old). She met the DSM-IV criteria for PTSD, reporting intrusive distressing perceptual recollections, emotional numbing, and hyperarousal. She also met the criteria for borderline personality disorder, reporting identity disturbance; impulsivity concerning eating and substance abuse; affective instability; chronic feelings of emptiness; and transient, stress-related paranoid ideation. Finally, she met the criteria for alcohol abuse (age of onset 26

years old) and had a history of major depression (age of onset 22 years old).

Psychiatric treatment history

The patient's treatment history consisted of hospitalization in a mental health clinic when she was 23 years old because of depression. In addition, she had had an outpatient treatment aimed at the borderline personality disorder, which she quit because of paranoid symptoms. Also, she engaged in an outpatient (one session per week) prolonged exposure program aimed at the PTSD but failed to improve, probably due to low treatment compliance because of constantly interfering stressors in her life and avoidance to disclose the most distressing details of her traumatic experiences. In addition to the psychological treatments, she underwent several pharmacological treatments, including two different kinds of selective serotonin reuptake inhibitors (SSRIs),

a benzodiazepine, an antipsychotic, two different kinds of tetracyclic antidepressants (TCAs), and sleep medication, with no results. At the start of the IET, the patient was on a stable dose for 2 years of a TCA (Mirtazapine, 45 mg).

The intensive exposure therapy (IET) intervention

At the first day, the IET started with processing a non-traumatic event about a situation in which the patient saw her little sister falling in the water and saved her. During day two and three, the recollection of the sexual abuse by the patient's stepfather was processed. At the second day, the sexual abuse was processed in detail including touching, penetration, and secretive attitude. During the exposure, the patient's anxiety levels increased to a high level. During the exposure, she felt ashamed to disclose explicit details of the sexual abuse and refused to do so. However, on the third day, she wanted to complete the story and filled in the details she left out the day before. She made detailed drawings of explicit sexual acts and during the prolonged exposure her anxiety levels decreased. The exposure *in vivo* mainly consisted of looking at pictures of her stepfather. During the writing assignments, she discussed with herself the function of drinking alcohol. During day four, the emotional neglect due to her mother's alcohol problems was the central focus. The patient chose the recollection that she came home with her oldest sister while her mother was drunk. During day five, the recollection of the moment that her mother's friend put a knife on her sister's throat was processed. During the writing, she discussed with herself her feelings of responsibility toward her sisters and imparted new views.

Results

During day two, the level of anxiety when experiencing the recollection of that day decreased from 8 toward 5. During day three, the level of anxiety decreased from 9 toward 3. At day four, this level decreased from 7 toward 5 and during day five, from 8 toward 6. Severity of PTSD symptoms, especially recollections, was reduced substantially.

The patient rated the experienced burden at the end of every treatment day with an average of 6.6. The patient experienced the IET as confronting and tiring; however, she reported that for the first time in life she has positive thoughts about her future.

Case two

Diagnostic details

Case two was a 49-year-old woman who reported repeated sexual and physical abuse in childhood by her father (during her whole childhood, mainly between 8 and 16 years old) and repeated sexual and physical abuse in adulthood within intimate relationships (mainly as an 18 until 20 years old). She met the DSM-IV criteria for

PTSD, reporting recurring distressing dreams; intrusive distressing recollections; avoidance of thoughts associated with the rapes; inability to recall important aspects of the trauma; diminished interest in significant activities; feeling of detachment from other, restricted range of affect; sense of foreshortened future; sleeping problems; irritability; difficulty concentrating; hypervigilance; and an exaggerated startle response. Besides that, she met the DSM-IV criteria for obsessive-compulsive disorder, specific phobia, panic disorder without agoraphobia, social phobia, and bipolar II disorder (age of onset 38 years old). Furthermore, she met the criteria for borderline personality disorder, reporting frantic efforts to avoid abandonment, a pattern of unstable interpersonal relationships, identity disturbance, and affective instability.

Psychiatric treatment history

The patient's treatment history consisted of an outpatient family therapy, hospitalization in a mental health clinic, when she was 35 years old because of depression and suicidal behavior and outpatient treatment aimed at the borderline personality disorder. Furthermore, she engaged in several outpatient trauma focused treatments with no results. All treatments lacked effect. At the time of the IET, the patient was using a serotonin noradrenaline reuptake inhibitor (SNRI, Venlafaxine, 75 mg) and was on a stable dose for 3 years.

