

# **Intensive Outpatient Programs for Treating Psychological Sequelae of Sexual Assault: A Brief Summary of the Evidence**

**Psychological Health Center of Excellence**

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**SUBJECT:** Review and summary of evidence for intensive outpatient programs (IOPs) for the treatment of sexual assault (SA) sequelae.

**BLUF:** The Psychological Health Center of Excellence (PHCoE) Evidence Synthesis & Dissemination Section conducted a rapid review of the empirical literature on IOPs for the treatment of sexual assault (SA) sequelae. Results yielded no randomized controlled trials (RCTs) on this topic; however we did identify a single, one-group pre-post treatment study of an IOP for SA with promising results. Given the negligible empirical literature on IOPs for SA, we also provide summaries of pre-post IOP treatment studies on trauma and other related problems, but not sexual assault exclusively. Preliminary evidence suggests that IOPs containing empirically-based components can potentially provide significant symptom reduction with high rates of patient retention. RCTs are clearly needed, however, to fully assess the efficacy of IOPs for SA sequelae.

## Background

*Purpose.* In an effort increase access to evidence-based care to treat SA in military personnel, the U.S. congress has requested that the PHCoE design, implement, and evaluate an IOP for the treatment of mental health (MH) sequelae associated with SA. To help support this effort, PHCoE's Evidence Synthesis and Dissemination section conducted the current review of the existing empirical literature on IOPs for the treatment of sexual assault sequelae. In this report, we detail the results of this effort.

*Sexual Assault in Military Personnel.* SA is a prominent problem in the U.S. military (Morral et al., 2016). Persons who are sexually assaulted during military service report significant number of physical and mental health sequelae, including depression, alcohol abuse, posttraumatic stress disorder (PTSD), and chronic health problems (Suris & Lind, 2008; Kimerling et al., 2010). SA is also associated with suicide risk (Bryan, Bryan, & Clemans, 2015). Despite the known prevalence and sequelae of military SA, a minority of victims receive care (Zinzow et al., 2008). A range of barriers may prevent victims from reporting incidents or seeking care, including fear of not being believed, self-blame, embarrassment, and confidentiality concerns (Turchik et al., 2013). In addition, a number of logistical barriers related to military mission requirements may further impact access to care for military victims compared to their civilian counterparts (see Murdough, 2015).

*Intensive Outpatient Programs.* IOPs provide weekday concentrated MH care on an outpatient basis for a specified period of time (e.g., three weeks). IOPs hold promise of a number of potential benefits such as increasing access to care and helping to mitigate patient avoidance and external distractions that can interfere with traditional outpatient treatment (Harvey et al., 2018; Zalta et al., 2018). As such, IOPs have become a popular model of care for patients who require a more intensive level of care compared to typical outpatients and at a lower cost than inpatient services. A particular benefit of IOPs is that they are structured to permit the integration of multiple treatment modalities to provide comprehensive care and to help ensure that patients are retained long enough to receive the prescribed “dose” of treatment (Harvey et al., 2018). The provision of IOP case management services may further enhance treatment adherence and reduce patient dropout (Miranda, Azocar, Organista, Dwyer, & Areane, 2003; Zalta et al., 2018).

The U.S. Army Medical Command (2015) published guidance for the establishment of half-day IOP programs at 19 Army installations to support comprehensive behavioral healthcare. This guidance directed the standardization of program length and duration to permit active duty service members to enroll in such programs while maintaining their work responsibilities. A recent preliminary retrospective evaluation of an IOP at one such Army installation demonstrated reductions in PTSD symptoms, general distress, and readmissions to inpatient care (Hoyt et al., 2018). Hoyt and colleagues however also noted several issues with the potential to adversely influence IOP services and cite several lessons learned to improve the operation of IOP implementation.

## Methods

Based on the timeline and needs of the requester, the rapid review methodology included the following:

- A systematic search of four databases
- Searches of two clinical trial databases
- English articles only
- Single-person abstract screening
- Single-person full-text screening
- Single-person data abstraction
- No formal assessment of quality
- No quantitative analysis

Search strategies included both free text and Medical Subject Headings (MeSH or Emtree) for the concepts of: 1) adults who have experienced sexual assault and 2) mental health intensive outpatient programs. Database searches were conducted in MEDLINE (via PubMed), EMBASE, the Cochrane Library, and PsycINFO (via Ovid). Grey literature searches were conducted in two clinical trial databases, clinicaltrials.gov and the World Health Organization's International Clinical Trials Registry Platform.

