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The ***Combat & Operational Stress Research Quarterly*** is a compilation of recent research that includes relevant findings on the etiology, course and treatment of Posttraumatic Stress Disorder (PTSD). The intent of this publication is to facilitate translational research by providing busy clinicians with up-to-date findings, with the potential to guide and inform evidence-based treatment.

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Empathic social support improves exposure therapy treatment response for combat veterans

Key Findings: Lower reported baseline levels of positive social interaction (which involves a sense of social companionship or integration) was associated with higher PTSD symptoms at the beginning of exposure therapy treatment, while higher reported baseline levels of emotional/informational support (caring and empathy from others) was related to stronger treatment response. Tangible support (i.e., help with daily tasks), positive social interaction and affectionate support were not related to treatment response for PTSD symptoms.
Study type: Treatment response study with clinician-rating and self-report measures
Sample: 69 treatment-seeking OIF/OEF veterans diagnosed with PTSD (n=43) or subthreshold PTSD (n=26)
Implications: Results suggest that greater levels of social companionship or integration are associated with lower PTSD symptom severity pre-treatment, and having caring/empathetic support from others is related to increased exposure therapy treatment response among treatment-seeking OIF/OEF veterans. This is the first study to show that social support was associated with PTSD treatment response in combat veterans. Further research is needed to examine how emotional/informational support leads to improved exposure therapy treatment outcome and if the finding is consistent for other types of treatment.

Price, M., Gros, D.F., Strachan, M., Ruggiero, K.J., & Acierno, R. (2013). The role of social support in exposure therapy for Operation Iraqi Freedom/Operation Enduring Freedom veterans: A preliminary investigation. *Psychological Trauma: Theory, Research, Practice, and Policy, 5*(1), 93-100.

IN THIS EDITION

Changes in facets of mindfulness explain post-treatment PTSD and depression severity

Key Findings: PTSD and depression severity significantly decreased after cognitive behavioral therapy (CBT)-based PTSD treatment at a residential facility. Facets of mindfulness generally increased during treatment and were associated with reductions in PTSD and depression symptom severity. Specifically, changes in acting with awareness accounted for significant variance in PTSD symptom severity, while changes in nonjudgmental acceptance accounted for significant variance in depression symptom severity.
Study type: Treatment study with self-report measures
Sample: 48 veterans in a residential PTSD treatment program
Implications: Results suggest that CBT-based group therapy for PTSD may be related to increases in facets of mindfulness. Results from this and another recent study suggest that the two core components of mindfulness (acting with awareness and nonjudgmental acceptance) strongly and consistently predicted PTSD treatment outcome. Future research should include a comparison group to examine whether changes in mindfulness were a result of another unmeasured variable.

Tyler Boden, M., Bernstein, A., Walser, R.D., Bui, L., Alvarez, J., & Bonn-Miller, M.O. (2012). Changes in facets of mindfulness and posttraumatic stress disorder treatment outcome. Psychiatry Research, 200(2-3), 609-13. doi: 10.1016/j.psychres.2012.07.011

New-onset PTSD/depression risk in deployed healthcare professionals

Key Findings: Military healthcare professionals have similar rates of new-onset PTSD or depression compared to those in other military occupations. Similar to other types of military personnel, combat exposure was the key factor that increased the rates of new-onset PTSD/depression in this sample, as deployed healthcare professionals with combat exposure had twice the odds of new-onset PTSD/depression compared to those deployed without combat exposure.
Study type: Prospective cohort study with self-report assessments
Sample: 65,108 military personnel from the Millennium Cohort Study (of which 9,371 were military healthcare professionals)
Implications: The unique stressors of being a healthcare professional do not seem to be a risk factor for new-onset PTSD or depression. Instead, combat exposure is noted to be an important risk factor for this and other occupations, suggesting that resources should focus on teaching military personnel how to better cope with the effects of combat to reduce PTSD and depression.

