Psychological Trauma:
Theory, Research, Practice, and Policy

ISSN: 1942-9681

2022, Vol. 14, No. 5, 769–779
https://doi.org/10.1037/tra0001100

Massed Cognitive Processing Therapy for Posttraumatic Stress Disorder in Women Survivors of Intimate Partner Violence

Tara E. Galovski[1, 2], Kimberly B. Werner[3], Terri L. Weaver[4], Kris L. Morris[5], Katherine A. Dondanville[6], John Nanney[7], Rachel Wamser-Nanney[7], Gina McGlinchey[8, 9], Catherine B. Fortier[8, 9], and Katherine M. Iverson[1, 2]

[1] Women's Health Sciences Division, National Center for PTSD, VA Boston Healthcare System, Boston, Massachusetts, United States
[2] Department of Psychiatry, Boston University School of Medicine
[3] College of Nursing, University of Missouri Saint Louis
[4] Department of Psychology, Saint Louis University
[5] Department of Defense, Fort Belvoir Community Hospital, Fort Belvoir, Virginia, United States
[6] Department of Psychiatry and Behavioral Sciences, The University of Texas Health Science Center at San Antonio
[7] Department of Psychological Sciences, University of Missouri Saint Louis
[8] The Translational Research Center for TBI and Stress Disorders and the Geriatric Research, Education and Clinical Center, VA Boston Healthcare System, Boston, Massachusetts, United States
[9] Department of Psychiatry, Harvard Medical School

Objective: Survivors of intimate partner violence (IPV) report significant trauma histories, high rates of posttraumatic stress disorder (PTSD), head injuries and comorbid disorders, and multiple barriers to treatment that often preclude the regular attendance and engagement required in typical therapy protocols. The significant challenges faced by IPV survivors needing treatment may be ameliorated by condensing effective treatments for PTSD, such as cognitive processing therapy (CPT), in an accelerated delivery timeline. ***Method:*** Using a multiple subject, single case design of six matched pairs of 12 female IPV survivors, we preliminarily tested the relative effectiveness of individual massed CPT delivered over 5 days (mCPT) as compared with standard CPT (sCPT) delivery in women IPV survivors. Assessments included full psychiatric diagnostic interviews, clinical interviews assessing trauma history and head injury prior to treatment, symptom monitoring during treatment, and full repeat assessments at 1 month and 3 months following treatment. ***Results:*** No treatment group effect was found for PTSD severity between mCPT and sCPT among intention-to-treat, $F(1, 10) = .01$, $p = .93$. Both mCPT and sCPT were associated with significant improvement in PTSD, $F(2, 20) = 45.05$, $p < .001$, $ds = 1.32–2.38$). ***Conclusion:*** Overall, findings indicate mCPT appears effective in reducing psychological symptoms for women IPV survivors and suggest that condensed treatment is both palatable and feasible. Accelerated treatment delivery in this population may provide a necessary lifeline for women with IPV-related PTSD.

Clinical Impact Statement

Findings in this pilot study of women survivors of intimate partner violence indicated Cognitive Processing Therapy administered in 5 days appears to be a promising approach for treating PTSD in this clinically complex sample. Massed treatment may be a particularly viable option for women who have a small window of opportunity to safely access treatment. PTSD is a painful and debilitating mental health condition. Shortening the time to recovery equals more days lived without PTSD. That might be the most important outcome of all.

Keywords: cognitive processing therapy, posttraumatic stress disorder, traumatic brain injury, intimate partner violence, women

This article was published Online First September 2, 2021.
Kimberly B. Werner https://orcid.org/0000-0001-9321-5884
Katherine A. Dondanville https://orcid.org/0000-0003-4204-7926
Correspondence concerning this article should be addressed to Tara E. Galovski, Women's Health Sciences Division, National Center for PTSD, VA Boston Healthcare System, One University Boulevard, 211 Seton Hall, St. Louis, MO 63121, United States. Email: Tara.Galovski@va.gov

Intimate partner violence (IPV) includes physical, psychological, and sexual violence by past or current intimate partners (Breiding et al., 2015). One third of women (32.4%) in the United States experience physical IPV during their lifetime. Nearly one half (45%) of women who experienced moderate to severe IPV develop posttraumatic stress disorder (PTSD) and comorbid disorders (Mechanic et al., 2008). Childhood physical and sexual abuse

are prevalent among IPV survivors (Widom et al., 2014) and the substantial cumulative trauma burden in this population contributes to PTSD and depressive symptoms. Left untreated, PTSD can persist for years after abuse has ended and increase risk for revictimization (Iverson et al., 2011a).

The lingering effects of physical injuries and the overall impact of IPV on physical health further complicate clinical presentations in this population (Galovski et al., 2021). Injuries from IPV are different from non-IPV injuries in that they are often severe and repetitive, enacted in a chronically invalidating environment, and are often untreated (Campbell et al., 2018). Injuries to the head, neck, and face are common during IPV (Zieman et al., 2017). Blows to the head can cause traumatic brain injury (TBI), defined as a physiological disruption in brain function caused by an external force (Kay, 1993). Research on TBIs from IPV is in its infancy, yet estimates that the prevalence of TBIs in IPV survivors exceeds those from falls, vehicular accidents, combat, and sports injuries combined (Valera et al., 2019). In addition, Mechanic et al. (2008). reported that 75% of IPV survivors experienced strangulation as part of the abuse. Strangulation can cause anoxic brain injury, further complicating the clinical picture.

Researchers are beginning to describe the relationship between PTSD, depression, and the possible effects of TBIs in IPV survivors (Cimino et al., 2019; Iverson et al., 2019; Valera et al., 2019). The complex psychiatric sequelae of IPV (e.g., PTSD and depression) along with the neurological effects of TBI may contribute to a poor prognosis for recovery (Bryant, 2011). Yet, there is limited guidance on treating PTSD and TBI in IPV survivors (Smith & Holmes, 2018).

Cognitive processing therapy (CPT; Resick et al., 2017) is a front-line treatment for PTSD (Chard et al., 2020). CPT demonstrates large effect sizes in the treatment of PTSD across populations, including IPV (Galovski et al., 2020). Despite strong evidence in support of CPT, some individuals have difficulty completing a full course of treatment, with drop-out rates of up to 52% (Imel et al., 2013), suggesting room for improving frontline treatments (Chard et al., 2020). Ongoing stressors are potential barriers to PTSD treatment engagement and completion. Behavioral avoidance of weekly sessions and decay of gains between sessions may contribute to drop-out and suboptimal recovery (Galovski et al., 2020). There are also specific limitations and barriers to treatment engagement and completion for women with PTSD following IPV, including childcare, housing and financial instability, ongoing safety concerns, and difficulties attending regular therapy sessions (Iverson et al., 2011b; Simmons et al., 2015).

Taken together, the many global barriers to treatment experienced by many PTSD patients (e.g., behavioral avoidance, comorbidities, lingering effects of physical injury) as well as the unique situational challenges for IPV survivors (e.g., limited resources and safety concerns) present obstacles to accessing and engaging in standard treatment modalities (e.g., weekly, 1-hr sessions over months). Conversely, a massed dose of CPT, in which sessions are delivered within a shortened time frame, allows clients to receive a full dose of treatment in an accelerated timeline, circumventing some of the noted barriers to treatment and maximizing clinical benefits.

