Complex Trauma in Adolescents and Adults

Article *in* The Psychiatric clinics of North America · June 2015

DOI: 10.1016/j.psc.2015.05.004

CITATIONS
20

READS
2,971

2 authors, including:

John Briere
University of Southern California
168 PUBLICATIONS **14,346** CITATIONS

SEE PROFILE

Complex Trauma in Adolescents and Adults

Effects and Treatment

John Briere, PhD*, Catherine Scott, MD

KEYWORDS

• Complex trauma • Trauma • PTSD • Complex PTSD • Treatment of complex trauma

KEY POINTS

- Exposure to multiple interpersonal traumas over the life span can have significant later psychological effects, both on the likelihood of posttraumatic stress disorder (PTSD) in response to a given stressor and in terms of a wide range of other symptoms and problems.
- Complex trauma can sometimes result in what has been referred to as complex PTSD, developmental trauma disorder, or enduring personality change after catastrophic events, often involving some combination of relational dysfunction, affect dysregulation, identity disturbance, and dysfunctional behavior.
- There are several empirically validated psychological and pharmacologic treatments relevant to complex trauma, most of which target individual symptom clusters.
- Psychological treatments for complex trauma effects tend to focus on processing trauma memories and cognitions and developing affect regulation skills and coping responses.
- Although selective serotonin reuptake inhibitors and related drugs can be helpful for the posttraumatic stress that sometimes follows complex trauma exposure, there are less data to suggest that the other, more personality-level difficulties associated with complex trauma respond well to pharmacologic interventions.

Recent research indicates that the number and variety of interpersonal traumas an individual has experienced over his or her lifespan significantly predicts the extent and composition of his or her subsequent psychological symptoms and disorders. At high levels, this phenomenon is referred to as *complex trauma*, defined as exposure to

Neither Dr J. Briere nor Dr C. Scott has commercial or financial conflicts of interest to declare. Preparation of this review was supported by grant No. 1U79SM061262-01 from the Substance Abuse and Mental Health Administration, U.S. Department of Health and Human Services.
Department of Psychiatry and Behavioral Sciences, Keck School of Medicine, University of Southern California, Los Angeles, CA 90089, USA
* Corresponding author. USC Psychiatry, Clinical Sciences Center, 2250 Alcazar Street, Suite 2200, Los Angeles, CA 90089.
E-mail address: jbriere@usc.edu

Psychiatr Clin N Am 38 (2015) 515–527
http://dx.doi.org/10.1016/j.psc.2015.05.004 **psych.theclinics.com**
0193-953X/15/$ – see front matter

multiple, often prolonged or extended traumas over time, potentially including events such as rape, physical assault, sex trafficking, torture, and combat and frequently in the context of previous childhood abuse and/or neglect.[1,2] As described in this article, complex trauma exposure not only increases the likelihood of posttraumatic stress in response to a given event but it also can result in several simultaneously presenting but phenomenologically discrete psychological difficulties, described in the empirical literature as *symptom complexity*.[3–5]

Research on the effects of complex trauma has had significant impacts on empirical and clinical models of posttraumatic distress and disorder. Most importantly, it reinforces the notion of multidimensional symptoms arising from multiple traumatic events and challenges traditional assumptions regarding the single-event cause of posttraumatic stress disorder (PTSD).

RISK OF POSTTRAUMATIC STRESS DISORDER

PTSD, as defined by the *Diagnostic and Statistical Manual of Mental Disorders* (Fifth Edition) (*DSM-5*), consists of 4 clusters or symptom dimensions: re-experiencing of the traumatic event; avoidance of trauma-relevant stimuli; numbing, negative cognitions, and mood; and hyperarousal and hyperreactivity.[6] Historically, *DSM-III* through *DSM-IV* linked all the symptoms of PTSD to a single traumatic event, such as an instance of sexual or physical assault or a natural disaster. As a result, by definition, PTSD could not be diagnosed if some of its symptoms, for example, flashbacks or numbing, arose from one trauma and others, for example, hyperarousal or effortful avoidance, were related to one or more other traumatic events.

Despite this narrow trauma requirement, a study of more than 2000 nonclinical individuals indicated that previous exposure to multiple traumatic events was associated with a greater risk of PTSD in response to a current (index) trauma and that multiple previous traumas had a stronger effect than did a single event.[7] Similarly, data from the World Health Organization's World Mental Health Survey Initiative (combined $N = 51{,}295$) found that approximately 20% of people with PTSD, if asked, attributed their disorder to the effects more than a single traumatic event. This study also indicated a risk threshold of 4 traumatic events, at or greater than which PTSD tended to involve greater functional impairment, more chronic symptoms, earlier onset, greater hyperarousal, and higher comorbidity with mood and anxiety disorders.[8] Other studies also have found that previous traumas increase the likelihood of PTSD in response to a later trauma as well as indicate that multiple trauma exposures are the norm in the general population rather than the exception.[9,10]