Jacobson, I.G., Horton, J.L., Leardmann, C.A., Ryan, M.A., Boyko, E.J., Wells, T.S.,…Smith, T.C. (2012). Posttraumatic stress disorder and depression among U.S. military health care professionals deployed in support of operations in Iraq and Afghanistan. *Journal of Traumatic Stress, 25*(6), 616-23. doi: 10.1002/jts.21753

PTSD symptom improvement from MDMA-assisted psychotherapy maintained over long-term follow-up

Key Findings: On average, participants with chronic, treatment-resistant PTSD who received MDMA-assisted psychotherapy in a clinical trial maintained statistically and clinically significant gains in PTSD symptom reduction over the long-term follow-up (from 17 to 74 months post-trial). Results from the 16 participants who completed a Clinician-Administered PTSD Scale (CAPS) interview at long-term follow-up demonstrated no significant difference between CAPS scores at treatment end (mean=24.6) and CAPS scores at follow-up (mean=23.7), although two participants relapsed. In addition, no participants reported short- or long-term harmful effects from the MDMA-assisted treatment.
Study type: Long-term follow-up of randomized controlled trial with clinical interview and self-report assessments
Sample: 19 general population participants who had previously received MDMA-assisted psychotherapy for treatment-resistant PTSD (trauma in most cases related to sexual abuse or assault)
Implications: Despite the small sample size, the study provides promising information on the durability of PTSD symptom improvement and safety over time among participants treated with MDMA-assisted psychotherapy. Additional study of MDMA-assisted psychotherapy for PTSD is planned or in progress to further examine its effectiveness using variations in populations (including combat veterans), therapists, MDMA doses and number of therapy sessions.

Mithoefer, M.C., Wagner, M.T., Mithoefer, A.T., Jerome, L., Martin, S.F., Yazar-Klosinski, B.,…Doblin, R. (2013). Durability of improvement in post-traumatic stress disorder symptoms and absence of harmful effects or drug dependency after 3,4-methylenedioxymethamphetamine-assisted psychotherapy: a prospective long-term follow-up study. *Journal of Psychopharmacology, 27*(1), 28-39. doi: 10.1177/0269881112456611

Flexible cognitive processing therapy sessions may be beneficial for treating PTSD and depression

Key Findings: Trauma survivors who were administered modified cognitive processing therapy (MCPT: 4-18 flexible sessions based upon client progress toward a pre-determined end point, with added stressor sessions if needed) showed greater improvement in PTSD and depression symptoms and associated secondary outcome measures such as guilt, quality of life, general mental health, social functioning and health perceptions compared to those in the symptom-monitoring delayed treatment (SMDT) group (minimal therapist contact without cognitive therapy or trauma focused intervention). Of those who completed MCPT, 58% met end-state criteria (defined as PTSD/depression symptoms that fell below a specific score, agreement by the therapist and participant that treatment goals had been attained, and confirmation of negative PTSD status by a blind rater) prior to completing12 sessions (mean 7.5). Eight percent of patients met end-state criteria at Session 12 and 34% met criteria between Sessions 12 and 18. Treatment gains were maintained at 3-month follow-up regardless of whether participants were early (< 12 weeks) or late responders (12-18 weeks) to treatment.
Study type: Randomized controlled semi-crossover study with clinician-administered and self-report assessments
Sample: 100 general population physical or sexual assault survivors with PTSD (47 assigned to SMDT; 53 assigned to MCPT)
Implications: Patients treated with MCPT protocol demonstrated significantly greater improvements than a symptom-monitoring condition, with only 8% of MCPT completers remaining symptomatic for PTSD at treatment end, after a maximum of 18 sessions. Based on the original manualized CPT protocol (ending at 12 sessions), 34% would have been considered non-responders at treatment end, suggesting that many patients can benefit from additional treatment sessions. Future research should focus on replicating the findings with different trauma types, including combat-related PTSD.

