

Serving Those Who Served Us First: Evidence to Support Effective Interventions for Returning Veterans

Tracey Barretto, Kelly Fiocco, Dana Tavares

Faculty Mentor: Teal Benevides

Presented in Partial Fulfillment of the Master of Science in Occupational Therapy degree at Thomas Jefferson University

Objectives of Presentation:

1. Discuss the impact of traumatic brain injury (TBI) and post-traumatic stress disorder (PTSD) on occupational performance
2. Identify a minimum of 3 interventions in the scope of occupational therapy that are effective in increasing participation and quality of life for returning veterans diagnosed with a TBI and/or PTSD
3. Explain 3 clinical implications of occupational therapy & its role for returning veterans who have PTSD &/or sustained a TBI.

PICO: What is the evidence supporting interventions within the scope of occupational therapy for returning veterans who have been diagnosed with a traumatic brain injury (TBI) and/or post-traumatic stress disorder (PTSD) in order to increase participation and quality of life?

Methods:

- Systematic review; followed PRISMA guidelines¹⁴
- Databases used: CINAHL, PubMed, Ovid-MEDLINE
- Search terms:

P: Veteran*, soldier*, returning vet*, war hero, wound* soldier*, OIF, OEF, Operation Enduring Freedom, Operation Iraqi Freedom, traumatic brain injur*, TBI, brain injur*, concussion*, army, armies, navy, navies, coast guard*, miliar*, marine* [AND terms with traumatic brain injury & Veterans, AND post traumatic stress disorder and veterans, OR together all terms]

I: Occupational therap*, intervention*, treatment*, cog* therap*, rehab*, rehab* therap*, group therap*, behavioral therap*, physical therap*, neuro* rehab* [OR together all terms]

C: (none)

O: participat*, quality of life, ADL*, IADL*, activities of daily living, instrumental activities of daily living, social participat* [OR together all terms]

* = wildcard

Total results	Total excluding duplicates	Screened	Excluded post screen	Reviewed
658	643	85	74	10

Articles were critiqued by a primary reader and a secondary reader using the Law and McDermid (2014) form for quantitative studies and the critical review form for qualitative studies (2007).

Results: Themes found within the systematic review:

- Cognitive Behavior Therapy (Cognitive Processing Therapy, Cognitive Strategy Training)^{1,2,5,9}
 - Setting: variety (Residential, Outpatient, Inpatient)
 - Time Line: 6 – 8 weeks & sessions ran from 45 minutes to 2 hours
 - Preliminary/Moderate Evidence Supporting:
 - Statistically and clinically significant reduction of PTSD symptoms, depression
 - Clinically significant increase in life satisfaction, compensatory strategies & lower levels of cognitive/memory impairments
- Cognitive Behavior Therapy (Behavioral Activation)^{7, 13}
 - Setting: Outpatient
 - Timeline: Between 45-90 minute session 1x a week for 8 weeks
 - Preliminary Evidence Supporting:
 - Statistically significant decrease in PTSD symptoms
 - Clinically significant increase in QOL & decrease in depressive symptoms
- Mindfulness/Massage Interventions (Meditation, Relaxation, Contemplative Therapy)^{3,6}
 - Setting: Combination of Outpatient and Home
 - Timeline: 3 weeks at 2X a week
 - Preliminary/Moderate Evidence Supporting:
 - Statistically significant decrease in PTSD symptoms, & QOL
 - Clinically significant decrease in veteran depression & life partners perceived stress
- Communication Building Interventions^{11,15}
 - Setting: Outpatient
 - Time Line: 10-12 sessions
 - Preliminary Evidence Supporting:

- Clinically significant increase in communication skills between family members

Results: Structures found within the Systematic Review

- Individual Involvement
 - Provides individuals with independence in utilizing new skills and decreases stigma
- Group involvement including other veterans^{1,2,3,5,11,15}
 - Builds trust between members,, share strategies for success, Feeling comfortable to express experiences
 - Moderate
- Family involvement^{3,11,15}
 - Support system for loved one, Assists loved one in initiation of therapy, Creates more accountability meet goals
 - Moderate

