



Acceptance and Commitment Therapy for Co-occurring Posttraumatic Stress Disorder and Alcohol Use Disorder in U.S. Military Veterans: Preliminary Treatment Outcomes

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BACKGROUND

- Posttraumatic stress disorder (PTSD) and alcohol use disorder (AUD) co-occur at rates ranging from 36% to 52%.^{1,2}
- Co-occurring PTSD and AUD are associated with more severe symptomatology, poorer functioning, higher risk of alcohol use relapse, and higher treatment utilization.³
- Since PTSD and AUD share psychological and neurobiological commonalities in their etiological pathways, it is recommended that the disorders be treated concurrently or in an integrated approach.⁴
- To optimize treatment efficiency and effectiveness, an integrated approach is needed. Acceptance and Commitment Therapy (ACT)⁵ conceptualizes PTSD and AUD in a theoretically consistent and functionally-related manner and may be an effective treatment for co-occurring PTSD and AUD.

PURPOSE

- The aim of the current study was to test the effectiveness of a 12 session individual ACT for co-occurring PTSD and AUD protocol⁶ in a sample of veterans in an uncontrolled pilot trial.

HYPOTHESES

- Veterans will report significant improvement in the primary outcomes of PTSD symptom severity and alcohol use severity at post-treatment.
- Veterans will report significant improvement in the secondary outcomes of depression symptoms, experiential avoidance, functioning, and quality of life at post-treatment.

METHODS

Participants

- 43 Iraq and Afghanistan War veterans (88.4% male; *M* age = 45.3; 20.9% Hispanic; 57.1% African American; 31.0% Caucasian).
- Index trauma: 44.4% combat, 33.3% non-combat military, and 22.2% military sexual trauma.

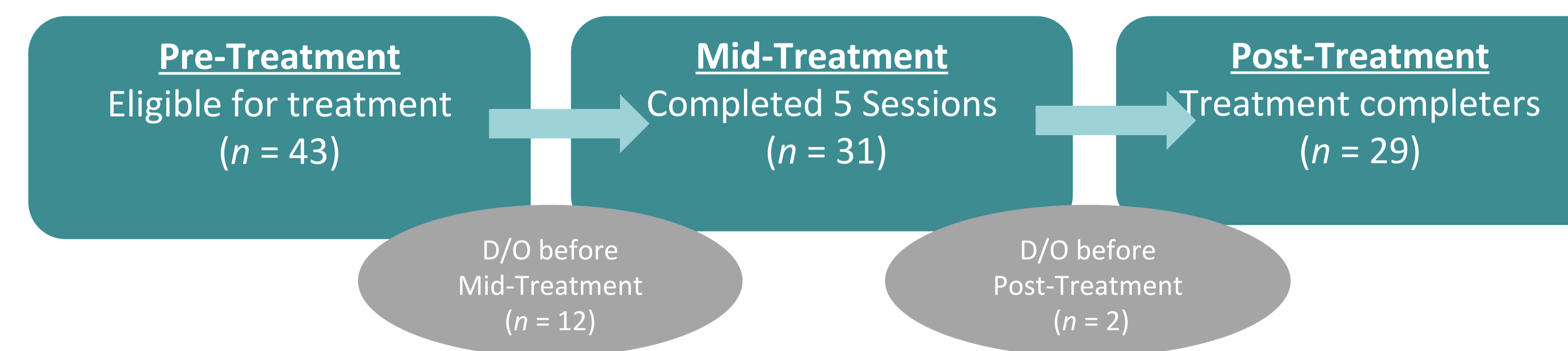
Eligibility Criteria

- Currently meet diagnostic criteria for PTSD and primary Alcohol Use Disorder; Drank in the past 2 weeks; Not currently in psychotherapy; Have not changed psychotropic medications in the past 3 months.

Study Procedures

- 71 of 271 Veterans screened by phone met initial eligibility criteria.
- 43 of 71 met full eligibility criteria established through clinical interview and were assigned to treatment.
- Assessments conducted were pre- and post-treatment.

METHODS CONT'D



Outcome Measures

- **PTSD:** Life Events Checklist for DSM-5 (LEC-5),⁷ Clinician Administered PTSD Scale for DSM-IV (CAPS),⁸ and PTSD Checklist for DSM-5 (PCL-5).⁹
- **Alcohol Use:** Structured Clinical Interview for DSM-5 Research Version (SCID-5-RV)¹⁰ and Timeline Followback (TLFB).¹¹
- **Depression:** Patient Health Questionnaire-9 (PHQ-9).¹²
- **Experiential Avoidance and Psychological Inflexibility:** Acceptance and Action Questionnaire-II (AAQ-II)¹³ and Brief Experiential Avoidance Questionnaire (BEAQ).¹⁴
- **Disability and Quality of Life:** The World Health Organization Disability Assessment Schedule 2.0 (WHODAS 2.0)¹⁵ and WHO Quality of Life Inventory Brief Version (WHOQOL-BREF).¹⁶

RESULTS

- Among treatment completers (*n* = 29), paired samples t-tests indicated that there were significant reductions in PTSD symptom severity, alcohol use, depressive symptoms, and psychological inflexibility as measured by the BEAQ but not the AAQ-II. There was not a significant change in functioning, but there was a significant increase in quality of life.
- Significance levels were adjusted using Benjamini and Hochberg's¹⁷ sequential Bonferroni procedure to control for family-wise error.