Galovski, T.E., Blain, L.M., Mott, J.M., Elwood, L., & Houle, T. (2012) Manualized therapy for PTSD: flexing the structure of cognitive processing therapy. *Journal of Consulting and Clinical Psychology, 80*(6), 968-81. doi: 10.1037/a0030600

A review of studies examining Virtual Reality Exposure Therapy for PTSD

Key Findings: Evaluation of several articles on Virtual Reality Exposure Therapy (VRET) for PTSD reveals that most studies found VRET to be significantly better in reducing PTSD symptoms compared to wait-list conditions, but no difference was found between VRET and traditional exposure therapy. However, dropout rates do not seem to be lower for VRET compared to traditional exposure therapy.
Study type: Systematic review
Sample: 10 articles examining the effectiveness of VRET for participants with PTSD
Implications: Although there are still relatively few studies on VRET (and most have used small samples), current evidence suggests VRET is a feasible treatment for PTSD, as it seems to be as effective as traditional exposure therapy. VRET may be beneficial for patients who are resistant to traditional exposure, as one study demonstrated the efficacy of VRET in such patients. However, there still seems to be a high dropout rate for VRET. Additional VRET research with methodologically stronger studies (including standardization of treatment methodology and larger samples) is needed to further examine the effectiveness of VRET and whether it confers additional benefits over traditional exposure therapy.

Goncalves, R., Pedrozo, A.L., Coutinho, E.S., Figueira, I., & Ventura, P. (2012). Efficacy of virtual reality exposure therapy in treatment of PTSD: A systematic review. *PLos One, 7(12),* e48469. doi:10.1371/journal.pone.0048469

Paroxetine may be effective in decreasing anxiety and depression symptoms in veterans with subthreshold PTSD

Key Findings: Twelve weeks of treatment with paroxetine led to greater reductions in depression and anxiety symptoms in OEF/OIF veterans with subthreshold PTSD compared to the placebo group (borderline significance, $p<0.065$). Hospital Anxiety and Depression Scale (HADS) scores decreased by 30.4% in veterans with subthreshold PTSD receiving paroxetine treatment compared to 1.7% in veterans receiving placebo. However, changes in PTSD symptoms were not significantly different from the placebo group.
Study type: Pilot randomized controlled trial with self-report and clinician rating measures

Sample: 12 OEF/OIF veterans meeting criteria for subthreshold PTSD (five randomized to paroxetine, seven randomized to placebo)
Implications: Results indicate that while no significant changes in PTSD symptoms were found, paroxetine may successfully decrease co-morbid anxiety and depression symptoms in OEF/OIF veterans with subthreshold PTSD. Further research with a larger sample is needed to replicate the findings.

Naylor, J.C., Dolber, T.R., Strauss, J.L., Kilts, J.D., Strauman, T.J., Bradford, D.W.,…Marx, C.E. (2012). A pilot randomized controlled trial with paroxetine for subthreshold PTSD in Operation Enduring Freedom/Operation Iraqi Freedom era veterans. *Psychiatry Research, 206*(2-3), 318-20. doi: 10.1016/j.psychres.2012.11.008

Increases in PTSD symptoms and alcohol use predicts increase in aggressive behavior among veterans with PTSD

Key Findings: Aggressive behaviors in mental health treatment-seeking veterans showed little change over a five- to 12-month period. Factors related to increases in aggression included being an OEF/OIF-era veteran, an increase in severity of PTSD symptoms and an increase in days of alcohol intoxication. Receipt of benzodiazepine medication treatment was also related to increases in aggression, but only among those reporting aggression at baseline. Reductions in aggression were related to reductions of PTSD symptoms, but were not related to number of mental health visits.
Study type: Longitudinal study with self-report measures
Sample: 376 help-seeking U.S. veterans recently diagnosed with PTSD
Implications: Results indicate that increases in PTSD symptoms and days of alcohol intoxication predict increases in aggressive behavior among help-seeking veterans. While mental health treatment utilization (measured by number of visits) was not associated with reductions in aggressive acts, decreases in PTSD symptom severity was. Future research should continue to explore how treatments for PTSD may be able to reduce aggression.