These findings suggest that although an index traumatic event may be immediately associated with the development of PTSD, this trauma may best be understood in some cases as the tipping point for the cumulative impacts of prior, more complex traumas. Apropos of this, *DSM-5* criterion A for PTSD specifies traumatic "*event*(s)",[6(pp271, 272)] in contrast to previous *DSM's* requirement of a single traumatic event. This *DSM* transition from a single-trauma to a potentially multi-trauma criterion highlights the notion that PTSD can arise from complex trauma, perhaps especially when it is accompanied by other symptoms and difficulties.[9]

RISK OF COMPLEX OUTCOMES

Because complex trauma typically involves exposure to multiple types of events, it is logical to assume that their combined effects might also be complex. For

example, sexual assaults are often associated with different outcomes than physical assaults; the effects of disaster can differ from those of interpersonal trauma; and childhood maltreatment often has different impacts than adolescent or adult victimization,[11] such that an accumulation of different traumas generally leads to a wider range of symptom types. Further, trauma is, itself, a risk factor for revictimization at later points in time[12] and, thus, even more complex outcomes.

Other variables further complicate this clinical picture. Multiple trauma exposures are frequently associated with reduced affect regulation capacity,[13] premorbid or comorbid anxiety, depressive or personality-level disorders,[8,14] impulsivity,[15] dissociation,[16] drugs or alcohol abuse,[17] and a history of insecure parent-child attachment.[2] These phenomena not only represent complex posttraumatic outcomes, they can intensify or mediate the effects of trauma exposure.[7,16] Finally, posttraumatic symptoms may motivate subsequent maladaptive coping responses, such as suicidality related to sustained posttraumatic stress[18] and avoidance activities, such as dissociation and substance abuse in response to trauma-related dysphoria.[17,19]

Given these findings, it is not surprising that a history of complex trauma exposures is associated with multiple symptoms or symptom clusters experienced simultaneously by the same individual. Although the literature describes an extensive list of these outcomes,[1–3,20–23] clinical researchers have repeatedly identified a more specific group of psychological symptoms and problems, generally involving self-related difficulties,[1] such as affect dysregulation, relational disturbance (including abandonment concerns and interpersonal sensitivity), identity problems, cognitive distortions, somatization, and avoidance responses such as dissociation, substance abuse, and self-injurious behavior.[1,20,22,23] Despite the overlap of many of these symptoms and problems with diagnostic features of borderline personality disorder,[24] their relationship to multiple childhood and adult traumas, and the frequent copresence of posttraumatic stress symptoms, have led them to be characterized as *complex PTSD*,[22] *disorders of extreme stress not otherwise specified*,[23] *developmental trauma disorder*,[25] *self-capacity disturbance*,[11] and *enduring personality change after catastrophic events* (EPCACE).[26] Most recently, the proposed *International Classification of Diseases*, *11th Revision*, is slated to replace EPCACE with a diagnosis of *complex PTSD*. There is controversy, however, regarding whether such disturbance reflects a specific syndrome, as opposed to dimensions of symptoms that vary according to characteristics and developmental timing of the traumas involved.[1,23]

TREATMENT OF COMPLEX TRAUMA-RELATED DISTURBANCE

Because complex posttraumatic outcomes are, by definition, wide ranging, there are several psychological and psychopharmacological interventions relevant to their treatment. In both psychological and biological domains, these can be divided into single- and multi-target treatments. Most single-target interventions address one aspect of complex trauma outcomes, although they may have additional effects. For example, exposure therapy is targeted at symptoms of PTSD but also impacts trauma-related cognitive distortions[27]; the selective serotonin reuptake inhibitors (SSRIs) have effects not only on PTSD but also on depression and anxiety.[28] Multi-target interventions, on the other hand, often consist of several different components and have been developed explicitly to address a wider range of trauma symptoms.

Psychological Interventions

Treatments for complex posttraumatic outcomes generally consist of (1) cognitive-behavioral therapy (CBT), (2) affect regulation and coping skills training, (3) relational/psychodynamic approaches, and (4) multi-target intervention models. These methodologies are briefly presented later, primarily for clinically referred older adolescents and adults.

Cognitive-behavioral

CBT is described in the trauma literature as the most commonly applied empirically based treatment of PTSD and, to a lesser extent, acute stress disorder (ASD).[29,30] The most efficacious aspects of CBT for trauma symptoms seem to be *therapeutic exposure*, involving the activation and habituation and/or extinction of trauma-related memories within the context of a safe therapeutic environment,[27] and *cognitive processing*, during which negative thoughts and schemas, such as self-blame, helplessness, and overgeneralized danger appraisals, are explored, challenged, and ideally replaced with more accurate information.[31] Also potentially included in this domain is *eye movement desensitization and reprocessing*,[32] during which the client recalls a traumatic event, focuses on his or her internal responses, and then, typically, tracks the therapist's finger as it moves across his or her visual field. Each of these methodologies has been shown in outcome studies to reduce symptoms associated with PTSD.[29]

