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Written Exposure Therapy vs Prolonged Exposure Therapy in the Treatment of Posttraumatic Stress Disorder
A Randomized Clinical Trial

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IMPORTANCE Evidence-based treatments for posttraumatic stress disorder (PTSD) exist, but all require 8 to 15 sessions and thus are less likely to be completed than brief treatments. Written exposure therapy (WET) is a brief and efficacious treatment that has not been directly compared with prolonged exposure therapy (PE), a more time-intensive, exposure-based treatment.

OBJECTIVE To determine whether WET is noninferior to PE in treating PTSD among veterans.

DESIGN, SETTING, AND PARTICIPANTS A randomized noninferiority clinical trial was conducted between September 9, 2019, and April 30, 2022. Participants were 178 veterans with PTSD presenting to 1 of 3 Veterans Affairs medical centers. Inclusion criteria consisted of a primary diagnosis of PTSD and stable medication. Exclusion criteria included current psychotherapy for PTSD, high suicide risk, active psychosis, unstable bipolar disorder, and severe cognitive impairment. Independent evaluations were conducted at baseline and 10, 20, and 30 weeks after the first treatment session. Data were analyzed from January 1 to March 31, 2023.

INTERVENTIONS Participants assigned to WET (n = 88) received five to seven 45- to 60-minute sessions. Participants assigned to PE (n = 90) received eight to fifteen 90-minute sessions. The WET sessions included 30 minutes of writing-based imaginal exposure conducted in session, whereas PE sessions included 40 minutes of in-session imaginal exposure and between-session in vivo exposures.

MAIN OUTCOMES AND MEASURES The primary outcome was change in PTSD symptom severity measured with the Clinician-Administered PTSD Scale for *DSM-5* (CAPS-5) from baseline to the 20-week assessment; noninferiority was defined as a less than 10-point difference between the 2 treatment groups. Difference in treatment dropout was also examined.

RESULTS Of the 178 participants, 134 (75.3%) were men, and the mean (SD) age was 44.97 (13.66) years. In terms of race, 37 participants (20.8%) were Black, 112 (62.9%) were White, 11 (6.2%) were more than 1 race, and 18 (10.1%) were of other race (including American Indian or Alaska Native, Asian, and Native Hawaiian or Other Pacific Islander [some participants did not specify their race when selecting the category "other"]); in terms of ethnicity, 19 participants (10.7%) were Hispanic. Changes in PTSD symptom severity from baseline to all subsequent assessments among individuals randomized to WET were noninferior relative to individuals randomized to PE. The largest difference between treatments was observed at 10 weeks and was in favor of WET (mean difference, 2.42 [95% CI, 0.35-1.46] points). Participants were significantly less likely to drop out of WET compared with PE (11 [12.5%] vs 32 [35.6%]; χ^2 = 12.91; Cramer V = 0.27).

CONCLUSIONS AND RELEVANCE In this study, WET was noninferior to PE in PTSD symptom change and was associated with significantly less attrition. Findings suggest that WET may transcend previously observed barriers to PTSD treatment for both patients and clinicians.

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Visual Abstract
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Supplemental content

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Posttraumatic stress disorder (PTSD) is a commonly occurring condition,[1,2] especially among military veterans. It is associated with various debilitating other psychiatric and physical health conditions.[3] Fortunately, several evidence-based psychotherapies for PTSD are available; among these, prolonged exposure therapy (PE)[4] and cognitive processing therapy (CPT)[5] have the strongest empirical support.[6-8] These interventions involve 8 to 15 individual sessions, lasting between 60 and 90 minutes per session and including between-session assignments.[9] Importantly, many factors prevent those who could benefit from these treatments from either accessing or completing them, including limited time and finances for a full course of treatment and limited availability of trained therapists. Even when patients successfully access these treatments, many (eg, 35%-50%) drop out before completion.[10,11] Efforts to disseminate and train mental health care clinicians in these treatments have improved, although time and cost associated with trainings still impede access.[12] Even when clinicians receive proper training, many report not using PE or CPT because they are overburdened by high caseloads[13] or work in settings in which it is not feasible to deliver time-intensive treatments.[14] These barriers result in evidence-based PTSD treatments being underused and patients with PTSD being untreated.