Shin, H.J., Rosen, C.S., Greenbaum, M.A., & Jain, S. (2012). Longitudinal correlates of aggressive behavior in help-seeking U.S. veterans with PTSD. *Journal of Traumatic Stress, 25*(6), 649-656. doi: 10.1002/jts.21761

Role of eye movements in EMDR for PTSD

Key Findings: A review of past research reveals conflicting evidence as to whether eye movements (EMs) are a critical part of Eye Movement Desensitization and Reprocessing (EMDR) therapy. Currently, there appears to be reasonable theoretical support for EMs and there is not enough evidence to support removing them from EMDR, which has been shown to be efficacious. Although the mechanism of EMs is not clear, the inclusion of them in therapy may help reduce distress and hasten the reduction of PTSD symptoms compared to simple exposure therapy.
Study type: Review of research
Sample: Articles investigating role of EMs in EMDR to treat PTSD
Implications: Currently, the question of whether EMs are essential to EMDR and whether they are more effective than other dual attention tasks cannot be answered with certainty due to a lack of rigorous research. Because EMDR has been shown to be effective, the authors recommend it should remain a clinical option for the treatment of PTSD.

Jeffries, F.W., & Davis, P. (2013). What is the role of eye movements in eye movement desensitization and reprocessing (EMDR) for post-traumatic stress disorder (PTSD)? A review. *Behavioural and Cognitive Psychotherapy, 41*(3), 290-300. doi: 10.1017/S1352465812000793

Reviews to Peruse

Bomyea, J., Risbrough, V., & Lang, A.J. (2012). **A consideration of select pre-trauma factors as key vulnerabilities in PTSD.** *Clinical Psychology Review, 32*(7), 630-41. doi: 10.1016/j.cpr.2012.06.008

Lipov, E. & Kelzenberg, B. (2012). **Sympathetic system modulation to treat post-traumatic stress disorder (PTSD): a review of clinical evidence and neurobiology.** *Journal of Affective Disorders, 142*(1-3), 1-5. doi: 10.1016/j.jad.2012.04.011

Gates, M.A., Holowka, D.W., Vasterling, J.J., Keane, T.M., Marx, B.P., & Rosen, R.C. (2012). **Posttraumatic stress disorder in veterans and military personnel: epidemiology, screening, and case recognition.** *Psychological Services, 9*(4), 361-82.

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Long-term follow-up of service members following mTBI recommended

Key Findings: Approximately half of veterans with mild traumatic brain injury (mTBI) met criteria for postconcussion disorder (PCD) within three months post-injury. The rate of PCD at various follow-ups from six months to five years post-injury ranged from 46-72%. Only a portion of those with PCD at baseline met criteria for PCD at two or more follow-up evaluations (persistence, 32%), with the rest characterized by late development and persistence (22%), improvement (12%), late onset (6%) or fluctuation (6%) of PCD symptoms. The high variability in symptom reporting from baseline to each follow-up hindered the identification of predictors of chronic symptom reporting.
Study type: Prospective study with self-report assessments
Sample: 167 U.S. service members with mTBI, most injured while deployed to OEF/OIF
Implications: Reporting of PCD symptoms after mTBI in the military remains high five years post-injury, although symptom reporting can be variable during that time period. PCD symptom reporting after mTBI can be influenced by co-morbidity with mental health disorders, sleep disorders, multiple blast exposures, physical injuries, chronic pain and medication use. Long-term surveillance of service members after mTBI is recommended, regardless of the presence or absence of PCD symptom reporting shortly after injury, to identify service members in need of treatment.

Lange, R.T., Brickell, T.A., Ivins, B., Vanderploeg, R., & French, L.M. (2012). Variable, not always persistent, postconcussion symptoms following mild TBI in U.S. military service members: A 5-year cross-sectional outcome study. *Journal of Neurotrauma*. Advance online publication. doi: 10.1089/neu.2012.2743