Wachen et al. (2019) reviewed studies of massed delivery of PTSD treatments and found evidence from two randomized controlled trials (RCTs) for the efficacy and efficiency of massed cognitive therapy for PTSD (treatment over 7 days; Ehlers et al., 2014) and massed prolonged exposure (treatment over two weeks; Foa et al., 2018). Along with several additional program evaluations and pilot studies that were reviewed, these RCTs reported equal or lower dropout rates and equivalent treatment gains in massed treatment compared with traditional length psychotherapies. Two uncontrolled studies suggest the effectiveness of massed CPT with military and veteran samples (Bryan et al., 2018; Zalta et al., 2018). Important to note, the methodological and analytic approaches for studies examining massed PTSD interventions differed dramatically, including testing different trauma-focused treatments with and without supplemental interventions, targeting different trauma populations, and conducting therapy in varying time frames. Only one study included comorbid diagnoses or considered the impact of the massed therapy on these outcomes (e.g., depression; Bryan et al., 2018). Finally, it remains unknown how other injuries that impact overall neurological functioning (e.g., TBI) might affect the delivery of services or trajectories of recovery in massed PTSD treatment.

To date, the effectiveness of massed PTSD treatment for IPV survivors with and without a history of TBI is unknown. Given the preliminary success of massed trials of evidence-based PTSD treatments in other trauma populations as well as the unique needs of IPV survivors, this study sought to evaluate massed CPT delivered in an individual format over 5 days as compared with CPT delivered traditionally (i.e., weekly sessions) for women IPV survivors with PTSD. Using a multiple subject, clinical replication series design of six matched pairs of 12 female IPV survivors, we compared individual CPT delivered over 5 days (mCPT) with standard CPT (sCPT) delivery. Clinical case series can begin to observe and test for individual differences that may be lost in larger between-group analyses (Hayes et al., 1999). Leveraging this design, we hypothesized that mCPT would be associated with equivalent decreases in PTSD and depression symptoms, as well as higher treatment engagement and lower dropout rates than sCPT. We also explored the impact of TBI history on treatment engagement and outcomes.

Method

Participants

Twelve women who experienced IPV and a current *DSM–5* PTSD diagnosis (American Psychiatric Association, 2013) were recruited for the pilot study. These women had participated in a larger observational study of PTSD and head injuries among female IPV survivors (Galovski et al., 2021). At the time of recruitment for this pilot study, 27 women had completed the larger study. Eligibility was assessed by phone and in-person. Inclusion criteria included female sex; age between 18 and 45 years; lifetime experience of physical, sexual, and/or emotional IPV; stable on any psychopharmacological medication (≥1 month); and a current PTSD diagnosis. Exclusion criteria included neurological illness or seizure disorders; a current diagnosis of bipolar I, schizophrenia, or other psychotic disorder; current active homicidal or suicidal ideation with intent; currently receiving a frontline trauma-focused therapy for PTSD; completed CPT in the last year; or currently pregnant (larger study included magnetic resonance imaging).

Procedure

Twenty-seven participants from the larger study were identified for possible inclusion in the treatment study. Of those, one did not have a full PTSD diagnosis; four were currently in a trauma-focused treatment for PTSD; and 10 were not available, not interested, or could not be contacted, resulting in 12 eligible participants who were matched into six pairs. Matching criteria (in order of priority) were TBI history, PTSD severity, number of psychiatric disorders, and demographic characteristics (particularly age; see Table 1). One member of each pair was assigned to each treatment modality (mCPT or sCPT). Due to the limitations of the pilot study, participants were asked if they were able to commit to either of the study condition time frames. If they were able to commit to either condition (as was the case in three matched pairs), they were randomly assigned to study condition. If they could only commit to one time frame, they were assigned to that time frame and their paired patient was assigned to the other. After informed consent, baseline data were extracted from the existing research database and additional assessment was conducted to update severity of symptoms on the self-report measures and to confirm or update current psychiatric diagnoses. These data were included as the first time point for the current study. Participants were reassessed 1 month and 3 months after the last treatment session. Participants were compensated $75 for each timepoint and were provided transportation if needed. The research was approved by the institutional review boards of the University of Missouri–St. Louis, Washington University, and the VA Boston Healthcare System.

Treatment Description

CPT is a manualized therapy for PTSD consisting of 12 sessions (~1 hr each), typically delivered weekly or twice weekly (Resick et al., 2017) in three phases: education, processing, and challenging. CPT focuses on challenging beliefs and assumptions related to the trauma, oneself, and the world. Changing dysfunctional beliefs alters negative emotions and behaviors emanating from those beliefs. Licensed clinical psychologists with CPT expertise provided the treatment. Treatment was delivered across two different timelines. sCPT occurred in 1-hr sessions once per week for 12 weeks by two therapists who incorporated sessions into usual clinical practice and missed sessions could be rescheduled as needed.

mCPT occurred in an accelerated outpatient format over 5 consecutive weekdays. Three therapists provided all 12 sessions in 5 days. mCPT participants were given the five-day treatment schedule and understood that therapy would need to be completed in that time frame. In the event of further need for treatment, participants would be referred for additional care. A typical treatment schedule was constructed as follows. Two to three CPT sessions were scheduled for Monday-Thursday as therapists' schedules allowed. Sessions started at 9:00 a.m., and the last session began by 3:00 p.m., allowing for extra time at the end of the day if needed. Sessions were spaced with at least a one-hour break between sessions to allow time for practice work in an on-location, private office. Practice work assigned at the last session of the day could be completed in the office or at home. An hour for lunch and a meal was always provided. Session 12 was scheduled on Friday morning, leaving time on Friday to accommodate any missed sessions from the week. This proved fruitful for the two participants who missed an entire day during the week.

Assessment Instruments

A master's-level clinician conducted pretreatment, posttreatment, and follow-up assessments. Three psychologists reviewed recorded diagnostic interviews to achieve diagnostic consensus.

Clinician-Administered Instruments

Trauma Exposure. Lifetime trauma exposure was assessed via a locally constructed clinician-administered interview (Galovski & Iverson, 2019). This interview included a specific focus on IPV and on injuries sustained during IPV. Index trauma was indicated by participants during the baseline assessment and confirmed by clinicians at the beginning of CPT.

TBI. The Boston Assessment of TBI–Lifetime (BAT-L/IPV version) was used to diagnose TBI. The BAT-L is a valid and reliable semistructured interview used to diagnose TBI in veterans (Fortier et al., 2014). The BAT-L/IPV was designed to differentiate acute TBI symptoms from other common physiological and psychological reactions to trauma using probes targeting IPV experiences. Interrater reliability for BAT-L diagnoses was strong ($\kappa s > .80$).

PTSD. The Clinician-Administered PTSD Scale for *DSM–5* (CAPS-5; Weathers et al., 2013) was used to assess and diagnose current (last month) and lifetime PTSD. The CAPS-5 total severity score had high internal consistency ($\alpha = .88$) and interrater reliability (interclass correlation coefficient = .91).

Psychiatric Comorbidity. The Structured Clinical Interview for *DSM–5* Disorders (SCID-5; First et al., 2016) is a semistructured interview used to assess lifetime and current (past-month) mood, anxiety, alcohol and drug and other psychiatric disorders. Interrater reliability for SCID-5 diagnoses have been found to be good to excellent ($\kappa s = .59–1.00$; Tolin et al., 2018).