Affect regulation training

A second form of psychological treatment attends less to the direct processing of traumatic memories and cognitions and more to the development of affect tolerance and regulation as well as emotional coping skills. This distinction is often important in the treatment of complex trauma effects because affect dysregulation is associated with affective instability, difficulties in tolerating and processing potentially overwhelming traumatic memories, and the use of maladaptive coping strategies, such as substance abuse, excessive dissociation, self-injury, dysfunctional sexual behavior, and binge-purge eating.[33] Empirically based interventions in this area teach several skills, including emotion identification, increased self-awareness, relaxation, mindfulness, de-escalation of catastrophic cognitions, and the development of coping strategies to deal with triggered trauma-related thoughts and feelings.[34–39]

Psychodynamic

A third class of interventions in complex trauma effects includes those calling on psychodynamic and relational principles and therapies. Although less studied in the empirical literature, a limited number of studies suggest that relational/dynamic treatments can be helpful in the treatment of the self-related aspects of complex trauma, including interpersonal dysfunction, attachment-related problems, and identity disturbance.[30,40] It is likely that, among other components, these treatments call on the most powerful common factors identified in psychotherapy outcome research: a positive therapeutic relationship, empathy, warmth, attunement, and positive regard.[41]

Multi-target therapies

Although the 3 approaches described here have demonstrated efficacy for trauma-related symptoms and problems, the breadth and range of complex posttraumatic symptoms often require more than one interventional modality. For example, although CBT might be helpful resolving a client's trauma-related flashbacks and hyperarousal, he or she might additionally require affect regulation interventions to address his or her

impulsive or self-injurious behavior, both of which might be most helpful in the context of a caring and attuned therapeutic relationship.

For this reason, there are currently several empirically based, multi-target interventions available for the treatment of complex trauma effects. Among these are dialectical behavior therapy (DBT)[38] and skill training in affect regulation (STAIR),[36] along with several programs developed specifically for adolescents, including Attachment, Self-Regulation, and Competency[37]; Integrative Treatment of Complex Trauma for Adolescents[35]; and Structured Psychotherapy for Adolescents Responding to Chronic Stress.[42] Two of the best known of these approaches for adults, DBT and STAIR, have especially encouraging treatment outcome data for the treatment of complex trauma symptoms,[38,43] although DBT originally identified borderline personality disorder (BPD) as its focus. Almost all these hybrid interventions stress some combination of the following:

- A positive therapeutic relationship, characterized by caring, attunement, compassion, and boundary awareness
- When appropriate, affect regulation training before major emotional processing of trauma is initiated
- Titrated therapeutic exposure, in which the client is only asked to recall and process traumatic memories that do not exceed his or her affect regulation capacity and, thus, do not overwhelm or retraumatize
- Cognitive and relational processing of negative attachment and relational schema
- Strategies for the management of posttraumatic triggers and activated emotional states

Pharmacotherapeutic Interventions

There is a dearth of literature on the pharmacotherapy of complex posttraumatic stress. The multidimensional nature of complex trauma presentations makes outcome research into this area particularly challenging: comorbidities, such as medical problems, ongoing domestic violence and other maltreatment, substance use, suicidal ideation, and dissociation, are typically excluded from treatment outcome studies.[44] MEDLINE searches for pharmacotherapy of *complex trauma*, *disorders of extreme stress not otherwise specified*, *self-capacities disturbance*, and *affect regulation/affect tolerance* yield virtually no results. Thus, treatment of complex trauma presentations must be adapted from the literature on PTSD, borderline personality disorder, and dissociation and most often involves targeting the various symptom clusters rather than specific diagnostic categories.[33]

Pharmacotherapy of Posttraumatic Stress Disorder

It must be noted that pharmacotherapy for PTSD is typically not curative and that generally the amount of symptom reduction obtained with psychotherapy is larger than that associated with pharmacology.[45,46] On the other hand, several medications have been found to be useful in the treatment of PTSD and other potential complex trauma effects.[33] Because there is less research available on the biological treatment of trauma symptoms in adolescents, this review is limited to pharmacotherapy with adults.

Antidepressants

The SSRIs are generally considered first-line pharmacotherapy for PTSD.[28] At this time, the only medications approved by the Food and Drug Administration for the treatment of PTSD are SSRIs: sertraline and paroxetine. Randomized placebo-controlled trials (RCTs) of SSRIs including sertraline, paroxetine, and fluoxetine[47–49]

have demonstrated efficacy across all 3 *DSM-IV* PTSD symptom clusters (re-experiencing, hyperarousal, and avoidance) and are now widely prescribed for posttraumatic stress. As SSRIs are also the first-line treatment of other anxiety and depressive disorders, SSRIs may be used to address this broader spectrum of comorbidity in complex trauma.

Other antidepressants also have been investigated, with mixed results. Venlafaxine[50] and mirtazapine[51] seem promising, whereas bupropion shows less potential efficacy.[52] Monoamine oxidase inhibitors and tricyclic antidepressants seem to be similarly equivocal[53,54]; given their high number of side effects, as well as lethality in overdose, these medications are not currently recommended for PTSD.