References

1. Ahmadizadeh, M., Ahmadi, K., Anisi, J., & Ahmadi, A. B. (2013). Assessment of cognitive behavioral therapy on quality of life of patients with chronic war-related post-traumatic stress disorder. *Indian journal of psychological medicine*, 35(4), 341-345. doi:10.413/0253-7176.122222.
2. American Occupational Therapy Association. (2008). *Occupational therapy practice framework: Domain and process* (2nd ed.). *American Journal of Occupational Therapy*, 62, 625–683.
3. Chard, K. M., Schumm, J. A., McIlvain, S.M., Bailey, G.W., & Parkinson, R.B. (2011). Exploring the efficiency of a residential treatment program incorporating cognitive processing therapy-cognitive for veterans with PTSD and traumatic brain injury. *Journal of Traumatic Stress*, 24, 3, 347-351.
4. Collinge, W., Kahn, J., & Soltysik, R. (2012). Promoting reintegration of National Guard veterans and their partners using a self-directed program of integrative therapies: a pilot study. *Military Medicine*, 177, 12, 1477-85.
5. Daggett, V.S., Bakas, T., Buelow, J., Habermann, B., & Murray, L.L. (2013). Needs and concerns of young male combat veterans with mild traumatic brain injury. *Journal of Rehabilitation Research and development*, 50, 3, 327-340
6. Goverover, Y., & Chiaravalloti, N. (2014). The impact of self-awareness and depression on subjective reports of memory, quality-of-life and satisfaction with life following TBI. *Brain Injury : [bi]*, 28, 2, 174-80. doi:10.3109/02699052.2013.860474.
7. Huckans, M., Kolessar, M., Storzbach, D., Demadura, T., Roost, N., Pavawalla, S., Seelye, A., ... Twamley, E. W. (2010). A pilot study examining effects of group-based cognitive strategy training treatment on self-reported cognitive problems, psychiatric symptoms, functioning, and compensatory strategy use in OIF/OEF combat veterans with persistent mild cognitive disorder and history of traumatic brain injury. *Journal of Rehabilitation Research and Development*, 47, 1, 43-60.
8. Jain, S., McMahon, G. F., & Hasen, P. (2012). Healing touch with guided imagery for PTSD in returning active duty military: a randomized controlled trial. *military medicine : Journal of the Association of Military Surgeons of the United States*, 177, 9, 1015-1021. doi:http://dx.doi.org/10.7205/MILMED-D-11-00290.
9. Jakupcak, M., Wagner, A., Paulson, A., Varra, A., & McFall, M. (2010). Behavioral activation as a primary care-based treatment for PTSD and depression among returning veterans. *Journal of Traumatic Stress*, 23, 4, 491-5. doi: 10.1002/jts.20543.
10. Law, M. & MacDermid, J. C. (2014). *Evidenced-Based Rehabilitation: A Guide to Practice, Third Edition*. Thorafare, NJ: SLACK Incorporated.
11. Magruder, K. M., Frueh, B. C., Knapp, R. G., Johnson, M. R., Vaughan, J. A., Carson, T. C., ... & Hebert, R. (2004). PTSD symptoms, demographic characteristics, and functional status among veterans treated in VA primary care clinics. *Journal of Traumatic Stress*, 17 (4), 293-301. doi:10.1023/B:JOTS.0000038477.47249.c8.
12. Margolies, S. O., Rybarczyk, B., Vrana, S. R., Leszczyszyn, D. J., & Lynch, J. (January 01, 2013). Efficacy of a cognitive-behavioral treatment for insomnia and nightmares in Afghanistan and Iraq veterans with PTSD. *Journal of Clinical Psychology*, 69, 10, 1026-42.
13. Mernoff, S. T., & Correia, S. (2010). *Military blast injury in Iraq and Afghanistan: the Veterans Health Administration's polytrauma system of care*. *Medicine and Health, Rhode Island*, 93, 1, 16-8.
14. Moher D, Liberati A, Tetzlaff J, Altman DG, The PRISMA Group (2009). Preferred Reporting Items for Systematic Reviews and Meta-Analyses: The PRISMA Statement. *PLoS Med* 6(6): e1000097. doi:10.1371/journal.pmed1000097.
15. Perlick, D. A., Straits-Troster, K., Strauss, J. L., Norell, D., Tupler, L. A., Levine, B., Luo, X., ... Dyck, D. G. (2013). Implementation of multifamily group treatment for veterans with traumatic brain injury. *Psychiatric Services (Washington, D.C.)*, 64, 6, 534-40. doi: 10.1176/appi.ps.001622012
16. Plach, H. L., & Sells, C. H. (2013). Occupational performance needs of young veterans. *The American Journal of Occupational Therapy : Official Publication of the American Occupational Therapy Association*, 67, 1.
17. Plagge, J. M., Lu, M. W., Lovejoy, T. I., Karl, A. I., & Dobscha, S. K. (2013). Treatment of Comorbid Pain and PTSD in Returning Veterans: A Collaborative Approach Utilizing Behavioral Activation. *Pain Medicine*, 14, 8, 1164-1172. doi:10.1111/pme.12155.
18. Straits-Troster, K., Gierisch, J. M., Strauss, J. L., Dyck, D. G., Dixon, L. B., Norell, D., & Perlick, D. A. (2013). Multifamily Group Treatment for Veterans With Traumatic Brain Injury: What Is the Value to Participants?. *Psychiatric Services*, 64, 6, 541. doi: 10.1176/appi.ps.001632012
19. Institute of Medicine (U.S.). (2010). *Returning home from Iraq and Afghanistan: Preliminary assessment of readjustment needs of veterans, service members, and their families*. Washington, D.C: National Academies Press.