Self-Report Measures

Self-report measures were administered at each assessment. To track progress during treatment (i.e., in the morning of the 5 mCPT days and prior to each sCPT session), participants completed brief self-report measures. mCPT measure instructions were modified to query symptoms over the prior day versus the last week.

PTSD Checklist. The PTSD Checklist (PCL-5; Bovin et al., 2016) is a 20-item measure used to assess *DSM–5* PTSD severity. Items are rated on a 5-pt. scale where 0 = "Not at all" to 4 = "Extremely" (possible score range = 0–80). Scores are summed, with higher scores reflecting greater symptoms. Interitem reliability was excellent ($\alpha = .96$).

Depression and Anxiety Stress Scale. The Depression and Anxiety Stress Scale (DASS-21; Lovibond & Lovibond, 1995) is a 21-item measure of depression, anxiety, and stress symptoms. Items are rated on a 4-pt. scale ranging from 0 (*did not apply to me at all*) to 3 (*applied to me very much*). Items are summed and multiplied by 2 for each subscale. The clinical cut-off score for depression is 21. Interitem reliability was excellent ($\alpha = .92$).

Patient Health Questionnaire–9. The Patient Health Questionnaire–9 (PHQ-9; Kroenke et al., 2001) is a nine-item measure used to assess depressive symptoms during treatment, with higher

Table 1
Matched Pair Demographic Characteristics

Participant	Treatment condition	Race	Marital status	Age	Educational attainment	Annual income	CAPS severity	PTSD chronicity (years)	% Life in IPV relationship	Current comorbidity[a]	DASS-21 Depression
					Matched Pair 1						
1[b]	mCPT	White	LWP	27	Some college credit	<$15,000 per year	38	7	11.1%	MDD	28
10[a]	sCPT	White	LWP	34	Bachelor's degree	$45,000–$54,999	48	1.25	36.5%	AUD, CUD	16
					Matched Pair 2						
2[a]	mCPT	Mixed	Single	43	Some college credit	<$15,000 per year	49	33	33.3%	MDD	30
8	sCPT	White	Separated/divorced	40	Some college credit	$55,000–$74,999	38	0.75	47.6%		14
					Matched Pair 3						
3	mCPT	Black	Separated/divorced	41	Some college credit	$15,000–$24,999	35	3	95.7%		10
9	sCPT	White	Single	42	Some college credit	<$15,000 per year	35	7	30.4%		22
					Matched Pair 4						
6	mCPT	White	Single	45	Vocational training	<$15,000 per year	30	8	68.5%	AUD	14
4	sCPT	White	LWP	30	Some college credit	$25,000–$34,999	28	4	59.1%	CUD	12
					Matched Pair 5						
5	mCPT	Black	Single	27	High school diploma/ GED	$15,000–$24,999	32	11	94.4%		8
7	sCPT	White	LWP	23	Associate degree	$75,000–$99,999	28	1	70.0%		8
					Matched Pair 6						
11[b]	mCPT	White	Single	29	Associate degree	<$15,000	39	2	98.5%	PD, OUD	22
12[b]	sCPT	Mixed	In a relationship	33	Master's degree	≥$150,000	44	5	16.7%	PD	42
					Statistics						
	50% mCPT	58% White	41.7% single	34.5 ± 7.4	8.3% high school/GED	41.7% <$15,000	37.0 ± 7.2	6.9 ± 8.4	55.2% ± 30.7%	16.7% MDD	18.3 ± 10.4
	50% sCPT	17% Black	33% LWP		8.3% vocational training	25% $15,000–$34,999				16.7% PD	
		25% mixed	16.7% separated/ divorced		50% some college credit	16.7% 45,000−74,999				16.7% AUD	
			8.3% in a relationship		16.7% associate degree	8.3% 75,000–$99,999				16.7% CUD	
					8.3% bachelor's degree 8.3% master's degree	8.3% ≥$150,000				8.3% OUD	

Note. CAPS = Clinician-Administered PTSD Scale for *DSM–5*; DASS-21 = The Depression and Anxiety Stress Scale; mCPT = massed cognitive processing therapy; sCPT = standard cognitive processing therapy; LWP = living with partner.
[a] Comorbidities reported include major depressive disorder (MDD), panic disorder (PD), alcohol use disorder (AUD), cannabis use disorder (CUD), and opioid use disorder (OUD). [b] Indicates participant has a lifetime history of traumatic brain injury.

scores reflecting higher levels of depressive symptoms. Interitem reliability was satisfactory ($\alpha = .86$).

Treatment Outcomes Questionnaire. At posttreatment, participants completed 20 items (shown in Table 3) regarding four domains: satisfaction with treatment (acceptability), therapeutic rapport (acceptability), opinions about the treatment's effectiveness in treating PTSD and related impairment (perceived helpfulness), and perceptions of attendance and treatment tolerability (tolerability). The four satisfaction items were rated on a scale ranging from 1 (*not at all*) to 9 (*extremely*). All other items were rated on a scale ranging from 0 (*not at all*) to 10 (*completely*). Higher scores reflected more positive perceptions. This questionnaire included open-ended questions querying perceptions of treatment, including pacing and rapport.

Data Analyses

We used a multimethod approach to data analysis including quantitative analyses (although we note the statistical power limitations with this sample size) and visual inspection of trajectories and individual differences across matched pairs. To assess the influence of time spent in a course of CPT on outcomes, we examined the change as a function of treatment type (mCPT vs. sCPT). Between-group analyses were completed using SAS Version 9.4 (SAS Institute Inc., 2013). Proc mixed procedures were used to examine the impact of treatment type (mCPT vs sCPT), assessment time (pretreatment, 1-month posttreatment, 3-month follow-up), and Treatment Type × Time interaction. We report effect sizes for between- and within group analyses. Significant overall or interaction effects were followed up with contrasts among conditions and across timepoints. In addition to examining the impact of TBI history (yes/no) on treatment response, we also used proc mixed procedures to examine the impact of TBI, assessment time, and the TBI × Time interaction collapsing across all participants in both arms. To investigate differences in symptom trajectories across treatment, we graphed individual PTSD and depression symptom severity scores across matched pairs for visual inspection. Where data were missing or missing because of the accelerated timeline for the mCPT arm, the last observation was carried forward. Perceptions of treatment were examined using independent samples *t* tests.

Results

Sample Characteristics

Table 1 displays demographic and descriptive statistics for the matched pairs. Participants were predominately White (58%) and ranged in age from 27 to 35 years ($M = 34.5$, $SD = 7.4$). Half received some college credit (50%), 41.7% were single, and 41.7% reported an annual household income below $15,000. On average, participants reported spending 55.2% of their adult life in an IPV relationship. Current comorbidities included major depression (16.7%), panic disorder (16.7%), and substance use disorder (alcohol, cannabis, and opioids combined; 25.5%). Lifetime diagnoses included major depression (41.6%), panic disorder (33.3%), and substance use disorders (alcohol, cannabis, and opioids combined; 58.3%). Most (92%) participants reported head injuries ($M = 2.5$ events, $SD = 2.15$), five (41.7%) were diagnosed with TBI, and five (41.7%) were strangled by a partner, with one reporting associated loss of consciousness.