Benzodiazepines

Benzodiazepines are generally contraindicated for traumatized individuals, except when they are necessary for downregulation of severe acute anxiety or panic.[55] Research with benzodiazepines has overwhelmingly indicated that they are specifically unhelpful in ameliorating the symptoms of PTSD[56] and may in fact increase the risk for later PTSD.[57,58] In complex trauma presentations, particular caution is warranted when prescribing benzodiazepines, given their tolerance effects and addictive potential.[33]

Mood stabilizers

Data on mood stabilizers in PTSD are sparse; most studies involve small sample sizes, are not randomized, and results are equivocal. Researchers have investigated lamotrigine,[59] divalproex sodium,[60] carbamazepine,[61] and tiagabine.[62] Mood stabilizers are not considered a primary treatment of PTSD.

Adrenergic agents

Both alpha- and beta-adrenergic blocking agents have been investigated in the treatment of PTSD. Although some open trials indicate promise,[63,64] data from larger studies suggest that beta-blockers are not effective in either preventing PTSD or ameliorating symptoms.[65,66] However, several open trials of clonidine[67,68] and RCTs of prazosin[69,70] indicate that alpha-blockade is useful for improving sleep and reducing nightmares and trauma-related dream content in PTSD.

Antipsychotics

There has been much interest in antipsychotics for PTSD; despite the limited evidence of effectiveness, they are used with some frequency in clinical practice. Of the second-generation antipsychotics, risperidone and olanzapine have been evaluated in RCTs. Initial studies of risperidone were promising[71,72]; however, in a recent 6-month multicenter RCT with more than 300 subjects, risperidone was not associated with a reduction in symptoms of anxiety, depression, or PTSD.[73] Similarly, although an initial RCT of olanzapine as an adjunctive treatment indicated moderate response in symptoms,[74] a second found no benefit over placebo.[75] The single RCT of olanzapine monotherapy[76] did show a robust response in 70% of the treated individuals but has not been replicated.

The aforementioned results are interpreted variously, with some reviewers suggesting that antipsychotics show promise for the treatment of PTSD,[77] whereas others conclude that there is not a role for antipsychotics as a first-line treatment.[28] According to the American Psychiatric Association's (APA) guidelines,[55] antipsychotics should be reserved for individuals with comorbid psychosis or overwhelming agitation and aggression.

Pharmacotherapy of Dissociation

The literature on pharmacotherapy of dissociative symptoms is extremely sparse. Symptoms such as derealization, depersonalization, and time loss are generally considered to be nonresponsive to medications. Although this is largely correct, there are some limited data on pharmacotherapy for dissociative symptoms. Several open trials[78] and one RCT[79] have suggested that naltrexone may help to reduce dissociative symptoms and posttraumatic flashbacks in borderline patients. Others have described its effectiveness in reducing self-injurious behavior in dissociative identity disorder.[80]

Initial open trials suggested that SSRIs might be effective for treating dissociation[81]: however, an RCT of fluoxetine did not support this practice.[82] Similarly, although open trials suggested the antiepileptic lamotrigine might be helpful for dissociative symptoms,[83] an RCT[84] did not indicate efficacy. In the lone study of an antipsychotic in dissociation, aripiprazole was found to be helpful in 3 cases of depersonalization disorder.[85]

Pharmacotherapy for Self-capacity Disturbance

There is virtually no literature on pharmacologic treatment of those complex posttraumatic outcomes characterized earlier as self-capacity disturbance. The only data available in the larger literature involves the pharmacotherapy of BPD, which also involves altered self-capacities. BPD is one of the most difficult psychiatric conditions to treat, and almost every medication in the psychopharmacotherapy armamentarium has been investigated.

Guidelines for the treatment of BPD vary: the APA recommends mood stabilizers and antipsychotics to treat aggression and transient paranoid ideation,[86] whereas the National Institute for Clinical Excellence recommends that pharmacotherapy of specific borderline symptoms, in the absence of comorbidities, be avoided.[87] Two extensive reviews of pharmacotherapy for BPD indicate, respectively, the following: “Notably, no evidence was found for several borderline personality disorder symptoms – avoidance of abandonment, chronic feelings of emptiness, identity disturbance and dissociation”[88] and “In particular, no drugs were found efficacious to treat core domains of BPD.”[89]

Despite the aforementioned information, there are a handful of RCTs indicating that there might be a role for medications in the treatment of 2 domains relevant to complex trauma: rejection sensitivity and interpersonal relatedness. The mood stabilizer divalproex sodium was found in 2 studies to be helpful for social functioning in BPD[90] and for interpersonal sensitivity,[91] respectively. Similarly, the antiepileptic topiramate decreased levels of both somatization and interpersonal sensitivity[92] and the antipsychotic olanzapine was superior to placebo in improving measures of interpersonal sensitivity.[93]

SUMMARY

Exposure to complex trauma is both relatively common and potentially associated with a range of psychological outcomes, including a decreased threshold for PTSD and a cluster of symptoms especially characterized by identity disturbance, affect dysregulation, relational difficulties, and dysfunctional behaviors. Empirical studies indicate that both psychological and pharmacologic interventions can be helpful, although psychotherapy seems to be markedly more effective for self-related symptoms.

