CLINICIAN'S TRAUMA UPDATE

CTU-ONLINE | www.ptsd.va.gov

ISSUE 15(6)
DECEMBER 2021

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TREATMENT

Written Exposure Therapy shows effectiveness in routine care

Written Exposure Therapy for PTSD (WET) was designed as a 5-session, trauma-focused treatment that does not require homework between sessions. The treatment involves writing detailed accounts of a traumatic experience and its impact. A randomized clinical trial has already demonstrated its non-inferiority to CPT (see the February 2018 *CTU-Online*), and a team led by National Center investigators recently examined its effectiveness when delivered in routine VA care. Participants included 277 Veterans (76.2% male, 23.4% female, 0.4% other) with PTSD who received care at 24 VA sites across the country. Veterans initially could choose to receive care in person (38.3%) or via telehealth (44.0%); some received both either by preference or due to COVID-19 (17.7%). Clinicians (N = 83) trained in WET administration at a virtual workshop and participated in weekly phone consultation. Veterans self-reported PTSD symptoms via the PCL-5 at each session. PCL-5 scores dropped by an average of 12.1 points across the treatment, a large effect (d = .84), which was consistent with findings in the original RCT. Factors such as patient gender and trauma type did not moderate the outcome, but dropout was lower among Veterans participating in telehealth (21.3% vs 34.0% for in-person care). The findings add to the growing support for WET as a trauma-focused intervention that can be delivered in person or via telehealth.

Read the article: https://www.ptsd.va.gov/professional/articles/article-pdf/id1582525.pdf

LoSavio, S. T., Worley, C. B., Aajmain, S. T., Rosen, C. S., Wiltsey Stirman, S., & Sloan, D. M. (2021). Effectiveness of written exposure therapy for posttraumatic stress disorder in the Department of Veterans Affairs Healthcare System. *Psychological Trauma*. Advance online publication. PTSDpubs ID: 1582525

Two novel delivery modalities of intensive PE show promise

Evidence-based therapies such as PE can be effectively delivered in a massed (see the August 2020 *CTU-Online,* for a review) or online format (see the February 2021 *CTU-Online*). These alternative delivery modalities may increase access to evidence-based treatment for PTSD. Two recent studies tested new versions of these strategies for delivering PE.

A team led by investigators from the Karolinska Institute in Stockholm, Sweden conducted a pilot trial of Condensed Internet-Delivered Prolonged Exposure (CIPE) in a sample of recent trauma survivors. CIPE is a 3-week therapist-guided online intervention based on the PE protocol. The intervention requires approximately six hours per week and includes daily email contact with a psychologist who provides support and feedback to a patient on their progress. Participants were 102 Swedish residents (82% women) exposed to a traumatic event in the past two months and demonstrating some symptoms of posttraumatic stress (PCL-5 ≥ 10) who were randomized to CIPE or a waitlist condition. Participants receiving CIPE reported larger reductions in posttraumatic stress symptoms than the waitlist group at post-treatment (PCL-5 change = 16.3 vs. 5.6, respectively; d =. 7) and 1 month follow-up (PCL-5 change 20.4 vs. 6.7, respectively, d = .8). Improvements in the CIPE group were sustained at 6-month follow-up. Although the study did not include an active control group, these results suggest that CIPE is a promising early intervention for reducing posttraumatic stress symptoms with minimal therapist involvement.

At another program examining novel delivery of PE, investigators at the Red Sox Foundation and Massachusetts General Hospital Home Base Program conducted an uncontrolled pilot study of a

four-day weekend-based PE intervention. Participants were 17 Veterans and Service Members with PTSD (76% male, 82% White) who completed the program in cohorts of 3-4 participants. The program includes group psychoeducation and in-vivo exposure, individual imaginal exposure with a therapist, and self-guided imaginal exposure between sessions, for a total of 13 hours of exposure therapy. Additional program elements include case management, mindfulness and distress tolerance skills groups, peer support, and group physical fitness. From pre- to post-treatment, participants had significant reductions in self-reported PTSD symptoms (d = 1.2) and depression (d = .85). Additionally, 77% had a ≥ 10-point reduction on the PCL-5 and 47% fell below the cutoff for probable PTSD (i.e., < 33). For participants who completed follow-up, effects remained large at 1-month and 3-months (d = 1.2 and 1.7, respectively). Although the study is limited by a small sample and lack of a comparison group, the effects are comparable to other Veteran studies of PTSD treatments and suggest that PE can be delivered effectively in a 4-day format, which is even shorter than the 2- and 3-week intensive outpatient formats that have been implemented across the country (see the October 2017 *CTU-Online*).