### Electronic Database Search

#### Population:

Concept: Adults who have experienced sexual assault

Key Words: assault, sexual abuse, sexual violence, trauma\*, rape, rapist

MeSH Terms: Sex Offenses

#### Intervention:

Concept: Mental health intensive outpatient programs

Key Words: outpatient program\*, outpatient treatment\*, day hospital\*, day program\*, day treatment\*, group therap\*, group treatment\*, group program\*

Records retrieved from database searches were downloaded into bibliographic database software and duplicates were removed. Titles and abstracts were screened by a single reviewer according to the following exclusion criteria:

- Not English language
- Not original research
- Not adults
- Not a mental health IOP
- Not treating mental-health sequelae of sexual assault

Full-text articles were obtained for records not excluded, and were screened by one reviewer against the same exclusion criteria. See the PRISMA diagram (Figure 1) for a detailed accounting of search results and exclusions.

## Findings

We did not identify any RCTs, and our review yielded only one study meeting full inclusion criteria (Zalta et al., 2018). Specifically, Zalta and colleagues evaluated changes in posttraumatic stress, depression symptoms, and posttraumatic cognitions in a one-group pre- and post-treatment evaluation of a 3-week IOP for veterans and active duty service members. The goals of the study were to examine: 1) patterns of PTSD and depressive symptom change, 2) sex and cohort type (i.e., combat vs. MST) as predictors of treatment response, 3) changes in PTSD cognitions as a predictor of treatment response, and 4) whether the relation between changes in PTSD cognitions and treatment response varied according to cohort type (i.e., combat vs. MST). Below we provide details of the program and study results:

### **Synopsis of Zalta, A.K. et al. (2018). Evaluating patterns and predictors of symptom change during a three-week intensive outpatient treatment for veterans with PTSD**

**Program Description.** The program is housed in a non-Veteran Affairs (VA) MH clinic that serves military personnel and families at no cost to patients. The IOP operates from 8:00 am to 5:00 pm Monday–Friday and is comprised of two tracks: combat-based and MST-based IOPs. Patients were assigned to the tracks based on their identified index traumas. The interventions provided in the two tracks were largely similar except for adjustments made for issues pertinent to each of the two populations, such as topic-specific psychoeducation (e.g., MST). In total, 19 cohorts participated; 12 combat-PTSD and 7 MST-PTSD. Cohort size ranged from 5 to 14 ( $M = 10.5$ ,  $SD = 2.27$ ), and most were co-ed, however, at least two participants were always assigned to MST cohorts.

**Participants.** Participants were 191 veterans (94%) and active duty service members (6%), 91.2% ( $n = 176$ ) of whom completed the program. They were referred by MH providers/programs, program outreach coordinators, non-profit veteran and social service organizations, other veterans, and via self-referral. Both local and non-local veterans and service members were eligible. Participants were screened with a comprehensive psychosocial diagnostic assessment and online measures. A history of trauma (combat, warzone, MST) and a PTSD diagnosis (via Clinician Administered PTSD Scale for DSM-5, last month version) were required for inclusion in the study. Exclusion criteria were: suicidality, homicidality, current self-harm, mania, psychosis, eating disorder and/or substance abuse deemed to interfere with participation or pose risk for withdrawal. The majority of participants were male (63.4%), white (80.6%), and coupled (90%). Eighty-two percent were E4–E9, with 23% E1–E3 and 6.3% officer/or warrant officer.

**Treatment Components.** The principal intervention components were daily individual and group cognitive processing therapy (CPT; Resick, Monson, & Chad, 2016), and daily integrative health treatment (mindfulness based stress reduction [MBSR; Kabat-Zinn, J. (1990)], and yoga). The MST track emphasized esteem and interpersonal difficulties. Secondary intervention components included the following:

- Healthy living — focus on nutrition and physical activity
- Art therapy
- Meaning making from military service
- Acupuncture
- Medication management
- Case management with VA liaison for continuity of care after discharge
- Case management for legal, financial, and other psychosocial needs
- Planned weekend social outing for leisure and practice of newly acquired skills

**Results.** Investigators reported study outcomes for the total sample, combat cohort, and MST cohort. Significant symptom reduction was observed on all outcome variables from pre- to post-treatment in both cohorts; the combat cohorts showed greater symptom reduction relative to the MST cohorts over time, as detailed below.