Written exposure therapy (WET) is emerging as an alternative, efficacious brief intervention for PTSD that requires less time and fewer resources to deliver with fidelity.[15] Written exposure therapy consists of 5 sessions during which patients write for 30 minutes each session about a specific traumatic event, with no between-session assignments. Written exposure therapy significantly reduces PTSD[16-19] and depression symptoms,[20] and these significant reductions are sustained for at least 1 year.[20] Studies have also shown that WET is noninferior to CPT, with significantly fewer treatment dropouts.[17,18] Moreover, PTSD symptom severity, psychiatric comorbidity, and symptom chronicity do not affect WET outcomes.[21]

Although this growing body of evidence is encouraging, no prior study has compared WET with PE. Such a comparison is critical because a recent, large clinical trial comparing PE and CPT treatment outcomes among veterans showed that PE outperformed CPT in the number of individuals who experienced a clinically significant change in PTSD symptom severity, lost their PTSD diagnosis, and experienced a remission of their PTSD symptoms.[22] Comparing WET and PE directly is also important because PE requires substantially more time spent confronting the trauma memory in session than WET, and PE requires between-session in vivo exposures, whereas WET does not. The possibility that WET might yield similar outcomes as PE despite these dramatic within- and between-session differences would have significant implications for making PTSD treatment more efficient and accessible for those in need of such services.

In this study, we compared treatment outcomes for WET and PE among veterans diagnosed with PTSD. Given prior findings,[17,18] we expected that PTSD treatment outcomes for participants who received WET would be noninferior compared with participants who received PE. Consistent with prior studies, we expected that WET would be associated with significantly less treatment dropout than PE.

Key Points

Question Is written exposure therapy (WET) noninferior to the more time-intensive prolonged exposure therapy (PE) in treating posttraumatic stress disorder (PTSD)?

Findings In this randomized clinical trial of 178 veterans diagnosed with PTSD, participants in both treatments improved significantly, with large observed effect sizes. Despite a considerable difference in the number of treatment sessions, WET was noninferior to PE, and treatment retention was significantly better among those who received WET.

Meaning These findings suggest that WET is a viable option for PTSD treatment and has the potential to reach a greater number of individuals who are in need of PTSD treatment.

Method

The study was approved by the institutional review board at each recruitment site. All participants provided written informed consent. The full protocol is included in Supplement 1. This study followed the Consolidated Standards of Reporting Trials (CONSORT) reporting guideline.

Participants

Table 1 provides the characteristics of the sample of this noninferiority randomized clinical trial. Participants included 178 men and women veterans who were seeking treatment for PTSD from 1 of 3 Department of Veterans Affairs (VA) Medical Centers, located in Boston, Massachusetts; Charleston, South Carolina; and Madison, Wisconsin. Study inclusion required being a US military veteran, meeting *DSM-5* criteria for PTSD,[23] and, if taking a psychotropic medication, taking a stable dose for at least 4 weeks prior to enrollment. We excluded individuals at high risk for suicide; those with significant cognitive impairment (assessed via clinical judgment), current comorbid severe substance use disorder, psychotic disorder, or unstable bipolar disorder; and those who were currently engaged in psychotherapy for PTSD.

As part of the baseline assessment, participants completed a demographic questionnaire measure in which they reported on their age, sex, and race and ethnicity. These data were collected to demonstrate that participants in the current study were representative of veterans presenting to VA medical centers for PTSD treatment services. Information for sex was used as part of the randomization process.

A study flow diagram outlining the recruitment and participation for each treatment condition is provided in **Figure 1**. eTable 1 in Supplement 2 provides a list of reasons for treatment dropout.