Standard CPT Compared With Massed CPT

In the intent-to-treat (ITT) sample ($N = 12$), the analyses showed a significant improvement in PTSD symptoms across assessment, $F(2, 20) = 45.05$, $p < .001$, with no treatment group effect, $F(1, 10) = .01$, $p = .93$, or interaction effect, $F(2, 20) = 1.08$, $p = .36$. Both mCPT and sCPT showed large effect improvements from pretreatment to posttreatment (mCPT $d = 1.92$; sCPT $d = 1.32$) and from pretreatment to 3-month follow-up (mCPT $d = 1.55$; sCPT $d = 2.38$). Both mCPT and sCPT showed significant improvements in depressive, anxiety, and stress symptoms, with no group or Group × Time interaction effect (see Table 2), indicating no differences in the effect of treatment due to treatment modality on any outcome.

Overall, three of the 12 participants retained their PTSD diagnosis. One participant in the sCPT condition dropped out after Session 1 and was PTSD positive at the follow-assessments. A second participant in the sCPT condition also retained her PTSD diagnosis, though her symptom severity at post and 3-month follow-up was low (CAPS scores of 22 and 19, respectively). One participant in the mCPT condition experienced an 11-pt. decrease on the CAPS (49 at pretreatment and 38 at posttreatment) but remained PTSD positive at posttreatment.

Table 1 shows participants' comorbid psychiatric diagnoses at baseline. Overall, 17% of the sample had current major depression, alcohol use disorder, or panic disorder respectively, and 25% had a substance use disorder. At posttreatment, the two participants with panic disorder no longer met criteria for the disorder. All other disorders remained positive at posttreatment.

Treatment Attendance and Retention

One participant dropped out of the sCPT arm. The remaining five participants attended sessions regularly on a weekly basis with very few cancellations. As per the CPT protocol, treatment end was determined by patient progress in the sCPT condition. Four of the five treatment completers were "early responders" (achieved good end state functioning, defined as session severity scores in the mild range on the PCL-5 and on the PHQ-9 and/or patient and therapist agreement that PTSD has been resolved prior to Session 12). One participant ended at Session 9, one at Session 10, and two at Session 11. The fifth completed CPT at Session 12. All six participants completed mCPT within the allotted 5 days. Two mCPT participants missed 1 full day, but sessions were rescheduled and participants received a full dose of CPT within 5 days.

Trajectories of Change Across Matched Pairs

PTSD and depression symptom severity were graphed across matched pairs for visual inspection (see Figure 1). Overall improvement in primary outcomes for both mCPT and sCPT participants was evident. The visual comparison shows similar trajectories of recovery on PTSD and depression symptoms across subjects within each pair.

Table 2
Association of Assessment Timepoint and Treatment Arm and Assessment Timepoint by Traumatic Brain Injury Status

Clinical outcomes	Pretreatment		1-month postassessment		3-month postassessment		Group	Time	Time × Group
	M (*SD*)		*M* (*SD*)		*M* (*SD*)		*F*(1, 10), *p*	*F*(2, 20), *p*	*F*(2, 20), *p*
					Time × Treatment Arm				
	mCPT	sCPT	mCPT	sCPT	mCPT	sCPT			
CAPS-5 Current	37.2 (6.7)	36.8 (8.2)	17.3 (13.0)	21.7 (14.0)	17.7 (16.5)	15.3 (9.8)	0.01, .932	45.05, <.001	1.08, .360
PCL-5 Total	46.8 (10.1)	48.8 (13.8)	20.7 (17.5)	29.7 (22.7)	17.8 (16.8)	19.7 (12.7)	0.27, .614	32.78, <.001	0.59, .565
DASS-21 Depression	18.7 (9.4)	19.0 (12.2)	8.7 (9.4)	14.0 (1 b0.0)	12.0 (13.2)	8.0 (8.4)	0.01, .920	7.40, .004	1.78, .194
DASS-21 Stress	19.3 (7.9)	24.7 (11.4)	8.0 (7.7)	17.3 (11.4)	10.7 (8.9)	11.0 (6.4)	1.14, .311	16.10, <.001	2.28, .128
DASS-21 Anxiety	18.0 (8.9)	19.7 (8.9)	8.0 (5.1)	12.3 (10.1)	8.7 (9.0)	8.0 (5.9)	0.18, .677	16.47, <.001	0.82, .455
					Time × TBI Status				
	TBI (*n* = 5)	No TBI (*n* = 7)	TBI (*n* = 5)	No TBI (*n* = 7)	TBI (*n* = 5)	No TBI (*n* = 7)			
CAPS-5 Current	43.6 (5.0)	32.3 (3.9)	31.2 (9.4)	11.1 (7.8)	29.0 (7.1)	7.6 (7.3)	30.72, <.001	48.00, <.001	3.21, .062
PCL-5 Total	54.4 (12.7)	43.1 (8.8)	40.6 (19.7)	14.1 (11.2)	31.8 (8.2)	9.4 (9.2)	12.80, .005	34.81, <.001	2.49, .108
DASS-21 Depression	27.6 (9.7)	12.6 (4.9)	18.8 (6.4)	6.0 (7.9)	18.8 (10.6)	3.7 (5.1)	22.01, <.001	6.28, .008	0.12, .891
DASS-21 Stress	25.6 (9.9)	19.4 (9.5)	16.8 (10.5)	9.7 (10.1)	15.6 (3.8)	7.4 (7.6)	2.55, .141	12.53, <.001	0.09, .914
DASS-21 Anxiety	25.2 (9.4)	14.3 (3.9)	14.0 (3.7)	7.4 (9.2)	14.4 (6.4)	4.0 (4.2)	9.24, .013	16.38, <.001	0.71, .504

Note. *N* = 12. mCPT = massed cognitive processing therapy; sCPT = standard cognitive processing therapy; TBI = traumatic brain injury.

Impact of TBI Across Collapsed Treatment Groups

As there was no difference between sCPT and mCPT on main outcomes, data from all 12 participants was collapsed to explore the impact of TBI history (yes/no) on CAPS-5, PCL-5, and DASS-21 (see Table 2). Results showed a significant main effect of TBI, $F(1, 10) = 30.72$, $p < .001$, and group by time interaction for PTSD severity on the CAPS-5, $F(2, 20) = 3.21$, $p = .06$ (see Figure 2). When examining the simple effects, those with TBI had significantly higher PTSD severity at one-month posttreatment ($M = 31.2$, $SD = 9.4$) compared with those without a history of TBI ($M = 11.1$, $SD = 7.8$; $t(20) = 4.96$, $p < .001$) and this difference was maintained at the three-month follow-up (TBI $M = 29.0$, $SD = 7.1$ vs. no TBI $M = 7.6$, $SD = 7.3$), $t(27) = 5.30$, $p < .001$. When examining the effect size for these comparisons, large effects for TBI group differences were reported at one-month posttreatment ($d = 2.33$) and three-month follow-up ($d = 2.97$). Thus, participants with a TBI history did not achieve the same treatment gains as those without TBI.