Clinical Vignette: Young Woman with Complex Posttraumatic Symptoms

M.K. is a 24-year-old single Caucasian woman brought to a university-based emergency department (ED) by police following an overdose with twenty 0.5-mg tablets of lorazepam (Ativan). ED records indicate 4 previous ED admissions for suicidal behavior, generally precipitated by relational strife with romantic partners. She was hospitalized following 2 of these incidents and in both cases was discharged after 72 hours. Discharge diagnoses were, variously, borderline personality disorder, posttraumatic stress disorder, mood disorder not otherwise specified, and substance use disorder. On interview, M.K. reports a childhood history of sexual abuse by her stepfather and oldest stepbrother, from 7 to 16 years of age, and psychological neglect combined with an episode of physical abuse by her mother. She describes herself as always in trouble from her early teens until the present, reporting chronic methamphetamine abuse, truancy, running away from home, physical fights with other girls, and relatively indiscriminant sexual behavior since 16 years of age, soon after being gang-raped by her ex-boyfriend and 2 of his friends. Her last methamphetamine use was reportedly 1 week before her ED admission. On mental status examination, she appeared alert and oriented but somewhat dissociated, with depressed mood and constricted/numb affect. She reported a history of chronic self-cutting, bulimia, hypervigilance around men, and flashbacks of the gang rape and an especially violent sexual assault by her stepbrother.

M.K. was referred to a trauma-specialized female psychologist and a psychiatrist who started her on sertraline hydrochloride (Zoloft), with limited supplies of medication because of her recent history of suicide attempts. After a relatively rocky beginning, characterized by rejection sensitivity and distrust of her therapist, she seems to be gaining from the affect regulation training component of therapy, which has reduced her self-injurious and dysfunctional behaviors, and has experienced some lifting of her depression. After 3 months of therapy, however, she is still unable to engage in significant therapeutic exposure or cognitive processing of her trauma history.

REFERENCES

1. Briere J, Spinazzola J. Phenomenology and psychological assessment of complex posttraumatic states. J Trauma Stress 2005;18:401–12.
2. Cook A, Spinazzola J, Ford J, et al. Complex trauma in children and adolescents. Psychiatr Ann 2005;35:390–8.
3. Briere J, Kaltman S, Green BL. Accumulated childhood trauma and symptom complexity. J Trauma Stress 2008;21:223–6.
4. Cloitre M, Stolbach BC, Herman JL, et al. A developmental approach to complex PTSD. Childhood and adult cumulative trauma as predictors of symptom complexity. J Trauma Stress 2009;22:399–408.
5. Hodges M, Godbout N, Briere J, et al. Cumulative trauma and symptom complexity in children: a path analysis. Child Abuse Negl 2013;37:891–8.
6. American Psychiatric Association. Diagnostic and statistical manual of mental disorders. 5th edition. Washington, DC: American Psychiatric Publishing; 2013.
7. Breslau N, Chilcoat HD, Kessler RC, et al. Previous exposure to trauma and PTSD effects of subsequent trauma: results from the Detroit area survey of trauma. Am J Psychiatry 1999;156:902–7.
8. Karam EG, Friedman MJ, Hill ED, et al. Cumulative traumas and risk thresholds: 12-month PTSD in the World Mental Health (WMH) surveys. Depress Anxiety 2014;31:130–42.
9. Kilpatrick DG, Resnick HS, Milanak ME, et al. National estimates of exposure to traumatic events and PTSD prevalence using DSM-IV and DSM-5 criteria. J Trauma Stress 2013;26:537–47.

10. Walsh K, Danielson CK, McCauley JL, et al. National prevalence of posttraumatic stress disorder among sexually revictimized adolescent, college, and adult household-residing women. Arch Gen Psychiatry 2012;69:935–42.
11. Briere J. Psychological assessment of adult posttraumatic states: phenomenology, diagnosis, and measurement. 2nd edition. Washington, DC: American Psychological Association; 2004.
12. Classen CC, Palesh OG, Aggarwal R. Sexual revictimization: a review of the empirical literature. Trauma Violence Abuse 2005;6:103–29.
13. Ford JD. Treatment implications of altered affect regulation and information processing following child maltreatment. Psychiatr Ann 2005;35:410–9.
14. Breslau N, Davis GC, Andreski P, et al. Traumatic events and posttraumatic stress disorder in an urban population of young adults. Arch Gen Psychiatry 1991;48:216–22.
15. Nickerson A, Aderka IM, Bryant RA, et al. The relationship between childhood exposure to trauma and intermittent explosive disorder. Psychiatry Res 2012;197:128–34.
16. Briere J, Hodges M, Godbout N. Traumatic stress, affect dysregulation, and dysfunctional avoidance: a structural equation model. J Trauma Stress 2010;23:767–74.
17. Ouimette P, Brown PJ. Trauma and substance abuse: causes, consequences, and treatment of comorbid disorders. Washington, DC: American Psychological Association; 2003.
18. Briere J, Godbout N, Dias C. Trauma, hyperarousal, and suicidality: a path analysis. J Trauma Dissociation 2015;16(2):153–69.
19. Briere J, Scott C, Weathers FW. Peritraumatic and persistent dissociation in the presumed etiology of PTSD. Am J Psychiatry 2005;162:2295–301.
20. Complex Trauma Taskforce. The ISTSS Expert Consensus treatment guidelines for complex PTSD in adults. 2012. Available at: http://www.istss.org/ISTSS_Main/media/Documents/ISTSS-Expert-Concesnsus-Guidelines-for-Complex-PTSD-Updated-060315.pdf. Accessed June 11, 2015.
21. Follette VM, Polusny MA, Bechtle AE, et al. Cumulative trauma: the impact of child sexual abuse, adult sexual assault, and spouse abuse. J Trauma Stress 1996;9:25–35.
22. Herman JL. Complex PTSD: a syndrome in survivors of prolonged and repeated trauma. J Trauma Stress 1992;5:377–92.
23. van der Kolk BA, Roth S, Pelcovitz D, et al. Disorders of extreme stress: the empirical foundation of a complex adaptation to trauma. J Trauma Stress 2005;18:389–99.
24. Gunderson J. Borderline personality disorder. N Engl J Med 2011;364:2037–42.
25. van der Kolk BA. Developmental trauma disorder: towards a rational diagnosis for chronically traumatized children. Psychiatr Ann 2005;35:401–8.
26. World Health Organization. International statistical classification of diseases and related health problems (10th revision). Geneva (Switzerland): World Health Organization; 1992.
27. Foa EB, Hembree EA, Rothbaum BO. Prolonged exposure therapy for PTSD: emotional processing of traumatic experiences: therapist guide. New York: Oxford University Press; 2007.
28. Friedman MJ, Davidson JR, Stein DJ. Psychopharmacotherapy for adults. In: Foa EB, Keane TM, Friedman MJ, et al, editors. Effective treatments for PTSD: practice guidelines from the International Society for Traumatic Stress Studies. New York: Guilford; 2009. p. 245–68.