Paired Samples T-Test Analyses (*n* = 29)

	Pre-Treatment		Post-Treatment		<i>t</i>	<i>df</i>	<i>p</i>	adjusted	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>				<i>p</i> ¹⁷	<i>d</i> ¹⁸
CAPS-5 - PTSD Severity	40.52	8.38	34.2	12.59	3.81	28	<.001	.030	.793
PLC 5 – PTSD Severity	57.07	9.25	44.31	16.85	4.70	28	<.001	.015	.976
SCID AUD Symptom count*	7.36	2.12	4.16	3.21	6.05	24	<.001	.005	1.299
TLFB Standard Drinks*	8.73	6.43	4.24	5.69	3.48	28	.001	.035	.649
TLFB Days Drinking*	.81	.27	.49	.39	4.72	28	<.001	.010	.914
TLFB Heavy Days Drinking*	.61	.38	.29	.35	4.64	28	<.001	.020	.847
PHQ-9*	1.78	.64	1.46	.84	2.62	28	.014	.045	.496
AAQ-II*	5.12	1.49	4.56	1.58	1.85	28	.076	<i>n.s.</i>	.340
BEAQ*	4.61	.74	4.32	.88	2.19	28	.037	.050	.404
WHODAS*	1.90	.75	1.63	.91	1.83	27	.078	<i>n.s.</i>	.354
WHOQOL-BREF*	2.98	.59	3.21	.56	-2.88	28	.007	.040	-.552

*Mean Item Scores

DISCUSSION

- Overall, the results of this uncontrolled pilot study supported significant improvement between pre-and-post-treatment assessments in PTSD severity, alcohol use, depressive symptoms, psychological inflexibility, and quality of life with medium to large effects.
- This study is the first trial to assess ACT for concurrent PTSD and AUD, with results suggesting that ACT may have promise as a treatment for co-occurring PTSD and AUD.
- Findings also suggest that PTSD and AUD can be treated concurrently, instead of sequentially.
- Limitations include the small sample size, lack of a comparison group, and the lack of ability to measure interrater reliability in diagnostic interviews.
- Additional research, such as a large randomized control trial, is needed to replicate these findings and establish the efficacy of this treatment.

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REFERENCES

- Breslau, N., & Davis, G. C. (1992). Posttraumatic stress disorder in an urban population of young adults: Risk factors for chronicity. *The American Journal of Psychiatry*, 149, 671-675.
- Pietrzak, R. H., Goldstein, R. B., Southwick, S. M., & Grant, B. F. (2011). Prevalence and Axis I comorbidity of full and partial posttraumatic stress disorder in the United States: Results from Wave 2 of the National Epidemiologic Survey on Alcohol and Related Conditions. *Journal of Anxiety Disorders*, 25, 456-465.
- Sells, J. R., Waters, A. J., Schwandt, M. L., Kwako, L. E., Hellig, M., George, D. T., & Ramchandani, V. A. (2016). Characterization of comorbid PTSD in treatment-seeking alcohol dependent inpatients: Severity and personality trait differences. *Drug and Alcohol Dependence*, 163, 242-246.
- U.S. Department of Veterans Affairs/Department of Defense. (2010). *VA/DoD clinical practice guideline for management of posttraumatic stress (Version 2.0)*. Washington, DC: Author. Retrieved from <https://www.healthquality.va.gov/ptsd/PTSD-FULL-2010a.pdf>.
- Hayes, S. C., Strosahl, K. D., & Wilson, K. G. (2012). *Acceptance and commitment therapy: The process and practice of mindful change, 2nd ed.* New York, NY, US: Guilford.
- Hermann, B. A., Meyer, E. C., Schnurr, P. P., Batten, S. V., & Walser, R. D. (2016). Acceptance and commitment therapy for co-occurring PTSD and substance use: A manual development study. *Journal of Contextual Behavioral Science*, 5(4), 225-234.
- Kroenke, K., & Spitzer, R. L. (2002). The PHQ-9: A new depression and diagnostic severity measure. *Psychiatric Annals*, 32, 509-521.
- Bond, F. W., Hayes, S. C., Baer, R. A., Carpenter, K. M., Gueonle, N., Orcutt, H. K., Waltz, T., & Zettle, R. D. (2011). Preliminary psychometric properties of the Acceptance and Action Questionnaire - II: A revised measure of psychological flexibility and experiential avoidance. *Behavior Therapy*, 42, 676-688.
- Gámez, W., Chmielewski, M., Kotov, R., Ruggero, C., Suzuki, N., & Watson, D. (2014). The Brief experiential avoidance questionnaire: Development and initial validation. *Psychological assessment*, 26(1), 35-45.
- Ustun, T. B., & World Health Organization. (2010). *Measuring health and disability: Manual for WHO Disability Assessment Schedule WHODAS 2.0*. Geneva: World Health Organization.
- The WHOQOL Group. (1995). The World Health Organization Quality Of Life Assessment (WHOQOL): Position paper from the World Health Organization. *Social Science and Medicine*, 41(10), 1403-1409.
- Benjamini, Y., & Hochberg, Y. (1995). Controlling the false discovery rate: A practical and powerful approach to multiple testing. *Journal of the Royal Statistical Society Series B (Methodological)*, 57, 289-300.
- Morris, S. B., & DeShon, R. P. (2002). Combining effect size estimates in meta-analysis with repeated measures and independent-groups designs. *Psychological Methods*, 7, 105-125.