Outcome Variable	Total Cohort <i>d</i>	<i>n</i>	Combat Cohort <i>d</i>	<i>n</i>	MST Cohort <i>d</i>	<i>n</i>
PTSD symptoms (in last month) <sup>1</sup>	1.12	176	1.40	112	0.74	64
PTSD symptoms (in last week) <sup>1</sup>	1.40	157	1.81	104	0.88	53
Depressive symptoms <sup>2</sup>	1.04	176	1.31	112	.096	64
PTSD Cognitions <sup>3</sup>	0.75	176	0.85	112	.062	64

Note. Paired T-tests of Pre- and Post-treatment scores; <sup>1</sup>PTSD Checklist for DSM-5; <sup>2</sup>Patient Health Questionnaire-9; <sup>3</sup>Posttraumatic Cognitions Inventory.

Results also showed that changes in PTSD cognitions significantly predicted changes in PTSD and depression scores. Changes in PTSD cognitions and PTSD and depression scores did not vary by sex. However, different patterns of change were shown for PTSD and depressive symptoms; the decrease in depressive symptoms was linear across the observation period, whereas a quadratic pattern was observed for PTSD symptoms such that little symptom change was observed during the first week of treatment, with an acceleration in the second and third weeks.

**Conclusions.** This study demonstrated promising results indicating that a multi-modal evidence-based IOP for combat- and MST-related PTSD can potentially support the administration of sufficient dose and time-effective treatment response with a high rate of patient retention. However, it is not possible to disentangle the effects of the various treatment components individually. It is also unclear why greater symptom reduction over time was shown for the combat cohort compared to the MST cohort. Additional research is required to evaluate potential sources of these observed differences. Furthermore, randomized controlled trials are needed to compare traditional outpatient treatment to IOPs.