These studies demonstrate that PE can be delivered effectively in formats that increase the efficiency of treatment delivery and could expand availability. Future research comparing these treatments to active control groups in more diverse samples will help to further explore the efficacy of these novel treatments to increase options and access to evidence-based PTSD care.

Read the articles:

https://doi.org/10.1017/S0033291721003706

Bragesjö, M., Arnberg, F. K., Olofsdotter Lauri, K., Aspvall, K., Särnholm, J., & Andersson, E. (2021). Condensed internet-delivered prolonged exposure provided soon after trauma: A randomised trial. *Psychological Medicine.* Advance online publication. PTSDpubs ID: 1583152

https://doi.org/10.1016/j.jbct.2021.02.001

Goetter, E. M., Tanev, K. S., Lynch, E., Lento, R., Blackburn, A. M., Mamon, D., . . . Spencer, T. (2021). An accelerated, weekend-based, prolonged exposure therapy program for veterans and service members with posttraumatic stress disorder. *Journal of Behavioral and Cognitive Therapy, 31*(3), 285-289. PTSDpubs ID: 1583388

Sudden gains in CPT and WET

A sizable minority of patients experience large, rapid improvements during PTSD treatment, which are associated with better overall outcomes (see the June 2013 *CTU-Online*). Investigators from the National Center for PTSD have examined sudden gains during CPT and WET by analyzing data from a non-inferiority RCT that compared WET to CPT (see the February 2018 *CTU-Online*). WET patients (N = 63) wrote about their index trauma for 30 minutes at 5 weekly sessions; CPT (N = 63) included 12 weekly sessions with the written trauma account. Based on a validated algorithm, sudden gains were defined as stable reductions (e.g., did not reverse by 50% within one session) of ≥16 points on the PCL-5. Overall, 19% of participants (N = 24) reported sudden gains (M = 21.5 points on the PCL-5). Neither the frequency nor magnitude of sudden gains differed between WET and CPT. Sudden gains were observed earlier in WET (M session = 2.7) than CPT (M session = 5.6). Regardless of treatment condition, participants who experienced sudden gains had better CAPS-5 outcomes at post-treatment than those who did not. Exploratory analyses of cognitive, emotional, demographic, and symptom severity predictors revealed that only greater expression of negative emotions in the first trauma narrative predicted sudden gains in WET and CPT. A challenge for future research is to further examine who is most likely to experience sudden gains and why, with a goal of improving treatment outcome.

Read the article: https://www.ptsd.va.gov/professional/articles/article-pdf/id1583556.pdf

Sloan, D. M., Thompson-Hollands, J., Hayes, A. M., Lee, D. J., Alpert, E., & Marx, B. P. (2021). Sudden gains in two trauma-focused treatments for posttraumatic stress disorder. *Behavior Therapy.* Advance online publication. PTSDpubs ID: 1583556

Search for new medications to treat PTSD yields mixed results

Relatively few medications have shown benefit for treating PTSD. The traditional pathway for developing new medications begins with preclinical animal studies followed by a series of clinical trials. Two recent studies demonstrate the early and later phases of an alternative approach to medication discovery. This approach aims to identify agents in use for other conditions that might also help treat PTSD, either because they are mechanistically relevant to PTSD or they show benefit in retrospective data analyses.

