CLINICIAN'S TRAUMA UPDATE

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TREATMENT

Supported employment helps Veterans with PTSD get jobs

Individual placement and support (IPS), which includes rapid engagement in competitive work that is matched to job preferences, improves employment outcomes among individuals with severe mental illness but has limited evidence of its effectiveness for individuals with PTSD. A team led by investigators at the Tuscaloosa VAMC conducted a multi-site randomized clinical trial to test whether IPS was more likely to lead to steady employment than transitional work among Veterans with PTSD. A total of 541 Veterans with PTSD were randomized to IPS or transitional work (i.e., vocational assessment and temporary, noncompetitive, minimum-wage work). The primary outcome was being a steady worker, defined as engaging in competitive work for at least 50% of the 18-month study duration. Compared to the transitional work group, Veterans who participated in IPS were more than twice as likely to be steady workers (38.7% versus 23.3%) and had higher total earnings than the (median $7290 versus $1886). Based on this and a smaller trial showing that IPS was effective for helping unemployed Veterans with PTSD obtain and sustain competitive employment, the authors recommend increasing access to IPS-supported employment.

Read the article: https://doi.org/10.1001/jamapsychiatry.2017.4472

Davis, L. L., Kyriakides, T. C., Suris, A. M., Ottomanelli, L. A., Mueller, L., Parker, P. E., . . . for the VA CSP #589 Veterans Individual Placement and Support Toward Advancing Recovery Investigators. (2018). Effect of evidence-based supported employment vs transitional work on achieving steady work among veterans with posttraumatic stress disorder: A randomized clinical trial. *JAMA Psychiatry*. PILOTS ID: 49881

Intensive Prolonged Exposure for complex PTSD

Prolonged Exposure can be effective when delivered in an intensive format (see the February 2018 *CTU-Online*). Recently, investigators from the Overwaal Centre of Expertise for Anxiety Disorders, OCD, and PTSD in the Netherlands conducted an open trial of intensive PE (iPE) for patients meeting symptoms of the ICD-11 diagnosis of complex PTSD. Participants were 73 men and women with DSM-IV PTSD related to multiple interpersonal traumas with a history of multiple treatment attempts. The iPE treatment included an intensive phase of three daily individual 90-minute sessions consisting of imaginal and *in vivo* exposures over four days. Participants subsequently received four weekly 90-minute PE booster sessions combined with imaginal and *in vivo* homework assignments. PTSD symptoms as assessed by the Clinician-Administered PTSD Scale improved following treatment (d = 1.2), and 71% of participants improved ≥ 10 points. These gains persisted through 6-month follow up. Notably, none of the participants dropped out during the intensive phase of treatment and there were few adverse events, suggesting that iPE is safe and effective in this complex population. Replication of these findings in a randomized trial including an active comparison group will provide more conclusive evidence about the efficacy of iPE.

Read the article: https://doi.org/10.1080/20008198.2018.1425574

Hendriks, L., Kleine, R. A. de, Broekman, T. G., Hendriks, G.-J., & Minnen, A. van. (2018). Intensive prolonged exposure therapy for chronic PTSD patients following multiple trauma and multiple treatment attempts. *European Journal of Psychotraumatology, 9*, 1425574. PILOTS ID: 50112

Seeking Safety vs. Creating Change, a new trauma-focused treatment

Seeking Safety is a widely-used present-focused CBT treatment for comorbid PTSD and substance use disorder (SUD). Because some individuals may want to more directly focus on trauma memories, and trauma-focused treatments have shown efficacy in this population (see the June 2017 *CTU-Online*), the developer of Seeking Safety developed a new intervention with a trauma focus—Creating Change—to see how it compared with Seeking Safety. A total of 52 Veterans with current DSM-IV PTSD and SUD were randomly assigned to Creating Change or Seeking Safety, which both included 17 1-hour sessions. PTSD and SUD diagnoses were assessed with the MINI. The investigators measured PTSD severity with the PTSD Checklist and assessed a number of secondary outcomes with other self-report measures. Sessions were well-attended and drop-out rates were low in both groups. PTSD and SUD symptoms improved in both groups over time, with no differences between groups. Pre-post change in PTSD and drug use was modest, although change in alcohol use was large. So do these findings suggest that Creating Change is comparable to Seeking Safety? Not yet. Because the investigators did not perform noninferiority or equivalence analyses, additional study is needed to determine if the treatments are equally effective.