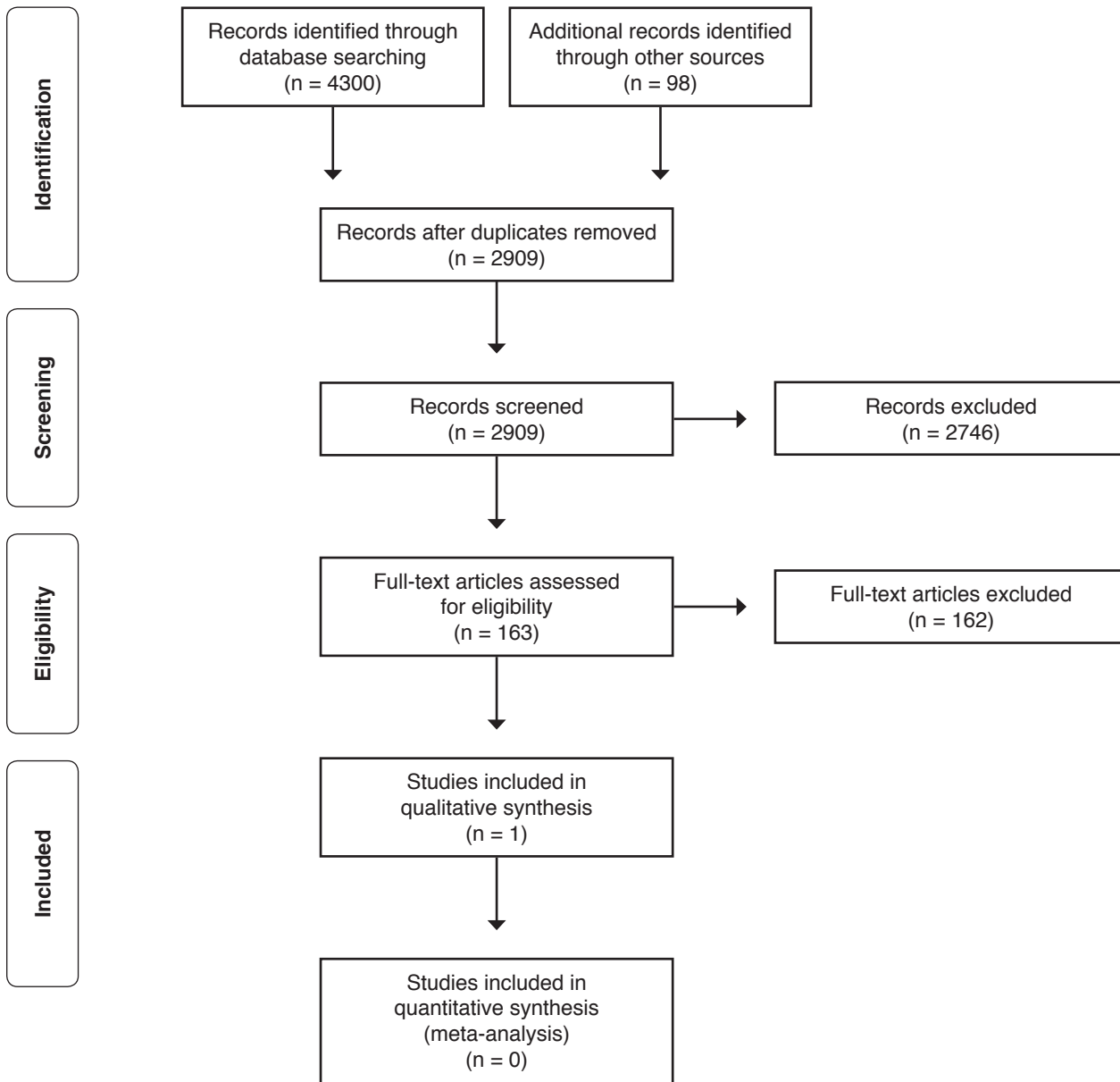
## Additional Considerations

Because of the dearth of available evidence on IOPs that treat SA sequelae, we also looked at civilian and military research that was not conducted on participants who experienced SA, but looked at IOPs for conditions commonly resulting from SA (Table 1). These studies were identified from the reference section of the study that met the inclusion criteria for the rapid review (i.e., Zalta et al., 2018, also included in the table for comparison purposes). Collectively, these studies provide promising but limited support for IOPs designed to treat patients largely diagnosed with PTSD and other trauma related symptoms.

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Figure 1. PRISMA Flow Diagram



**Table 1. Intensive Outpatient Programs for PTSD and Related Problems**

Study	Study Design	Military (M) or Civilian (C), N	Duration	Target Problem(s)	Treatment Modalities	Providers	Retention	Results
Zalta et al. (2018)	Pre-post evaluation of trauma-based treatment	M – service members veterans N = 191	3 weeks; 8–5 Monday– Friday	Combat-PTSD; MST-PTSD tracks; co-ed	CPT, MBSR, yoga, psychoeducation, acupuncture, case management with VA Liaison	Licensed psychologists, postdoctoral fellows, licensed clinical social workers. All treated in CPT by national subject matter expert	92%	Reductions in PTSD symptoms: past month, $d = 1.12$ ; past week, $d = 1.40$ ; depressive symptoms: past 2 weeks, $d = 1.04$ Combat PTSD > reductions relative to MST PTSD
Beidel et al. (2017)	Pre-post evaluation of Trauma Management Therapy (TMT)	M – SMs and veterans N = 112	3 weeks; Monday– Friday	Combat-related PTSD	ET, in-vivo practice, SER, social reintegration, anger management, BA	Licensed clinical psychologists, advanced clinical psychology doctoral students	89.3%	Reductions in CAPS, $d = 2.06$ ; PCL-M, $d = 1.4$ ; 65% no longer met criteria for PTSD
Lande et al. (2011)	Pre-post evaluation of WRAMC Psychiatry Continuity Services (PCS)	M – active duty N = 39	3 weeks, day-long	PTSD	ET, motivational and cognitive-based therapy, trauma recovery skills, crisis management, anger management, biofeedback, light therapy, cranial electric stimulation, art therapy	Multi-disciplinary trauma recovery staff	–	Reductions in PTSD symptoms, $d = .56$ ; depressive symptoms, $d = .52$
Harvey et al. (2018)	Pre-post evaluation Home Base Intensive Clinical Program (ICP)	M- Post 9/11 veterans with complex MH problems N = 132	2 weeks	TBI and PTSD tracks	Individual (PE, CPT), group ( <i>InVivo</i> group PE, DBT), integrative health (art therapy, Tai Chi, exercise, nutrition), case management, veteran peer outreach, family education	Psychiatrists, clinical psychologists, neuropsychologists, rehabilitation specialists, licensed clinical social workers, a dietician, integrative health providers (art therapist, yoga and Tai Chi instructors), peer-to-peer veteran and family outreach coordinators	97%	Reductions in PTSD symptoms, $d = 1.16$ ; neurobiological symptoms, $d = .65$ ; depressive symptoms, $d = .87$ ; increased satisfaction with participation in social roles, $d = -0.82$