In one study, investigators at the White River Junction VA Medical Center performed data mining of the VA's electronic medical record system, using data from a previously defined cohort of all patients with a clinical diagnosis of PTSD between 1999 and 2019. The study identified patients who had started a new medication and had at least two PCL-5 scores, one prior to starting the medication and another at least 30 days later. Investigators then compared medication use in patients with clinically significant improvement in PTSD symptoms (≥15-point decrease in PCL-5 score) versus those without improvement (< 7-point decrease or worsening in PCL-5 score). Several antivirals used to treat hepatitis C were identified as having an association with PTSD improvement. Although the investigators controlled for confounding by using propensity score matching, a next step is to test these antivirals as a treatment for PTSD in an RCT.

A multisite, randomized, placebo-controlled trial led by investigators from the University of California San Diego and McLean Hospital tested the antihypertensive agent losartan in 149 individuals with PTSD. This medication was chosen because losartan's effects on the cardiovascular system suggest potential effects on the stress response system and medications like losartan facilitate fear extinction in animals and humans. Also, a prior epidemiological study found that taking antihypertensive medications, including losartan, was associated with lower levels of PTSD symptoms. In the current study there was no difference in change in PTSD severity as measured by the CAPS-5 between the losartan and the placebo groups after 10 weeks of treatment. Both groups showed a relatively large decrease in symptoms (about a 16-point decrease in each group). A possible next step is to explore whether antihypertensives are effective in only some subgroups of patients, as suggested by a study that found the antihypertensive prazosin was more effective than placebo

for treating PTSD only in patients with baseline systolic blood pressure > 110 mg Hg (see the August 2013 *CTU-Online*).

These studies exemplify an alternative approach to identifying novel medications for PTSD that is not based on preclinical animal studies. Although one study did not support the antihypertensive losartan as a potential PTSD intervention, the other identified antivirals used to treat hepatitis C as deserving of further study. Going forward, studies like these will hopefully contribute to the development of better pharmacological interventions for PTSD.

Read the articles:

https://doi.org/10.1016/j.biopsych.2021.05.012

Stein, M. B., Jain, S., Simon, N. M., West, J. C., Marvar, P. J., Bui, E., . . . Ressler, K. J. (2021). Randomized, placebo-controlled trial of the angiotensin receptor antagonist losartan for posttraumatic stress disorder. *Biological Psychiatry, 90*(7), 473-481. PTSDpubs ID: 1574095

https://www.ptsd.va.gov/professional/articles/article-pdf/id1580991.pdf

Shiner, B., Forehand, J. A., Rozema, L., Kulldorff, M., Watts, B. V., Trefethen, M., . . . Gradus, J. L. (2021). Mining clinical data for novel PTSD medications. *Biological Psychiatry.* Advance online publication. PTSDpubs ID: 1580991

Exposure-based psychotherapy maintains gains at two-year follow-up

Despite the substantial evidence on the effectiveness of trauma-focused psychotherapy, few studies have reported on the long-term efficacy of these treatments. (For one exception, see the February 2012 *CTU-Online*; see also a meta-analysis in the August 2021 *CTU-Online*.) Investigators from University of New South Wales conducted a two-year follow-up of an earlier study testing brief- (CBT-B; $N = 44$) vs. long- exposure (CBT-L; $N = 49$) cognitive behavioral therapy in emergency service workers. Both CBT-B and CBT-L consisted of 12 individual sessions that included psychoeducation, cognitive restructuring, imaginal and in-vivo exposure, and skills training; CBT-B sessions were 60 minutes with 10 minutes of imaginal exposure, CBT-L sessions were 90 minutes with 40 minutes of imaginal exposure. The original waitlist control trial found that CBT-B and CBT-L were equally effective in reducing PTSD symptoms on the CAPS at 6-month follow-up. In the current two-year follow-up, CAPS scores were comparably reduced in both conditions relative to baseline (CBT-L, $d = 1.28$; CBT-B, $d = 1.28$). Similar percentages of participants met PTSD criteria at two-year follow-up (40.6% in CBT-B vs. 44.1% in CBT-L). Findings such as these are important because they demonstrate the durability of the effects of trauma-focused psychotherapy and show that recovery is possible.