The intensive exposure therapy (IET) intervention

At the first day, the IET started with processing a non-traumatic event about a bullying in childhood. During day two, the patient focused on the sexual and physical abuse by her father. The patient chose two specific recollections that reflected the theme. First, she chose the recollection that her father watched her changing a tampon. Second, she chose a specific moment when she was beaten by her father. During the exposure, the patient experienced dissociative symptoms; however, later on she applied some simple grounding exercises to resist the dissociating successfully. During day three, the recollections of the sexual abuse during different intimate relationships was processed such as the moment that the patient was forced to do oral sex. During day four, the death of the patient's cat was processed. The most important recollection was the moment that the patient picked up her cat and felt that all the bones were broken. During day five, the patient focused on the death of her mother. The main intrusive recollection was a situation in which the mother negatively judged the care she received from the patient. The exposure *in vivo* mainly consisted of looking at several pictures and home videos.

Results

During day two, the level of anxiety when experiencing the recollection of that day decreased from 10 toward 8. During day three, the level of anxiety decreased from 7 toward 2. At day four, this level decreased from 10 toward 7 and during day five, from 8 toward 5. Severity of PTSD symptoms was reduced. At follow-up after 3 months, recollections, arousal, and avoidance reduced comparably.

The patient rated the experienced burden at the end of every treatment day with an average of 5.6. The patient experienced the IET as confronting and tiring; however, she reported she felt safe and learned a lot. She valued the results of the IET as very good.

Case three

Diagnostic details

Case three was a 27-year-old woman who reported physical abuse in childhood by her father (during her whole childhood, mainly between 8 and 16 years old), sexual abuse in childhood by her sister and brother (as a 10 until 12-year-old), sexual abuse in childhood by a neighbor (as a 8-year-old), and sexual abuse in adulthood (as a 26-year-old). She met the DSM-IV criteria for PTSD reporting recurring distressing dreams, intrusive distressing recollections, flashbacks, hypervigilance, an exaggerated startle response, trichotillomania, and recurrent major depressive episodes in partial remission (age of onset 20 years old). Furthermore, she had features of borderline personality disorder, reporting frantic efforts to avoid abandonment, identity disturbance, recurrent self-mutilating behavior, and affective instability.

Psychiatric treatment history

The patient's treatment history consisted of a daycare treatment where her depression was treated effectively, daycare treatment aimed at the personality disorder where the patient's need for PTSD treatment was not met, an outpatient depression treatment, hospitalization in a mental health clinic when she was 26 years old, where again the patient's need for PTSD treatment was not met, and hospitalization in a mental health clinic aimed at PTSD when she was 27 years old. During this last hospitalization, she had several trauma-focused EMDR-sessions with no results. Besides that, she had several pharmacological treatments, consisting of SSRIs and benzodiazepines, with minimal results. At the time of the IET, the patient was still under medication using a SSRI (Sertraline, 50 mg), a benzodiazepine (Clonazepam, 0.5 mg), and was on a stable dose for 1 year.

The intensive exposure therapy (IET) intervention

At the first day, the IET started with a non-traumatic event about being bullied during childhood. During day two, the recollection of the sexual abuse by a neighbor was

processed. The patient chose a specific recollection that reflected the theme in which she was on a bicycle and a neighbor touched her vagina. During day three, the sexual abuse by her brother and sister was the central focus. At the third day, the sexual abuse was processed in detail including penetration. The patient had a tendency to elaborate on non-significant details and had trouble narrowing down the traumatic aspects of her experiences. This complicated the imaginal exposure. In the exposure by drawings, she was asked to draw her hotspots first and fill in the details later, by doing so she was able to complete her stories. During day four, she focused on the physical abuse by her father. During the writing assignment the central theme was her feelings of loneliness and desertedness by mother. During day five, the physical abuse by her family members was processed. She exposed herself to several occasions of physical abuse of which she only focused on the hotspot. By doing so, she condensed a long period of violence in the family into one bound story.

Results

During day two, the level of anxiety when experiencing the recollection of that day stayed 7. During day three, the level of anxiety decreased slightly from 8 toward 7. At day four, this level decreased from 9 toward 7 and during day five, from 8 toward 7. Severity of PTSD symptoms was reduced. At follow-up after 3 months, recollections, arousal, and avoidance reduced comparably.

The patient rated the experienced burden at the end of every treatment day with an average of 6.8. She valued the results of the IET as very good and reported that she was less numb and felt more powerful during the treatment.

The patient still met the criteria for trichotillomania and was referred elsewhere for specialized treatment. Besides that, she was still involved in a post-care program of the mental health clinic she was hospitalized in.

Case four

Diagnostic details

Case four was a 32-year-old woman who reported sexual abuse during childhood by her sports trainer (as a 13 until 14-year-old) and physical abuse during childhood by her father (during her whole childhood). She met the DSM-IV criteria for PTSD, reporting recurring intrusive distressing thoughts, recurring distressing dreams, flashbacks, avoiding thoughts and activities associated with the trauma, diminished interest in significant activities, feeling detached from others, restricting range of affect, sleeping problems, irritability, hypervigilance, and exaggerated startle response. Furthermore, she met the DSM-IV criteria for dissociative disorder not otherwise specified (NOS) and recurrent severe major depressive episodes without psychotic features (age of onset 16 years old).