Acceptability, Perceived Helpfulness, and Tolerability

No significant differences were reported between treatment type on ratings of acceptability, perceived helpfulness, and tolerability of treatment (see Table 3). Overall, participants rated these domains highly, including satisfaction with treatment and therapeutic alliance. When examining distress during treatment, one significant difference was reported on the item "to what extent did your PTSD symptoms and level of distress cause you to miss or cancel therapy appointments" with mCPT participants reporting higher distress than sCPT participants (mCPT $M = 6.7$, $SD = 5.2$ vs. sCPT $M = .8$, $SD = 1.8$), $t(9) = 2.40$, $p = .04$. Qualitative data from the Treatment Outcomes Questionnaire expand these quantitative findings. In terms of the tolerability of a massed intervention, a participant noted the following: "The pacing made it easier in a way. I did not have time to ruminate and procrastinate and everything stayed fresh." Addressing the concern that the accelerated time frame may interfere with the development of therapeutic alliance, we include the following quotes about three mCPT therapists: "She listened, she didn't judge me, she made me feel like I could trust her"; "She is an amazing woman, so heartfelt, understanding. I can't give you enough gratitude of how she helped me. I'm going to miss her"; "My therapist was very understanding and didn't make me feel judged. She was very logical. She was very great."

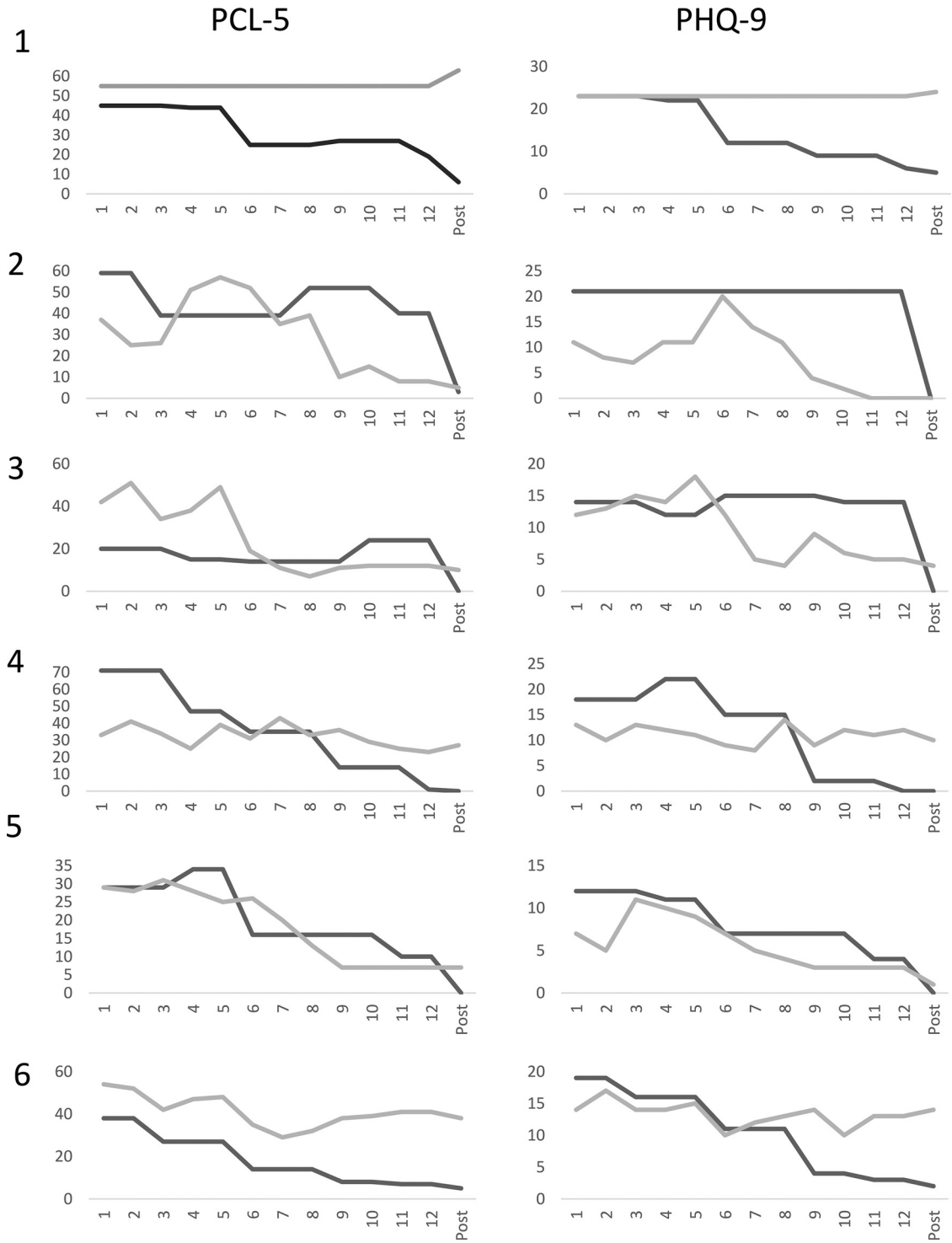
Discussion

The goal of this study was to conduct a clinical case replication series of massed CPT compared with standard CPT in a sample of women IPV survivors for whom the need for efficient PTSD treatment is of particular relevance. As hypothesized, women who received mCPT responded to treatment at rates similar to those who received sCPT with no differential effect. Overall, treatment effects were large suggesting that CPT was successful in treating PTSD and depression and that a truncated treatment delivery timeline did not reduce that effect. Thus, the general benefits of engaging in massed therapy observed in parallel trauma populations (Wachen et al., 2019) certainly apply to this sample of IPV survivors.

The importance of demonstrating the effectiveness of an accelerated delivery time frame for IPV survivors cannot be overstated. First, providing therapy over a brief period of time may provide more access to care for a greater number of IPV survivors, particularly those who reside in temporary residence or shelters. In the United States, women typically reside in shelters between 30 and 60 days (McNulty et al., 2009). Massed CPT could be implemented within that time frame. Second, in the all-too-frequent case of ongoing violent relationships, a truncated period of time in treatment may reduce opportunities for an abusive partner to detect and prevent the survivor's attempts to engage in therapy. Finally, psychiatric disorders such as PTSD and depression contribute to risk

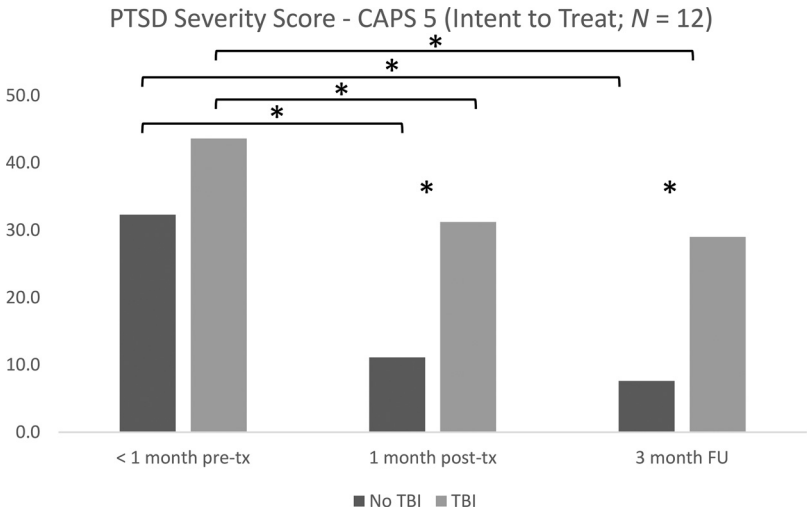
Figure 1

Matched Pairs PCL-5 (Left Column) and PHQ-9 (Right Column) Scores by Treatment Session for Visual Inspection



Note. PCL-5 = PTSD Checklist for *DSM–5*; PHQ-9 = Patient Health Questionnaire - 9; Matched pairs (1 through 6) across massed CPT (indicated in dark grey) and standard CPT (indicated in light grey) treatment. In Matched Pair 1, Participant 10 dropped out of treatment after Session 1. Where data are missing, the last observation is carried forward.