Read the article: https://doi.org/10.1080/10826084.2018.1432653

Najavits, L. M., Krinsley, K., Waring, M. E., Gallagher, M. W., & Skidmore, C. (2018). A randomized controlled trial for veterans with PTSD and substance use disorder: *Creating Change versus Seeking Safety. Substance Use & Misuse*, 1–13. PILOTS ID: 49779

Preliminary support for a medication that could enhance Prolonged Exposure

According to the theoretical background for Prolonged Exposure, reductions in trauma-cued arousal are needed for optimal treatment outcomes. Yohimbine, an alpha-2 adrenergic receptor antagonist, increases arousal and facilitates fear extinction, so may improve outcomes for people with low arousal if used to augment PE. A double-blind, placebo-controlled RCT led by investigators at the Charleston VAMC explored the efficacy of a single dose of yohimbine in PE. Twenty-six male OEF/OIF Veterans with combat-related PTSD were randomized to receive either a one-time oral dose of yohimbine (21.1 mg; $n = 14$) or placebo ($n = 12$) one hour prior to their first imaginal exposure session (typically session 3), then completed the PE protocol as usual. Veterans receiving yohimbine showed greater subjective and objective ratings of arousal than the placebo group during a trauma-cued heart rate reactivity task one week after their yohimbine session. PTSD symptoms, distress, and depression decreased in both groups following treatment, but the yohimbine group had greater improvements in distress and depression. Despite the between-group differences in symptom change, there were no group differences in completion, drop-out, or PTSD remission at the end of treatment or 3-month follow-up. Although this study did not find yohimbine enhanced the effect of PE on PTSD outcomes, as the authors note, continued investigations may determine optimal dosing schedules and identify which patient phenotypes are most responsive to yohimbine augmentation.

Read the article: https://doi.org/10.1080/16506073.2018.1432679

Tuerk, P. W., Wangelin, B. C., Powers, M. B., Smits, J. A. J., Acierno, R., Myers, U. S., … Hamner, M. B. (2018). Augmenting treatment efficiency in exposure therapy for PTSD: A randomized double-blind placebo-controlled trial of yohimbine HCl. *Cognitive Behaviour Therapy*, 1–21. PILOTS ID: 50114

Transcranial magnetic stimulation (TMS) may enhance response to Cognitive Processing Therapy

Several strategies, including medications and devices, have been proposed for enhancing response to evidence-based psychotherapies for PTSD. Repetitive transcranial magnetic stimulation (rTMS), an FDA-approved treatment for depression, is a noninvasive technique for altering brain activity and potentially enhancing cognitive function. In a sham-controlled trial, investigators at the University of Texas at Dallas tested whether rTMS prior to Cognitive Processing Therapy would enhance treatment response in combat Veterans with PTSD. Male and female Veterans ($N = 103$) previously deployed to Iraq or Afghanistan were randomized to receive either active or sham low frequency rTMS applied to the right dorsolateral prefrontal cortex immediately prior to each of 12 CPT sessions. The CAPS was administered at baseline, after the fifth and ninth treatments, and then at 1, 3 months, 6 months following the last CPT session. Sixty percent of participants completed treatment and 57% completed the 6-month assessment. Overall, Veterans who received active rTMS prior to CPT showed greater improvement in PTSD symptom severity than those who received sham, and this difference was sustained throughout 6 months of follow-up. Overall, the effect size was modest, and the beneficial effects of active rTMS combined with CPT were somewhat weaker when measured by clinician- versus patient-rated measures. rTMS was well tolerated, with no significant adverse events associated with the treatment.

Read the article: https://doi.org/10.1016/j.jad.2017.12.046

Kozel, F. A., Motes, M. A., Didehbani, N., DeLaRosa, B., Bass, C., Schraufnagel, C. D., … Hart, J. (2018). Repetitive TMS to augment cognitive processing therapy in combat veterans of recent conflicts with PTSD: A randomized clinical trial. *Journal of Affective Disorders, 229*, 506–514. PILOTS ID: 49858

Using statistical modeling to predict who will complete trauma-focused psychotherapy