Psychiatric treatment history

The patient's treatment history consisted of an outpatient depression and PTSD treatment (EMDR), but she failed to improve due to strong dissociative symptoms and an extreme high level of anxiety. In addition to the psychological treatments, she underwent several pharmacological treatments, including two different kinds of SSRIs, a SNRI, a TCA, an antipsychotic, and a benzodiazepine with no results. At the time of the IET, the patient was on a stable dose of two different kinds of antipsychotics (Olanzapine, 10 mg for 1 year; Levomepromazine, 50 mg for 10 months), a benzodiazepine (Midazolam, 15 mg for 1 year), and an antiepileptic medication (Lamotrigine, 15 mg for 8 months).

The intensive exposure therapy (IET) intervention

At the first day, the IET started with processing a non-traumatic event about the patient's stay in a hospital during childhood. During day two and three, the recollection of the sexual abuse by her sports trainer was processed. The patient chose a specific recollection that reflected the theme in which her sports trainer lay on her in a car. The patient had a lot of trouble disclosing the details of the trauma, her anxiety levels rose high and she experienced dissociative symptoms including conversion paralysis and loss of consciousness. Therefore, it took 2 days to complete the story of the sexual abuse. During day four, it was decided to halt the treatment for one part of the day because of patient's dissociative and fatigue symptoms. Despite these problems, however, she managed to do the drawings of the trauma of that day on her own in the hotel. During day five, she focused on the violent behavior of her father as well as the death of her best friend. During the writing, she discussed with herself her views during childhood and imparted new views concerning the traumatic event.

Results

Severity of PTSD symptoms was reduced. At follow-up after 3 months, recollections, arousal, and avoidance reduced comparably.

The patient rated the experienced burden at the end of every treatment day with an average of 8.3. She reported that she had learned a lot. She experienced the treatment as very extensive; however, she was very satisfied with the fixed structure. Furthermore, she was satisfied with the effects of the IET.

Because the patient is suffering recurrent severe major depressive episodes, the pharmacological treatment, which she received in another mental health care center, was continued after the IET.

Overall results the intensive exposure therapy (IET)

All patients improved in PTSD symptoms during treatment and the effect sizes were large (Cohen's *d* resp. 1.5

[pre-post], 2.4 [pre-FU1 month], and 2.3 [pre-FU3 months]). Overall, treatment effects were most pronounced in decreasing re-experiences. What is more, none of the patients showed symptoms worsening during or after the treatment, none dropped out, and treatment compliance and attendance was optimal (100%). Finally, patients themselves experienced and rated the IET as an acceptable treatment. These findings indicate that the IET was possible and feasible, even in this group of severely traumatized patients with high levels of comorbidity.

However, some important difficulties occurred during the IET. First, it was very difficult for some patients to disclose explicit details of their traumas, especially during the prolonged imaginal exposure. For some patients, avoidance of those details was also an obstacle during earlier trauma-focused treatments. Our impression was that the exposure by drawing was helpful in overcoming this avoidance because the explicit details could be filled in step by step. Also, for the therapists it was more visible and thus controllable what was missing in a specific picture. In addition, some patients needed more time than the regular 60–90 min sessions to reveal the traumatic details, which was available in the IET. Another difficulty was that some patients experienced strong dissociative symptoms that complicated the imaginal exposure. In some cases, patients resisted the dissociation successfully by applying some simple grounding exercises; in other cases, the technique of imaginal exposure was adapted, for instance, by letting patients open their eyes or telling the story from a third person perspective. Again, we felt that the exposure by drawings was helpful in this respect perhaps because drawing, holding a pencil, has some similarities with grounding techniques. Also, the time aspect was important; sometimes we just waited a while for the anxiety levels to decrease, the associated dissociation to disappear, and could then continue the exposure, which is, in practical sense, harder to do during regular 60–90 min sessions.

Discussion

The evaluation of these four pilot cases suggests that it is possible to intensify exposure treatment, even for multiple traumatized PTSD patients with high comorbidity. The first results are promising; the effect size was good, patients showed no symptom worsening, no patients dropped out, and all patients complied to all five treatment days and indicated the burden of treatment as acceptable. This study confirmed the results of Ehlers's study (2010) that intensive trauma-focused treatment is possible and feasible, and extended those results to patients with sexual abuse in childhood and high comorbidity.