29. Foa EB, Keane TM, Friedman MJ, et al, editors. Effective treatments for PTSD: practice guidelines from the International Society for Traumatic Stress Studies. 2nd edition. New York: The Guilford Press; 2008.
30. Roberts NP, Kitchiner NJ, Kenardy J, et al. Early psychological interventions to treat acute traumatic stress symptoms. Cochrane Database Syst Rev 2010;(3):CD007944.
31. Resick PA, Schnicke MK. Cognitive processing therapy for rape victims: a treatment manual. Newbury Park (CA): Sage; 1993.
32. Shapiro F. Eye movement desensitization and reprocessing: basic principles, protocols, and procedures. New York: Guilford; 1995.
33. Briere J, Scott C. Principles of trauma therapy: a guide to symptoms, evaluation, and treatment. DSM-5 update. 2nd edition. Thousand Oaks (CA): Sage; 2014.
34. Blaustein ME, Kinniburgh KM. Treating traumatic stress in children and adolescents: how to foster resilience through attachment, self-regulation, and competency. New York: Guilford Publications; 2010.
35. Briere J, Lanktree CB. Treating complex trauma in adolescents and young adults. Thousand Oaks (CA): Sage; 2011.
36. Cloitre M, Stovall-McClough KC, Nooner K, et al. Treatment for PTSD related to childhood abuse: a randomized controlled trial. Am J Psychiatry 2010;167:915–24.
37. Ford JD, Russo E. A trauma-focused, present-centered, emotion self-regulation approach to integrated treatment for PTSD and addiction. Am J Psychother 2006;60:335–55.
38. Linehan MM. Cognitive-behavioral treatment of borderline personality disorder. New York: Guilford; 1993.
39. Lampe A, Mitmansgruber H, Gast U, et al. [Treatment outcome of psychodynamic trauma therapy in an inpatient setting]. [Therapieevaluation der Psychodynamisch Imaginativen Traumatherapie (PITT) im stationären Setting]. Neuropsychiatr 2008;22:189–97 [in German].
40. Schottenbauer MA, Glass CR, Arnkoff DB, et al. Contributions of psychodynamic approaches to treatment of PTSD and trauma: a review of the empirical treatment and psychopathology literature. Psychiatry 2008;71:13–34.
41. Lambert MJ, Barley DE. Research summary on the therapeutic relationship and psychotherapy outcome. Psychother Theor Res Pract Train 2001;38:357–61.
42. Habib M, Labruna V, Newman J. Complex histories and complex presentations: implementation of a manually-guided group treatment for traumatized adolescents. J Fam Violence 2013;28:717–28.
43. Linehan MM, Comtois KA, Murray AM. Two-year randomized controlled trial and follow-up of dialectical behavior therapy vs therapy by experts for suicidal behaviors and borderline personality disorder. Arch Gen Psychiatry 2006;63:757–66.
44. Spinazzola J, Blaustein M, van der Kolk BA. Posttraumatic stress disorder treatment outcome research: the study of unrepresentative samples? J Trauma Stress 2005;18(5):425–36.
45. Cahill SP, Rothbaum BO, Resick PA, et al. Cognitive behavioral therapy for adults. In: Foa EB, Keane TM, Friedman MJ, et al, editors. Effective treatments for PTSD: practice guidelines from the International Society for Traumatic Stress Studies. New York: Guilford; 2009. p. 139–222.
46. Cukor J, Difede J. Review: psychotherapy, somatic therapy and pharmacotherapy are all more effective than control for the treatment of PTSD. Evid Based Ment Health 2014;17(1):7. Accessed January 21, 2015.