The ability to predict which patients are likely to complete a specific therapy could help with treatment matching and may improve outcomes. A recent study led by investigators at the University of Pennsylvania used the Personalized Advantage Index (PAI) approach to examine data from a clinical trial of CPT and PE in order to assess risk of dropout from both treatments. Participants were 160 female rape survivors meeting criteria for DSM-IV PTSD who were randomly assigned to receive CPT or PE. Predictors and moderators were combined in a statistical model to predict which treatment each patient would be more likely to

complete. Twenty potential moderator variables were included in the exploratory model. Four variables were retained: current relationship abuse, childhood abuse, feelings of anger, and minority race, all of which were associated with higher likelihood of dropout in PE than CPT. Patients who were assigned to their model-indicated treatment had lower dropout than those who were not assigned to their model-indicated treatment (19.7% vs. 40.5%). The findings do not explain why these factors were associated with dropout, and it is unclear if the patterns observed in this population will generalize to other trauma types. However, the findings suggest that modeling approaches may someday be used to inform clinical decision-making to identify an optimal therapy for each patient and potentially reduce treatment dropout.

Read the article: http://www.ptsd.va.gov/professional/articles/article-pdf/id49811.pdf

Keefe, J. R., Wiltsey Stirman, S., Cohen, Z. D., DeRubeis, R. J., Smith, B. N., & Resick, P. A. (2018). In rape trauma PTSD, patient characteristics indicate which trauma-focused treatment they are most likely to complete. *Depression and Anxiety*. PILOTS ID: 49811

Cognitive-Behavioral Therapy for Insomnia: There's an app for that

Mobile apps have the potential to enhance engagement in evidence-based treatment (see the December 2017 *CTU-Online*), including CBT for Insomnia (CBT-I). A team led by investigators at the Minneapolis VA conducted the first randomized clinical trial of CBT-I Coach, an app designed by the National Center for PTSD, in Veterans currently engaged in CBT-I. In this pilot study, 18 Veterans were randomly assigned to either CBT-I or CBT-I plus CBT-I Coach. The CBT-I protocol developed by VA consists of 5 weekly sessions. CBT-I Coach includes psychoeducation, a sleep diary, recommended sleep schedules, guided exercises, and reminders for changing sleep habits. Sleep difficulties, measured with the Insomnia Severity Index, improved in both groups, with no difference between conditions. The effect size for treatment adherence favored the CBT-I Coach group, but the difference was not statistically significant; this is not surprising given the small sample. Veterans' feedback on the app was positive. They reported using the sleep diary most frequently and finding it to be helpful. Results suggest that adding CBT-I Coach to CBT-I is feasible in practice and acceptable to Veterans. Better powered studies that can test whether the addition of CBT-I Coach to CBT-I improves outcomes are needed, as are studies of CBT-I as a stand-alone screener and intervention as part of a stepped-care model.

Read the article: https://www.ptsd.va.gov/professional/articles/article-pdf/id45357.pdf

Koffel, E., Kuhn, E., Petsoulis, N., Erbes, C. R., Anders, S., Hoffman, J. E., … Polusny, M. A. (2018). A randomized controlled pilot study of CBT-I Coach: Feasibility, acceptability, and potential impact of a mobile phone application for patients in cognitive behavioral therapy for insomnia. *Health Informatics Journal, 24*, 3–13. PILOTS ID: 45357

ASSESSMENT

Comparing ICD-11 and DSM-5 criteria for PTSD

The ICD-11 workgroup has proposed a narrowed set of "core" symptoms for PTSD in an attempt to address issues with overlap with other stress-related disorders, simplify diagnosis and assessment, and improve diagnostic accuracy. A study led by investigators at the New Orleans VAMC examined the concordance of self-reported ICD-11 core symptoms with DSM-5 PTSD diagnosis determined by clinician-administered diagnostic interviews and self-report. Veterans ($N = 617$) presenting for PTSD treatment completed the PCL-5 and CAPS-5 as part of standard screening procedures. As proposed, the endorsement of one or more items as at least "moderately" bothersome on the PCL-5 in each of three symptom sets (A: nightmares/flashbacks; B: internal/external avoidance; C: hypervigilance/exaggerated startle) was considered an ICD-11 PTSD diagnosis. This categorization was compared to CAPS-5 diagnosis and the recommended cutpoint of 33 for the PCL-5. Compared with Veterans who did not meet ICD-11 criteria, those who did were twice as likely to meet DSM-5 criteria on the CAPS-5 and 22 times more likely to meet the DSM-5 diagnostic cutpoint on the PCL-5. The authors raise a number of interesting issues that could affect the interpretation of their findings, including whether a different group of symptoms would yield similar or even better results. Given the heterogeneity of PTSD, future studies would benefit from exploring other subsets of symptoms to evaluate the utility of a "core" symptom profile.