The presented patients who succeeded in IET all failed in weekly dosed trauma-focused therapy, implying that it is not per se the treatment in itself (exposure technique) that should be improved or adapted but the

implementation and dose of treatment. Especially for those patients with high psychosocial stressors, problems of treatment attendance and compliance can be adequately solved by presenting them a more intensive way to engage in trauma-focused treatments. We also had the impression that the longer sessions within the IET helped patients to overcome their avoidance in revealing details of the trauma. We also think that providing exposure in several ways (reliving, exposure *in vivo*, drawings) helped patients to overcome difficulties experienced during earlier failed treatments (e.g., dissociation).

An important limitation of this study is that at this moment we don't know the long-term effects. It is thinkable that, given the context dependence of extinction, fear returns when patients go back to their own daily life context (Eftting & Kindt, 2007). However, the 3 month follow-up results are promising. We also felt that the inclusion of exposure *in vivo* materials such as family pictures and home videos helped to broaden the treatment context. However, future studies should focus on long-term effects and relapse. Also, we don't know which elements of the IET were effective and what the most optimal order of the five IET techniques is. Future research should study those issues.

Other limitations are that this was a small, non-controlled study with limited outcome measures. Future controlled studies could compare this new treatment with existing regular treatments such as prolonged exposure, or with adapted treatment programs for PTSD-patients who suffered sexual abuse in childhood such as Skills Training in Affective and Interpersonal Regulation (STAIR) (Cloitre et al., 2010).

Conclusion

To conclude, the first results of this new, intensive exposure treatment program showed that this is a promising approach. Patients who failed to improve during regular trauma-focused treatments did improve substantially during the IET. Treatment attendance and compliance was optimal, there was no symptom worsening, and none of the patients dropped out. What is more, patients were satisfied with the program and found the treatment acceptable.

This study showed that intensive exposure therapy is feasible and possible, even for PTSD patients who suffered repeated childhood sexual abuse and had high levels of comorbidity. Maybe this intensive treatment is even more indicated for this group of patients, because it prevents stressful daily life events to interfere with the treatment and helps them overcome severe avoidance behavior.

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References

- Arntz, A., Tiesema, M., & Kindt, M. (2007). Treatment of PTSD: A comparison of imaginal exposure with and without imagery rescripting. *Journal of Behavior Therapy and Experimental Psychiatry*, *38*, 345–370.
- Cloitre, M., Chase Stovall-McClough, K., Noonan, K., Zorbas, P., Cherry, S., Jackson, C. L., et al. (2010). Treatment for PTSD related to childhood abuse: A randomized controlled trial. *American Journal of Psychiatry*, *167*, 915–924.
- Eftting, M. & Kindt, M. (2007). Contextual control of human fear associations in a renewal paradigm. *Behaviour Research and Therapy*, *45*, 2002–2018.
- Ehlers, A., Clark, D. M., Hackmann, A., Grey, N., Liness, S., Wild, J., et al. (2010). Intensive cognitive therapy for PTSD: A feasibility study. *Behavioural and Cognitive Psychotherapy*, *38*, 383–398.
- First, M. B., Gibbon, M., Spitzer, R. L., Williams, J. B. W., & Benjamin, L. S. (1997). *Structured clinical interview for DSM-IV axis I personality disorders, (SCID-II)*. Washington, DC: American Psychiatric Press, Inc.
- Foa, E. B., Riggs, D. S., Dancu, C. V., & Rothbaum, B. O. (1993). Reliability and validity of a brief instrument for assessing post-traumatic stress disorder. *Journal of Traumatic Stress*, *6*, 459–473.
- Foa, E. B., Rothbaum, B. O., Riggs, D. S., & Murdock, T. B. (1991). Treatment of post-traumatic stress disorder in rape victims: A comparison between cognitive-behavioral procedures and counseling. *Journal of Consulting and Clinical Psychology*, *59*, 715–723.
- Gantt, L. M. & Tinnin, L. W. (2007). Intensive trauma therapy of PTSD and dissociation: An outcome study. *The Arts in Psychotherapy*, *34*, 69–80.
- Powers, M. B., Halpern, J. M., Ferenschak, M. P., Gillihan, S. J., & Foa, E. B. (2010). A meta-analytic review of prolonged exposure for posttraumatic stress disorder. *Clinical Psychology Review*, *30*, 635–641.
- Sheehan, D. V., Lecrubier, Y., Sheehan, K. H., Amorim, P., Janavs, J., Weiller, E., et al. (1998). The Mini-International Neuropsychiatric Interview (M.I.N.I.): The development and validation of a structured diagnostic psychiatric interview for DSM-IV and ICD-10. *Journal of Clinical Psychiatry*, *59*(Suppl 20), 22–57.
- 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 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.

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