Read the article: https://doi.org/10.1002/da.23214

Bryant, R. A., Kenny, L., Rawson, N., Cahill, C., Joscelyne, A., Garber, B., . . . Dawson, K. (2021). Two-year follow-up of trauma-focused cognitive behavior therapy for posttraumatic stress disorder in emergency service personnel: A randomized clinical trial. *Depression and Anxiety, 38*(11), 1131-1137. PTSDpubs ID: 1580866

Physical limitations linked to lower initiation, retention of psychotherapy for PTSD

Many individuals with PTSD also struggle with physical health problems that can profoundly impact quality of life. Investigators at the Minneapolis VA Medical Center analyzed how limitations in physical functioning impact access to evidence-based PTSD treatment. They examined outpatient and pharmacy records of Veterans with a documented PTSD diagnosis between June 2008 and July 2009 who had not engaged in mental health care in the previous year ($N = 6{,}765$, 17% women). Participants had completed the SF-12, a brief questionnaire that assesses physical and mental health functioning. Investigators coded limitations in moderate activities (e.g., climbing a few flights of stairs) and to what extent limitations impacted their social or occupational roles. Veterans who reported significant limitations were less likely than those with no limitations to start psychotherapy within six months of their PTSD diagnosis. Results remained in analyses that adjusted for PTSD severity and comorbid chronic health conditions. Those reporting limitations were also less likely to receive an adequate dose of treatment (≥8 sessions). In contrast, reporting physical limitations was not associated with starting medication or combined medication and psychotherapy for PTSD. Veterans with physical limitations face particular barriers in engaging in evidence-based PTSD psychotherapy. Understanding the specific challenges facing these Veterans (e.g., transportation barriers, additional psychological burden due to worse physical functioning) will be important to guide interventions.

Read the article: https://www.ptsd.va.gov/professional/articles/article-pdf/id1581034.pdf

Duan-Porter, W., Nelson, D. B., Ensrud, K. E., & Spoont, M. R. (2021). Physical functioning and mental health treatment initiation and retention for veterans with posttraumatic stress disorder: A prospective cohort study. *BMC Health Services Research, 21,* Article 1005. PTSDpubs ID: 1581034

Take NOTE

Intersection of Racism and PTSD: Assessment and Treatment of Racial Stress and Trauma

Investigators from the University of Ottawa reviewed the literature on racial trauma and the occurrence of PTSD resulting from the cumulative stress of discrimination, racism, and traumatic stressors in people of color.

Read the article: https://doi.org/10.1007/s40501-021-00250-2

Williams, M. T., Osman, M., Gran-Ruaz, S., & Lopez, J. (2021). Intersection of racism and PTSD: assessment and treatment of racial stress and trauma. *Current Treatment Options in Psychiatry.* PTSDpubs ID: 1580637

Transcranial Magnetic Stimulation for Post-traumatic Stress Disorder

Investigators at VA RR&D Center for Neurorestoration and Neurotechnology and Alpert School of Medicine at Brown University reviewed and evaluated the body of literature examining TMS treatment studies for TPSD.

Read the article: https://doi.org/10.1177/20451253211049921

Petrosino, N. J., Cosmo, C., Berlow, Y. A., Zandvakili, A., van 't Wout-Frank, M., & Philip, N. S. (2021). Transcranial magnetic stimulation for posttraumatic stress disorder. *Therapeutic Advances in Psychopharmacology, 11.* PTSDpubs ID: 1582796

MDMA-Assisted Psychotherapy for Treatment of Posttraumatic Stress Disorder: A Systematic Review with Meta-Analysis

A team led by investigators at University of Connecticut conducted a systematic review and meta-analysis of MDMA-assisted psychotherapy for PTSD.

Read the article: https://doi.org/10.1002/jcph.1995

Smith, K. W., Sicignano, D. J., Hernandez, A. V., & White, C. M. (2021). MDMA-assisted psychotherapy for treatment of posttraumatic stress disorder: A systematic review with meta-analysis. *Journal of Clinical Pharmacology.* Advance online publication. PTSDpubs ID: 1582092

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