47. Davidson JRT, Rothbaum BO, van der Kolk BA, et al. Multi-center, double-blind comparison of sertraline and placebo in the treatment of posttraumatic stress disorder. Arch Gen Psychiatry 2001;58:485–92.
48. Stein DJ, Davidson J, Seedat S, et al. Paroxetine in the treatment of posttraumatic stress disorder: pooled analysis of placebo-controlled studies. Expert Opin Pharmacother 2003;4:1829–38.
49. Martenyi F, Soldatenkova V. Fluoxetine in the acute treatment and relapse prevention of combat-related post-traumatic stress disorder: analysis of the veteran group of a placebo-controlled, randomized clinical trial. Eur Neuropsychopharmacol 2006;16:340–9.
50. Pae CU, Lim HK, Ajwani N, et al. Extended-release formulation of venlafaxine in the treatment of post-traumatic stress disorder. Expert Rev Neurother 2007;7(6):603–15.
51. Davidson JRT, Weisler RH, Butterfield MI, et al. Mirtazapine vs placebo in posttraumatic stress disorder: a pilot trial. Biol Psychiatry 2003;53:188–91.
52. Becker ME, Hertzberg MA, Moore SD, et al. A placebo-controlled trial of bupropion SR in the treatment of chronic posttraumatic stress disorder. J Clin Psychopharmacol 2007;27:193–7.
53. Frank JB, Kosten TR, Giller EL, et al. A randomized clinical trial of phenelzine and imipramine for posttraumatic stress disorder. Am J Psychiatry 1988;145:1289–2291.
54. Reist C, Kauffmann CD, Haier RJ, et al. A controlled trial of desipramine in 18 men with posttraumatic stress disorder. Am J Psychiatry 1989;146:513–6.
55. American Psychiatric Association (APA). Practice guideline for the treatment of patients with acute stress disorder and posttraumatic stress disorder. Psychiatry Online. 2004. Available at: http://psychiatryonline.org/pb/assets/raw/sitewide/practice_guidelines/guidelines/acutestressdisorderptsd.pdf. Accessed June 11, 2015.
56. Braun P, Greenberg D, Dasberg H, et al. Core symptoms of posttraumatic stress disorder unimproved by alprazolam treatment. J Clin Psychiatry 1990;51:236–8.
57. Gelpin E, Bonne O, Peri T, et al. Treatment of recent trauma survivors with benzodiazepines: a prospective study. J Clin Psychiatry 1996;57:390–4.
58. Girard TD, Shintani AK, Jackson JC, et al. Risk factors for post-traumatic stress disorder symptoms following critical illness requiring mechanical ventilation: a prospective cohort study. Crit Care 2007;11:28.
59. Hertzberg MA, Butterfield MI, Feldman ME, et al. A preliminary study of lamotrigine for the treatment of posttraumatic stress disorder. Biol Psychiatry 1999;45:1226–9.
60. Hamner MB, Faldowski RA, Robert S, et al. A preliminary controlled trial of divalproex in posttraumatic stress disorder. Ann Clin Psychiatry 2009;21:89–94.
61. Keck P, McElroy S, Friedman L. Valproate and carbamazepine in the treatment of panic and posttraumatic stress disorders, withdrawal states, and behavioral dyscontrol syndromes. J Clin Psychopharmacol 1992;12:368–418.
62. Connor KM, Davidson JR, Weisler RH, et al. Tiagabine for posttraumatic stress disorder: effects of open-label and double-blind discontinuation treatment. Psychopharmacology (Berl) 2006;184:21–5.
63. Jiménez JP, Romero CC, Diéguez NG, et al. Pharmacological treatment of acute stress disorder with propranolol and hypnotics. Actas Esp Psyquiatr 2007;35(6):351–8.
64. Vaiva G, Ducrocq F, Jezequel K, et al. Immediate treatment with propranolol decreases posttraumatic stress disorder two months after trauma. Biol Psychiatry 2003;52:947–9.