Impact of proposed DSM-5 changes to PTSD criteria on PTSD prevalence

Key Findings: Several changes to diagnostic criteria for PTSD have occurred in the latest edition of the DSM (DSM-5). Criterion A1 was revised to narrow qualifying traumatic events, and a response of fear, helplessness and horror (Criterion A2) no longer is required. Diagnostic criteria includes three new symptoms, with the total number of symptoms increasing from 17 to 20, and the current three-factor model of PTSD (re-experiencing symptoms, avoidance/numbing symptoms and hyperarousal symptoms) was replaced with a four-factor model (intrusion, persistent avoidance, alterations in cognitions and mood, and hyperarousal/reactivity). Research examining the concordance between DSM-IV and DSM-5 demonstrated that the proportion of the sample meeting Criterion A requirements decreased from 95% on the DSM-IV (Criterion A1/A2) to 89% using DSM-5 Criterion A. Also, the proposed DSM-5 requirement of three symptoms from both Clusters D and E (which may be revised after field trials) demonstrated greater imbalance between sensitivity and specificity compared to requiring two symptoms each from Clusters D and E, and resulted in a decrease of 6% in PTSD prevalence rates in this sample, from 50% to 44%. Requiring only two symptoms each from these two clusters would provide stronger concordance between DSM-IV and DSM-5, with prevalence rates differing by only 2% (DSM-5: 52%, DSM-IV: 50%).
Study type: Cross-sectional study with structured clinical interviews and self-report assessments
Sample: 185 participants from multiple studies, almost all exposed to trauma
Implications: Field studies to investigate the impact of the new diagnostic criteria in the DSM-5 are needed in various populations, especially to clarify the number of symptoms required for Clusters D and E to provide the best balance of sensitivity and specificity. The impact of DSM-5 diagnostic changes on prevalence will be based largely on the PTSD base rate in a given population, with DSM-5 prevalence rates diverging more from DSM-IV (higher prevalence) as DSM-IV prevalence rates decrease in a population.

Calhoun, P.S., Hertzberg, J.S., Kirby, A.C., Dennis, M.F., Hair, L.P., Dedert, E.A., & Beckham, J.C. (2012). The effect of draft DSM-V criteria on posttraumatic stress disorder prevalence. *Depression and Anxiety, 29*(12), 1032-42. doi: 10.1002/da.22012

Trajectories of Response to Treatment for PTSD

Key Findings: Using a sample of women with PTSD who had previously experienced interpersonal violence and underwent treatment with Cognitive Processing Therapy (CPT), CPT components or Prolonged Exposure (PE), two main response patterns were identified and examined: treatment responders (87%) and treatment non-responders (13%). Average symptom levels for responders were below clinical cutoffs by the end of the study, whereas symptom levels of non-responders were consistently above clinical cutoffs. Having Major Depressive Disorder (MDD) or high hyperarousal symptoms at pre-treatment predicted non-response. In addition, women assigned to the Written Accounts (WA)

treatment (i.e., CPT that contains exposure but no cognitive therapy) were more likely to be in the non-responder group.
Study type: Treatment response study with self-report and clinician-rating measures
Sample: 313 women with PTSD and a history of sexual or physical assault participating in one of two treatment-efficacy studies
Implications: Results suggest that PTSD treatment response patterns can be split into response or non-response when receiving CPT, CPT component or PE treatment. Most PTSD patients responded to treatment, and non-response was predicted by meeting criteria for MDD or having high levels of hyperarousal. This suggests that additional treatment may be required for those who present with these types of symptoms. For example, training on hyperarousal symptom regulation before therapy begins may increase therapeutic efficacy. Results also indicate that some PTSD patients may not benefit from WA treatment alone and require the cognitive restructuring aspect of CPT to reduce symptoms. Further research is needed to better understand the role of MDD and hyperarousal in PTSD patients who do not respond to trauma treatment.