Figure 2
Interaction Effect of Time by Lifetime TBI Status for PTSD Severity on the CAPS-5



Note. * $p < .05$.

for revictimization (Iverson et al., 2011). The presence of these disorders poses barriers to breaking the cycle of victimization in which many IPV survivors find themselves trapped. Recovery from PTSD increases survivors' ability to restore functioning across important life domains including parenting, employment, and social supports. These gains in psychosocial functioning are critical in optimizing IPV survivors' ability to sustain safety and well-being.

TBIs are commonly sustained by women during intimate partner assaults (Galovski et al., 2021). Although the impact of TBIs in IPV survivors is understudied, research in the larger field of trauma recovery suggests that comorbid TBI complicates recovery from PTSD (Bryant, 2011). Given that there were no differences in outcomes between conditions, we collapsed the conditions to compare women with and without a TBI history. Consistent with findings in the IPV-related TBI literature, women with TBI reported more severe PTSD symptoms at pretreatment (Valera et al., 2019) and achieved smaller treatment gains (Galovski et al., 2020). A more intensive administration of therapy might mitigate the lingering effects of TBIs, such as poor concentration and memory impairment. Unfortunately, this is difficult to determine in our data given the small sample size and the lack of ability to control for alternative factors that might account for the results (e.g., comorbid disorders). These findings are far from conclusive, and replication is necessary to understand the impact of TBI on recovery from PTSD.

Massed treatment for PTSD is a fairly novel and this type of therapy is not without clinical concerns. Is this accelerated therapy too intense? Is there time to build therapeutic alliance? To begin to address these concerns, we assessed participants' perceptions of treatment and compared answers across conditions. Both groups were highly satisfied with their treatment and therapeutic alliance, but one difference did emerge regarding attendance. Participants in the mCPT condition experienced several life stressors during their week of therapy and the schedule was necessarily adjusted for 3 participants (2 of whom missed an entire day). At the time, reasons for cancelling sessions included an emergency trip to the hospital for daughter, being called in unexpectedly to work, and needing to leave session to prevent utilities being cut off. After therapy, these participants reported that PTSD symptoms and level of distress contributed to missed sessions. Contrarily, participants in the sCPT group were regular attenders and only one person dropped out. The extent to which sCPT participants experienced stressors between sessions is unknown, but life stressors may not affect attendance in the sCPT modality as compared with mCPT. The consistency of attendance and overall low drop-out in this study is unusual in PTSD trials and in usual care (Galovski et al., 2020). These data suggests that even when life stressors occur and distress is amplified, the women in the mCPT group were able to return to and complete therapy and achieve good clinical outcomes. Even if a cancellation was related to elevated distress, there was little opportunity for decay of treatment gains given that only a day was lost in the mCPT condition versus a two-week lag for missed sessions during sCPT. Finally, the success of any trauma-focused therapy hinges on good clinical rapport. Concerns that there was not enough time to establish rapport in the mCPT condition were alleviated in the high ratings that the therapists received at levels nearly identical to the sCPT condition.

This study has limitations, chiefly in terms of statistical power with a sample size of 12. Although pairs were matched on key characteristics (e.g., TBI history, PTSD severity, psychiatric comorbidity), it was not feasible to match on all client characteristics. Randomization to condition was not possible for all participants. Limitations to the accelerated delivery of CPT became apparent in this trial. CPT is currently conducted as a variable-length treatment (Galovski et al., 2012) such that the end of treatment is dictated by patient progress. If a patient has not met good end state functioning by the end of the protocol (Session 12), then the patient is offered more sessions. However, in this trial, mCPT had to be completed in 1 week. The single participant in the mCPT condition who retained her PTSD diagnosis may have benefited from additional sessions. In this case, the participant's index trauma changed mid-treatment. The timing of additional sessions and rescheduling missed sessions in this accelerated format will be challenging for clinicians and clients who

Table 3
Treatment Follow-Up and Therapeutic Outcomes by Treatment Arm

Treatment outcomes	Total *M* (*SD*)	sCPT *M* (*SD*)	mCPT *M* (*SD*)
Number of sessions completed	10.6 (3.2)	9.2 (4.2)	12 (0)
Satisfaction with treatment (acceptability)			
Now that you've completed treatment, how logical does this type of treatment seem to you?	8.8 (0.4)	9.0 (0.0)	8.7 (0.52)
How confident are you that this treatment was successful in reducing your symptoms?	8.4 (0.8)	8.2 (1.1)	8.5 (0.55)
How confident are you that this treatment was successful in reducing other personal problems?	7.8 (1.1)	7.4 (1.1)	8.2 (1.0)
How likely is it that you would recommend this treatment to a friend with similar problems?	9.0 (0.0)	9.0 (0.0)	9.0 (0.0)
Therapeutic alliance (acceptability)			
How comfortable were you talking about your trauma with your therapist?	9.6 (0.9)	9.8 (0.5)	9.5 (1.2)
How confident were you that your therapist was knowledgeable and competent during treatment?	9.9 (0.3)	10.0 (0.0)	9.8 (0.4)
How understanding was your therapist?	9.9 (3.0)	10.0 (0.0)	9.8 (0.4)
How supportive was your therapist?	10.0 (0.0)	10.0 (0.0)	10.0 (0.0)
Effectiveness for treatment PTSD and associated health domains (perceived helpfulness)			
How helpful did you find treatment?	8.8 (1.5)	8.2 (1.9)	9.3 (1.0)
How much did you like treatment?	9.0 (1.4)	8.8 (1.6)	9.2 (1.3)
How much did your PTSD symptoms improve as a result of therapy?	7.9 (2.0)	7.0 (2.6)	8.7 (1.2)
How much did your relationships (e.g., dating, friendship, family life) improve as a result of therapy?	7.5 (2.1)	7.8 (2.2)	7.2 (2.1)
How much did your health concerns improve as a result of therapy?	5.9 (3.9)	5.0 (3.6)	6.5 (4.4)
How much did your sexual functioning improve as a result of therapy?	5.8 (4.0)	6.5 (4.4)	5.0 (4.1)
How much did your school or work performance improve as a result of therapy?	6.2 (3.6)	6.6 (3.8)	5.8 (3.8)
In general, how much improvement did you experience in all areas of life functioning (e.g., general life satisfaction) as a result of therapy?	8.5 (1.8)	8.0 (2.0)	8.8 (1.6)
How satisfied were you with the condition to which you are randomized?	9.6 (0.8)	9.8 (0.4)	9.3 (1.0)
Attendance (tolerability)			
To what extent did stressor, other than your trauma, cause you to miss or cancel your therapy appointments?	4.4 (4.4)	2.2 (2.6)	6.2 (4.9)
To what extent did your PTSD symptoms and level of distress cause you to miss or cancel your therapy appointments?*	4.0 (4.9)*	0.8 (1.8)*	6.7 (5.2)*
If you had been paid for therapy sessions, would that have changed your attendance?	1.9 (0.3)	2.0 (0.0)	1.8 (0.4)

Note. The items were rated on a 10-point scale, ranging from 1 (*Not at all*) to 10 (*Completely*), except for satisfaction with treatment items, which were rated on a 9-point scale, ranging from 1 (*Not at all*) to 9 (*Extremely*). mCPT = Massed cognitive processing therapy; sCPT = Standard cognitive processing therapy.
* Significant difference at $p < .05$.

may not be able to clear their schedules for this more intensive schedule. Clients need to commit to the full week and clinicians will need to do their best to stay on target and on protocol.