65. Pitman RK, Sanders KM, Zusman RM. Pilot study of secondary prevention of posttraumatic stress disorder with propranolol. Biol Psychiatry 2002;51:189–92.
66. Stein MB, Kerridge C, Dimsdale JE, et al. Pharmacotherapy to prevent PTSD: results from a randomized controlled proof-of-concept trial in physically injured patients. J Trauma Stress 2007;20(6):923–32.
67. Kolb LC, Burris BC, Griffiths S. Propranolol and clonidine in the treatment of the chronic post-traumatic stress disorders of war. In: van der Kolk BA, editor. Posttraumatic stress disorder: psychological and biological sequelae. Washington, DC: American Psychiatric Press; 1984. p. 98–108.
68. Kinzie JD, Leung P. Clonidine in Cambodian patients with posttraumatic stress disorder. J Nerv Ment Dis 1989;177:546–50.
69. Taylor FB, Martin P, Thompson C, et al. Prazosin effects on objective sleep measures and clinical symptoms in civilian trauma posttraumatic stress disorder: a placebo-controlled study. Biol Psychiatry 2008;63:629–32.
70. Raskind MA, Peskind ER, Kanter ED, et al. Reduction of nightmares and other PTSD symptoms in combat veterans by prazosin: a placebo-controlled study. Am J Psychiatry 2003;160:371–3.
71. Monnelly EP, Ciraulo DA. Risperidone effects on irritable aggression in posttraumatic stress disorder. J Clin Psychopharmacol 1999;19:377–8.
72. Rothbaum BO, Killeen TK, Davidson JR, et al. Placebo-controlled trial of risperidone augmentation for selective serotonin reuptake inhibitor-resistant civilian posttraumatic stress disorder. J Clin Psychiatry 2008;69:520–5.
73. Krystal JH, Rosenheck RA, Cramer JA. Adjunctive risperidone treatment for antidepressant-resistant symptoms of chronic military service-related PTSD: a randomized trial. JAMA 2011;306:493–502.
74. Stein MB, Kline NA, Matloff JL. Adjunctive olanzapine for SSRI-resistant combat-related PTSD: a double-blind, placebo-controlled study. Am J Psychiatry 2002; 159:1777–9.
75. Butterfield MI, Becker ME, Connor KM, et al. Olanzapine in the treatment of posttraumatic stress disorder: a pilot study. Int Clin Psychopharmacol 2001;16: 197–203.
76. Carey P, Suliman S, Ganesan K, et al. Olanzapine monotherapy in posttraumatic stress disorder: efficacy in a randomized, double-blind, placebo-controlled study. Hum Psychopharmacol 2012;27(4):386–91.
77. Wang HR, Woo YS, Bahk WM. Atypical antipsychotics in the treatment of posttraumatic stress disorder. Clin Neuropharmacol 2013;36(6):216–22.
78. Bohus MJ, Landwehrmeyer GB, Stiglmayr CE, et al. Naltrexone in the treatment of dissociative symptoms in patients with borderline personality disorder: an open-label trial. J Clin Psychiatry 1999;60:598–603.
79. Schmahl C, Kleindienst N, Limberger M, et al. Evaluation of naltrexone for dissociative symptoms in borderline personality disorder. Int Clin Psychopharmacol 2012;27(1):61–8.
80. Simeon D, Knutelska M. An open trial of naltrexone in the treatment of depersonalization disorder. J Clin Psychopharmacol 2005;25(3):267–70.
81. Preve M, Mula M, Cassano G, et al. Venlafaxine in somatopsychic and autopsychic depersonalization. Prog Neuropsychopharmacol Biol Psychiatry 2011;35(8): 1808–9.
82. Simeon D, Guralnik O, Schmeidler J, et al. Fluoxetine therapy in depersonalisation disorder: randomised controlled trial. Br J Psychiatry 2004;185:31–6.
83. Sierra M, Phillips ML, Lambert MV, et al. Lamotrigine in the treatment of depersonalization disorder. J Clin Psychiatry 2001;62(10):826–7.

84. Sierra M, Phillips ML, Ivin G, et al. A placebo-controlled, cross-over trial of lamotrigine in depersonalization disorder. J Psychopharmacol 2003;17(1):103–5.
85. Uguz F, Sahingoz M. Aripiprazole in depersonalization disorder comorbid with major depression and obsessive-compulsive disorder: 3 cases. Clin Neuropharmacol 2014;37(4):125–7.
86. American Psychiatric Association. Practice guideline for the treatment of patients with borderline personality disorder. Washington, DC: Author; 2001.
87. National Institute for Clinical Excellence (NICE). Borderline personality disorder: treatment and management. 2009. Available at: https://www.nice.org.uk/guidance/cg78/resources/guidance-borderline-personality-disorder-pdf. Accessed January 21, 2015.
88. Lieb K, Völlm B, Rücker G, et al. Pharmacotherapy for borderline personality disorder: Cochrane systematic review of randomised trials. Br J Psychiatry 2010; 196(1):4–12.
89. Bellino S, Rinaldi C, Bozzatello P, et al. Pharmacotherapy of borderline personality disorder: a systematic review for publication purpose. Curr Med Chem 2011; 18(22):3322–9.
90. Hollander E, Allen A, Lopez RP, et al. A preliminary double-blind, placebo-controlled trial of divalproex sodium in borderline personality disorder. J Clin Psychiatry 2001;62(3):199–203.
91. Frankenburg FR, Zanarini MC. Divalproex sodium treatment of women with borderline personality disorder and bipolar II disorder: a double-blind placebo-controlled pilot study. J Clin Psychiatry 2002;63(5):442–6.
92. Loew TH, Nickel MK, Muehlbacher M, et al. Topiramate treatment for women with borderline personality disorder: a double-blind, placebo-controlled study. J Clin Psychopharmacol 2006;26(1):61–6.
93. Zanarini MC, Frankenberg FR. Olanzapine treatment of female borderline personality disorder patients: a double blind, placebo-controlled pilot study. J Clin Psychiatry 2001;62(11):849–54.