Stein, N.R., Dickstein, B.D., Schuster, J., Litz, B.T., & Resick, P.A. (2012). Trajectories of response to treatment for posttraumatic stress disorder. *Behavior Therapy, 43*(4), 790-800. doi: 10.1016/j.beth.2012.04.003

Web-based intervention may help veterans with combat-related stress, depression

Key Findings: Veterans participating in a Web-based early intervention combining cognitive behavioral therapy (CBT) coping skills training with online peer-to-peer support and professional guidance reported significant decreases in PTSD and depression symptoms, but no changes in functional status, 12 weeks after starting the intervention. In addition, participants were more willing to accept a mental health diagnosis after completing the program and showed improved attitudes toward stigma; yet there was no improvement in willingness to seek counseling if needed. Additionally, there was no improvement in mental health self-efficacy behaviors to manage mental health symptoms (e.g., I can change my depressed mood by changing my behavior; I understand how my behavior and habits affect mood).
Study type: Intervention evaluation with self-report assessments
Sample: 50 OEF/OIF veterans with mild to moderate depression and/or distress symptoms
Implications: Web-based interventions can play a valuable role in addressing PTSD/depression symptoms and barriers to care and stigma by providing coping skills training and peer/professional support regardless of geographic location and can be done in a private, comfortable setting. Future studies should aim to replicate these findings using randomized controlled trials, further examining if self-efficacy can be enhanced, and investigating how to increase enrollment in these interventions.

Van Voorhees, B.W., Gollan, J., & Fogel, J. (2012). Pilot study of Internet-based early intervention for combat-related mental distress. *Journal of Rehabilitation Research and Development, 49*(8), 1175-90. doi: 10.1682/JRRD.2011.05.0095

Supportive military leadership and benefit finding may reduce PTSD risk among combat veterans

Key Findings: Higher levels of supportive noncommissioned officer (NCO) leadership and benefit finding (perception of having benefited from stressful situations) were linked to fewer reported PTSD symptoms among combat-exposed junior enlisted soldiers. Benefit finding also buffered the relationship between combat stress and PTSD symptoms, but only when officer leadership was rated as supportive.
Study type: Cross-sectional study with self-report assessments
Sample: 583 junior enlisted U.S. Army soldiers recently returned from a combat deployment to Iraq
Implications: Results from this study indicate that promoting supportive military leadership and positive coping strategies, such as benefit finding, may reduce the risk of PTSD development among soldiers exposed to combat. Further study using longitudinal measurements is needed to confirm the findings.

Wood, M.D., Foran, H.M., Britt, T.W., & Wright, K.M. (2012). The impact of benefit finding and leadership on combat-related PTSD symptoms. *Military Psychology, 24*(6), 529-41. doi: 10.1080/08995605.2012.736321

Trajectories for development of PTSD before, during and after deployment

Key Findings: Six trajectories were observed for resilience or development of PTSD among combat-deployed soldiers across five time points before, during and after deployment. Two resilient trajectories demonstrated low PTSD symptom levels across all time

Quarterly Highlight: Interventions to reduce barriers to military mental health care

Although recent military operations in Iraq and Afghanistan have led to increased rates of mental health problems among service members, rates of seeking mental health treatment among military personnel are relatively low. The reasons for low utilization rates include stigma surrounding mental healthcare, logistical difficulties getting into and staying in treatment, negative perceptions of mental health treatment and its consequences to a military career, beliefs that problems can be handled by the individual, and an attitude that service members should "tough it out." Some stigma could be reduced at the leadership level, as service members endorsing higher unit cohesion and ranking their leaders as high in leadership skills appear less likely to report mental health treatment-seeking stigma and practical barriers to care. Also, several preventive and early interventions have been introduced in the military setting that may address barriers to care, including Combat Stress Control programs, psychological debriefing and resiliency training. These interventions, however, are still being evaluated for efficacy in reducing both mental health symptoms and barriers to care. In addition, several mental health treatments and interventions have been adapted to address barriers to care in the military, including using brief or flexible therapy protocols, group therapy formats or such technology as virtual reality or telemedicine. Other strategies consist of integrating clinicians into the military or deployed environments, providing psychoeducation, reframing perceptions of mental health symptoms and treatment, and addressing such military-specific issues as grief and survivor's guilt in treatment. Widespread military mental health screening and peer support may also improve treatment seeking. Many of these interventions and strategies show promise for improving symptoms and reducing barriers to military mental healthcare, although much more high-quality research with large samples, randomized controlled designs and long-term follow-up is needed.