Of note, this clinic was well-resourced. Therapists were able to commit needed time to conduct mCPT, and private clinic space was available for participants to complete practice work between sessions. The clinic also provided lunch and transportation. Treatment settings will vary in their ability to provide such resources. Therapist scheduling flexibility and space issues may be challenges. Solutions might include blocking time in advance of the massed therapy week, coordinating care with several therapists, and creating a master schedule of space and therapist availability. Finding alternative space for practice assignments may be an option for some sites.

In summary, CPT administered in 5 days appears to be effective, feasible, and acceptable in this clinically complex IPV sample. Massed treatment may be a particularly viable option for women who have a small window of opportunity to safely access treatment. PTSD is a painful and debilitating mental health condition. Shortening the time to recovery equals more days lived without PTSD. That may be the most important outcome of all.

References

American Psychiatric Association. (2013). *Diagnostic and statistical manual of mental disorders* (5th ed.).

Bovin, M. J., Marx, B. P., Weathers, F. W., Gallagher, M. W., Rodriguez, P., Schnurr, P. P., & Keane, T. M. (2016). Psychometric properties of

the PTSD Checklist for Diagnostic and Statistical Manual of Mental Disorders–Fifth edition (PCL-5) in veterans. *Psychological Assessment*, *28*(11), 1379–1391. https://doi.org/10.1037/pas0000254

Breiding, M., Basile, K. C., Smith, S. G., Black, M. C., & Mahendra, R. R. (2015). *Intimate partner violence surveillance: Uniform definitions and recommended data elements. Version 2.0.* National Center for Injury Prevention and Control, Centers for Disease Control and Prevention. https://stacks.cdc.gov/view/cdc/31292

Bryan, C. J., Leifker, F. R., Rozek, D. C., Bryan, A. O., Reynolds, M. L., Oakey, D. N., & Roberge, E. (2018). Examining the effectiveness of an intensive, 2-week treatment program for military personnel and veterans with PTSD: Results of a pilot, open-label, prospective cohort trial. *Journal of Clinical Psychology*, *74*(12), 2070–2081. https://doi.org/10.1002/jclp.22651

Bryant, R. A. (2011). Mental disorders and traumatic injury. *Depression and Anxiety*, *28*(2), 99–102. https://doi.org/10.1002/da.20786

Campbell, J. C., Anderson, J. C., McFadgion, A., Gill, J., Zink, E., Patch, M., Callwood, G., & Campbell, D. (2018). The effects of intimate partner violence and probable traumatic brain injury on central nervous system symptoms. *Journal of Women's Health*, *27*(6), 761–767. https://doi.org/10.1089/jwh.2016.6311

Chard, K. M., Kaysen, D., Galovski, T. E., Nixon, R. D. V., & Monson, C. M. (2020). Cognitive processing therapy. In D. Forbes, J. Bisson, C. Monson, & L. Berliner (Eds.), *Effective treatments for PTSD: Practice guidelines from the International Society for Traumatic Stress studies* (3rd ed.; pp 210–233). Guilford Press.

Cimino, A. N., Yi, G., Patch, M., Alter, Y., Campbell, J. C., Gundersen, K. K., Tang, J. T., Tsuyuki, K., & Stockman, J. K. (2019). The effect of intimate partner violence and probable traumatic brain injury on mental health outcomes for black women. *Journal of Aggression, Maltreatment & Trauma*, *28*(6), 714–731. https://doi.org/10.1080/10926771.2019.1587657

Ehlers, A., Hackmann, A., Grey, N., Wild, J., Liness, S., Albert, I., Deale, A., Stott, R., & Clark, D. M. (2014). A randomized controlled trial of 7-day intensive and standard weekly cognitive therapy for PTSD and emotion-focused supportive therapy. *The American Journal of Psychiatry*, *171*(3), 294–304. https://doi.org/10.1176/appi.ajp.2013.13040552

First, M. B., Williams, J. B., Karg, R. S., & Spitzer, R. L. (2016). *User's guide for the SCID-5 Structured Clinical Interview for DSM–5 disorders: Clinical version*. American Psychiatric Publishing.

Foa, E. B., McLean, C. P., Zang, Y., Rosenfield, D., Yadin, E., Yarvis, J. S., Mintz, J., Young-McCaughan, S., Borah, E. V., Dondanville, K. A., Fina, B. A., Hall-Clark, B. N., Lichner, T., Litz, B. T., Roache, J., Wright, E. C., Peterson, A. L., & for the STRONG STAR Consortium. (2018). Effect of prolonged exposure therapy delivered over 2 weeks vs. 8 weeks vs present-centered therapy on PTSD symptom severity in military personnel: A randomized clinical trial. *Journal of the American Medical Association*, *319*(4), 354–364. https://doi.org/10.1001/jama.2017.21242

Fortier, C. B., Amick, M. M., Grande, L., McGlynn, S., Kenna, A., Morra, L., Alexandra, C., William, M., & McGlinchey, R. E. (2014). The Boston Assessment of Traumatic Brain Injury–Lifetime (BAT-L) semistructured interview: Evidence of research utility and validity. *Journal of Head Trauma Rehabilitation*, *29*(1), 89–98. https://doi.org/10.1097/HTR.0b013e3182865859

Galovski, T. E., Blain, L., Mott, J., Elwood, L., & Houle, T. (2012). Manualized therapy for PTSD: Flexing the structure of cognitive processing therapy. *Journal of Consulting and Clinical Psychology*, *80* (6), 968–981. https://doi.org/10.1037/a0030600

Galovski, T. E., & Iverson, K. M. (2019). *Lifetime trauma interview for intimate partner violence survivors.* Women's Health Sciences Division of the National Center for PTSD, VA Boston Healthcare System.

Galovski, T. E., Nixon, R. D. V., & Kaysen, D. (2020). *Flexible applications of cognitive processing therapy: Evidence-based treatment methods*. Academic Press.

Galovski, T. E., Smith, B., Micol, R., & Resick, P. A. (2021). Interpersonal violence and traumatic brain injury: The effects on treatment for PTSD. *Psychological Trauma: Theory, Research, Practice, and Policy*, *3*(3), 376–384. https://doi.org/10.1037/tra0000976

Galovski, T. E., Werner, K. B., Iverson, K. M., Kaplan, S., Fortier, C. B., Fonda, J. R., Currao, A., Salat, D., & McGlinchey, R. E. (2021). A multi-method approach to a comprehensive examination of the psychiatric and neurological consequences of intimate partner violence in women: A methodology protocol. *Frontiers in Psychiatry*, *12*, 108. https://doi.org/10.3389/fpsyt.2021.569335

Hayes, S. C., Barlow, D. H., & Nelson-Gray, R. O. (1999). *The scientist-practitioner: Research and accountability in the age of managed care*. Allyn & Bacon.