Read the article: https://doi.org/10.1016/j.psychres.2018.01.021

Franklin, C. L., Raines, A. M., Cuccurullo, L.-A. J., Chambliss, J. L., Maieritsch, K. P., Tompkins, A. M., & Walton, J. L. (2018). 27 ways to meet PTSD: Using the PTSD-checklist for DSM-5 to examine PTSD core criteria. *Psychiatry Research, 261*, 504–507. PILOTS ID: 49767

Take NOTE

Meta-analysis of randomized controlled trials of CBT for anxiety and related disorders

A team led by investigators at Boston University conducted a meta-analysis of randomized placebo-controlled trials of CBT for PTSD, acute stress disorder, GAD, OCD, panic disorder, and social anxiety disorder. Overall, results supported CBT, with small-to-moderate effects for PTSD. PTSD was the only disorder to have greater dropout rates for CBT (29%) than placebo (17.2%).

Read the article: https://doi.org/10.1002/da.22728

Carpenter, J. K., Andrews, L. A., Witcraft, S. M., Powers, M. B., Smits, J. A. J., & Hofmann, S. G. (2018). Cognitive behavioral therapy for anxiety and related disorders: A meta-analysis of randomized placebo-controlled trials. *Depression and Anxiety*. PILOTS ID: 50110

A meta-analysis of nonadherence to medications for medical conditions in patients with PTSD

A meta-analysis conducted by a team led by investigators at Columbia University revealed that patients with PTSD were more likely to be nonadherent to medications prescribed for chronic medical conditions than patients without PTSD; effects were limited to PTSD related to a medical event.

Read the article: https://doi.org/10.1016/j.jpsychires.2018.02.013

Taggart Wasson, L., Shaffer, J. A., Edmondson, D., Bring, R., Brondolo, E., Falzon, L., & Kronish, I. M. (2018). Posttraumatic stress disorder and nonadherence to medications prescribed for chronic medical conditions: A meta-analysis. *Journal of Psychiatric Research*. PILOTS ID: 50113

Review of PTSD and depression as risk factors for dementia in Veterans

In a review of six studies, a team led by investigators at King's College London concluded that PTSD and depression were associated with increased risk of developing dementia in Veterans.

Read the article: https://doi.org/10.1017/S0033291717001386

Rafferty, L. A., Cawkill, P. E., Stevelink, S. A. M., Greenberg, K., & Greenberg, N. (2018). Dementia, post-traumatic stress disorder and major depressive disorder: A review of the mental health risk factors for dementia in the military veteran population. *Psychological Medicine*, 1–10. PILOTS ID: 49867

Review of effects of therapy relationships on treatment outcome

A team led by investigators at Albizu University in Miami, FL conducted a systematic review of studies that examined the role of therapy relationship variables, such as therapeutic alliance, in treatment outcomes for trauma-exposed individuals. While stronger alliance was found to be associated with better outcomes, many studies had methodological issues.

Read the article: https://www.ptsd.va.gov/professional/articles/article-pdf/id49169.pdf

Ellis, A. E., Simiola, V., Brown, L., Courtois, C., & Cook, J. M. (2018). The role of evidence-based therapy relationships on treatment outcome for adults with trauma: A systematic review. *Journal of Trauma & Dissociation, 19*, 185–213. PILOTS ID: 49169

VA reports on hyperbaric oxygen and cranial stimulation

The VA Evidence-based Synthesis Program (ESP) Center has released an evidence brief on hyperbaric oxygen therapy for PTSD and/or traumatic brain injury and a systematic review on cranial electrical stimulation for chronic pain, depression, anxiety, PTSD, and insomnia. Both reports conclude that the evidence supporting these treatments is insufficient.

Read the reports:
https://www.hsrd.research.va.gov/publications/esp/ces.cfm
https://www.hsrd.research.va.gov/publications/esp/hbot.cfm

Peterson, K., Bourne, D., Anderson, J., Boundy, E., & Helfand, M. (2018). *Evidence brief: Hyperbaric oxygen therapy (HBOT) for traumatic brain injury and/or post-traumatic stress disorder*. (VA ESP Project #09-199). PILOTS ID: 49870

Shekelle, P. G., Cook, I., Miake-Lye, I. M., Mak, S., Booth, M. S., Shanman, R., & Beroes J. M. (2018). *The effectiveness and risks of cranial electrical stimulation for the treatment of pain, depression, anxiety, PTSD, and insomnia: A systematic review.* (VA ESP Project #05-226). PILOTS ID: 49871

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