Zinzow, H.M., Britt, T.W., McFadden, A.C., Burnette, C.M., & Gillispie, S. (2012). Connecting active duty and returning veterans to mental health treatment: interventions and treatment adaptations that may reduce barriers to care. *Clinical Psychology Review, 32*(8), 741-53. doi: 10.1016/j.cpr.2012.09.002

points (one with slightly higher symptom levels than the other). A new-onset trajectory started low and showed a strong increase in symptoms following deployment. Three of the trajectories showed a temporary decrease in PTSD symptoms during or immediately after deployment, followed by increases in symptoms after deployment. The non-resilient trajectories were associated with pre-deployment emotional problems and traumas (such as childhood adversities), but were not associated with deployment-related stress.
Study type: Longitudinal study with self-report measures
Sample: 746 Danish soldiers deployed to Afghanistan
Implications: Stressors directly related to deployment may not be as influential in the development of PTSD as earlier (frequently childhood) stressors among deployed soldiers. Also, the development of PTSD symptoms may occur along different trajectories, which indicates a need for multiple measurements to identify those in need of PTSD treatment.

Berntsen, D., Johannessen, K.B., Thomsen, Y.D., Bertelsen, M., Hoyle, R.H., & Rubin, D.C. (2012). Peace and war: Trajectories of posttraumatic stress disorder symptoms before, during, and after military deployment in Afghanistan. *Psychological Science, 23*(12), 1557-65. doi: 10.1177/0956797612457389

Relationship of guilt with suicidal ideation stronger among those with combat exposure

Key Findings: Guilt was associated with more severe suicidal ideation among military personnel receiving mental health treatment, and this association was even stronger among those with direct combat exposure. PTSD and depression symptoms were also associated with suicidal ideation, but those relationships were not affected by combat exposure.
Study type: Cross-sectional study with self-report assessments
Sample: 97 U.S. Air Force personnel receiving outpatient mental health treatment
Implications: Results from this study confirm previous findings that guilt is an especially strong predictor of suicidal ideation among military personnel and veterans who have been involved in direct combat. Assessing guilt among combat veterans and implementing treatments designed to reduce guilt may be important for reducing suicide risk in this population.

Bryan, C.J., Ray-Sannerud, B., Morrow, C.E., & Etienne, N. (2012). Guilt is more strongly associated with suicidal ideation among military personnel with direct combat exposure. *Journal of Affective Disorders.* Advance online publication. doi: 10.1016/j.jad.2012.11.044

Written disclosure treatment decreases PTSD symptoms in substance use disorder inpatients

Key Findings: Among substance use disorder (SUD) inpatients with full or subthreshold PTSD, 53.3% no longer met criteria for full or subthreshold PTSD after four sessions of written disclosure treatment for PTSD. Of the 17 participants completing the three-month follow-up assessment, 47% no longer met criteria for full or subthreshold PTSD. Participants with the most severe PTSD symptoms reported the highest rate of PTSD symptom decreases after treatment.
Study type: Uncontrolled treatment evaluation study with self-report measures
Sample: 45 general population SUD inpatients with full or subthreshold PTSD

Implications: Results suggest that PTSD symptoms significantly decrease in severity after written disclosure treatment among patients with SUD and PTSD (full or subthreshold). However, other studies have found that depression, anxiety and PTSD symptoms naturally decrease as recovery from substance withdrawal progresses in SUD treatment, which may have influenced participants' symptom change in this study, as well. Future research should include a comparison group to determine the relative roles of substance abstinence and written disclosure treatment on symptoms of PTSD.

Bragdon, R.A. & Lombardo, T.W. (2012). Written disclosure treatment for posttraumatic stress disorder in substance use disorder inpatients. *Behavior Modification, 36*(6), 875-96. doi: 10.1177/0145445512451273

Test your knowledge!

According to the summary "Flexible cognitive processing therapy sessions may be beneficial for treating PTSD and depression" (pg. 3), what percentage of PTSD patients being treated with a modified CPT protocol benefitted from more than 12 sessions of CPT (i.e., reached end-state criteria between 12-18 weeks of CPT)?

A. 47%

B. 34%

C. 23%

D. 12%

Answer: B

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