*Note.* BA = behavioral activation; DBT = dialectical behavioral therapy CA = complimentary/adjunctive treatments; CBT = cognitive behavioral therapy; CPT = cognitive processing therapy; ET= exposure therapy; SMs = service members; PE = prolonged exposure; MBSR = mindfulness based stress reduction; MST = military sexual trauma; PST = problem solving therapy PTSD = posttraumatic stress disorder; SER = social/emotional rehab



**Table 1. Continued**

Study	Study Design	Military (M) or Civilian (C), N	Duration	Target Problem(s)	Treatment Modalities	Providers	Retention	Results
Hoyt et al. (2018)	Retrospective evaluation of Joint Base Lewis-McChord Psychological Health Intensive Outpatient Program (PHIOP)	M – active duty N = 169	4 weeks (3 hours/day, Monday–Friday)	Trauma – trauma tracks, skills resiliency track, trauma + skills resiliency track; transdiagnostic	Skills and resiliency training, trauma focused group treatment (CPT), trauma-informed yoga, PST, art therapy	Treatment protocols developed and delivered by 1 psychologist, 3 social workers, 1 licensed marriage and family therapist all with > 10 years experience in military health settings and trained in several empirically-based modalities.	–	Reductions in PTSD symptoms, $F(1.87, 310) = 14.70, p < .001, \eta_p^2 = .08$ ; general distress, $F(1.81, 126.5) = 4.71, p < .013, \eta_p^2 = .01$ . Inpatient hospitalization decreased from 12 month prior to treatment to the 12 months after, $z = 6.34, p < .01$
McHugh et al. (2014)	Pre-post evaluation of the Behavioral Health Partial Program (BHPP)	C; N = 626	Monday–Friday; Average = 8.2 days ( $SD = 3.2$ )	Distress intolerance (DI) – transdiagnostic	Group CBT, BA, psychoeducation, self-assessment, communication skills, stress management, mindfulness	Psychiatrists, psychologists, social workers, occupational therapist, postdoctoral- and presdoctoral-level psychology trainees, MH counselors	75%	30.9% showed reduction of $\geq 2$ SDs in DI; roughly half showed reduction of $\geq 20\%$ in DI; those with $\geq 2$ SD reduction in DI showed significantly less depression, $d = .46$ and anxiety, $d = .69$
Lothes et al. (2014)	Pre-post evaluation of DBT-informed program	C; N = 38	5 days/week, 4 hours/day Average = 29 days;	Symptoms of depression, anxiety, hopelessness in adults with acute mental illness Major depression, $n = 23$ ; PTSD, $n = 11$ ; Bipolar, $n = 11$ ; GAD, $n = 8$	DBT: Mindfulness, emotion regulation, distress tolerance, interpersonal effectiveness, process groups, individual therapy, 24-hour coaching telephone consultations	Master’s level licensed clinicians; all individuals leading DBT studied DBT extensively and attended weekly DBT fidelity checks	32% attended $\leq 30$ program days, 26% attended $< 30$ program days	Paired t-tests showed significant reductions in symptoms of depression, anxiety, hopelessness, and degree of suffering

*Note.* BA = behavioral activation; DBT = dialectical behavioral therapy CA = complimentary/adjunctive treatments; CBT = cognitive behavioral therapy; CPT = cognitive processing therapy; ET= exposure therapy; SMs = service members; PE = prolonged exposure; MBSR = mindfulness based stress reduction; MST = military sexual trauma; PST = problem solving therapy PTSD = posttraumatic stress disorder; SER = social/emotional rehab