Imel, Z. E., Laska, K., Jakupcak, M., & Simpson, T. L. (2013). Meta-analysis of dropout in treatments for posttraumatic stress disorder. *Journal of Consulting and Clinical Psychology*, *81*(3), 394–404. https://doi.org/10.1037/a0031474

Iverson, K. M., Dardis, C. M., Grillo, A. R., Galovski, T. E., & Pogoda, T. K. (2019). Associations between traumatic brain injury from intimate partner violence and future psychosocial health risks in women. *Comprehensive Psychiatry*, *92*, 13–21. https://doi.org/10.1016/j.comppsych.2019.05.001

Iverson, K. M., Gradus, J. L., Resick, P. A., Suvak, M. K., Smith, K. F., & Monson, C. M. (2011a). Cognitive-behavioral therapy for PTSD and depression symptoms reduces risk for future intimate partner violence among interpersonal trauma survivors. *Journal of Consulting and Clinical Psychology*, *79*(2), 193–202. https://doi.org/10.1037/a0022512

Iverson, K. M., Resick, P. A., Suvak, M. K., Walling, S., & Taft, C. T. (2011b). Intimate partner violence exposure predicts PTSD treatment engagement and outcome in cognitive processing therapy. *Behavior Therapy*, *42*(2), 236–248. https://doi.org/10.1016/j.beth.2010.06.003

Kay, T. (1993). Neuropsychological treatment of mild traumatic brain injury. *Journal of Head Trauma Rehabilitation*, *8*(3), 86–87. https://doi.org/10.1097/00001199-199309000-00009

Kroenke, K., Spitzer, R. L., & Williams, J. B. W. (2001). The PHQ-9: Validity of a brief depression severity measure. *Journal of General Internal Medicine*, *16*(9), 606–613. https://doi.org/10.1046/j.1525-1497.2001.016009606.x

Lovibond, P. F., & Lovibond, S. H. (1995). *Manual for the Depression Anxiety Stress Scales* (2nd ed.). Psychology Foundation.

McNulty, M. C., Crowe, T. K., Kroening, C., VanLeit, B., & Good, R. (2009). Time use of women with children living in an emergency homeless shelter for survivors of domestic violence. *OTJR: Occupation, Participation, and Health, 29*(4), 183–190. https://doi.org/10.3928/15394492-20090914-06

Mechanic, M. B., Weaver, T. L., & Resick, P. A. (2008). Risk factors for physical injury among help-seeking battered women: An exploration of multiple abuse dimensions. *Violence Against Women*, *14*(10), 1148–1165. https://doi.org/10.1177/1077801208323792

Resick, P. A., Monson, C. M., & Chard, K. M. (2017). *Cognitive processing therapy for PTSD: A comprehensive manual*. Guilford Press.

SAS Institute Inc. (2013). *SAS® 9.4 Statements: Reference*.

Simmons, C. A., Lindsey, L., Delaney, M. J., Whalley, A., & Beck, J. G. (2015). Real-world barriers to assessing and treating mental health problems with IPV survivors: A qualitative study. *Journal of Interpersonal Violence*, *30*(12), 2067–2086. https://doi.org/10.1177/0886260514552275

Smith, T. J., & Holmes, C. M. (2018). Assessment and treatment of brain injury in women impacted by intimate partner violence and PTSD. *The Professional Counselor*, *8*(1), 1–10. https://doi.org/10.15241/tjs.8.1.1

Tolin, D. F., Gilliam, C., Wootton, B. M., Bowe, W., Bragdon, L. B., Davis, E., Hannan, S. E., Steinman, S. A., Worden, B., & Hallion, L. S. (2018). Psychometric properties of a structured diagnostic interview for *DSM–5*

anxiety, mood, and obsessive-compulsive and related disorders. *Assessment*, *25*(1), 3–13. https://doi.org/10.1177/1073191116638410

Valera, E., Campbell, J. C., Gill, J., & Iverson, K. M. (2019). Correlates of brain injuries in women subjected to intimate partner violence: Identifying the dangers and raising awareness. *Journal of Aggression, Maltreatment & Trauma*, *28*(6), 695–713. https://doi.org/10.1080/10926771.2019.1581864

Wachen, J. S., Dondanville, K. A., Evans, W. R., Morris, K., & Cole, A. (2019). Adjusting the timeframe of evidence-based therapies for PTSD-massed treatments. *Current Treatment Options in Psychiatry*, *6*(2), 107–118. https://doi.org/10.1007/s40501-019-00169-9

Weathers, F. W., Blake, D. D., Schnurr, P. P., Kaloupek, D. G., Marx, B. P., & Keane, T. M. (2013). *The Clinician-Administered PTSD Scale for DSM–5 (CAPS-5)* [Assessment]. www.ptsd.va.gov

Widom, C. S., Czaja, S., & Dutton, M. A. (2014). Child abuse and neglect and intimate partner violence victimization and perpetration: A prospective investigation. *Child Abuse & Neglect: The International Journal*, *38*(4), 650–663. https://doi.org/10.1016/j.chiabu.2013.11.004

Zalta, A. K., Held, P., Smith, D. L., Klassen, B. J., Lofgreen, A. M., Normand, P. S., Brennan, M. B., Rydberg, T. S., Boley, R. A., Pollack, M. H., & Karnik, N. S. (2018). Evaluating patterns and predictors of symptom change during a three-week intensive outpatient treatment for veterans with PTSD. *BMC Psychiatry*, *18*(1), 15. https://doi.org/10.1186/s12888-018-1816-6

Zieman, G., Bridwell, A., & Cárdenas, J. F. (2017). Traumatic brain injury in domestic violence victims: A retrospective study at the Barrow Neurological Institute. *Journal of Neurotrauma*, *34*(4), 876–880. https://doi.org/10.1089/neu.2016.4579

Received November 22, 2020
Revision received March 30, 2021
Accepted May 21, 2021 ■

Correction to Ciro et al. (2021)

In the article "Acculturation, Coping, and PTSD in Hispanic 9/11 Rescue and Recovery Workers," by Dianne Ciro, Robert H. Pietrzak, Rufina J. Lee, Janice Rodriguez, Ritika Singh, Ryan Salim, Clyde B. Schechter, Steven M. Southwick, Michael Crane, Denise J. Harrison, Benjamin J. Luft, Jacqueline M. Moline, Iris G. Udasin, and Adriana Feder (*Psychological Trauma: Theory, Research, Practice, and Policy*, 2021, Vol. 13, No. 1, pp. 84–93, http://dx.doi.org/10.1037/tra0000624), the following acknowledgment of funding was missing in the author note: "This study was supported by the Centers for Disease Control and Prevention/National Institute for Occupational Safety and Health (Research Contract 200-2011-41919). Its contents are solely the responsibility of the authors and do not necessarily represent the official views of CDC/NIOSH. This funding source had no role in study design; in the collection, analysis and interpretation of data; in the writing of the report; or in the decision to submit the paper for publication." The online version of this article has been corrected.

https://doi.org/10.1037/tra0001250