Measures

Diagnostic interviews were administered by independent evaluators located at the VA Boston Healthcare System who held

Table 1. Participant Characteristics

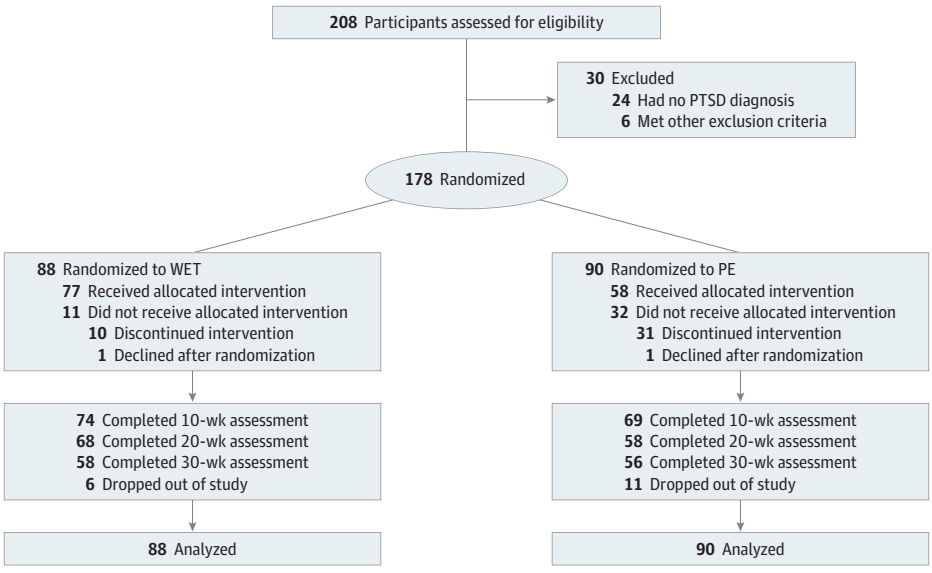
Characteristic	Treatment condition of participants[a] All (N = 178)	WET (n = 88)	PE (n = 90)
Sex			
Women	44 (24.7)	21 (23.9)	23 (25.6)
Men	134 (75.3)	67 (76.1)	67 (74.4)
Age, mean (SD), y	45.0 (13.7)	46.2 (52.5)	43.8 (48.7)
Ethnicity			
Hispanic or Latino	19 (10.7)	<10	12 (13.3)
Not Hispanic or Latino	159 (89.3)	81 (92.0)	78 (86.7)
Race			
Black	37 (20.8)	20 (22.7)	17 (18.9)
White	112 (62.9)	56 (63.6)	56 (62.2)
>1 Race	11 (6.2)	<10	<10
Other[b]	18 (10.1)	<10	11 (12.2)
Index trauma of worst event			
Combat-related	93 (52.2)	51 (58.0)	42 (46.7)
Military sexual assault	26 (14.6)	11 (12.5)	15 (16.7)
Sudden violent death	11 (6.2)	<10	<10
Other (eg, motor vehicle crash, physical assault, nonmilitary sexual assault)	48 (27.0)	19 (21.6)	29 (32.2)
Comorbid disorders			
MDD	95 (53.4)	50 (56.8)	45 (50.0)
Persistent depressive disorder	80 (44.9)	36 (40.9)	44 (48.9)
Generalized anxiety disorder	36 (20.2)	16 (18.2)	20 (22.2)
Alcohol use disorder	34 (19.1)	19 (21.6)	15 (16.7)
Social anxiety disorder	24 (13.5)	15 (17.0)	<10
Panic disorder	22 (12.4)	12 (13.6)	10 (11.1)
Specific phobia	17 (9.6)	<10	10 (11.1)
OCD	16 (8.9)	<10	<10
Agoraphobia	16 (8.9)	<10	<10
Bipolar disorder	10 (5.6)	<10	<10
Other comorbid disorders	32 (18.0)	10 (11.4)	22 (24.4)

Abbreviations: MDD, major depressive disorder; OCD, obsessive compulsive disorder; PE, prolonged exposure therapy; WET, written exposure therapy.

[a] Unless otherwise indicated, data are expressed as No. (%) of participants; <10 is used where applicable to protect participant identifiability.

[b] Includes American Indian or Alaska Native, Asian, and Native Hawaiian or Other Pacific Islander (some participants did not specify their race when they selected "other").

Figure 1. Study Flow Diagram



PE indicates prolonged exposure therapy; PTSD, posttraumatic stress disorder; WET, written exposure therapy.

at least a master's degree in psychology and who had no knowledge of treatment assignment. Assessments were conducted before treatment and at 10, 20, and 30 weeks after the first treatment session. This assessment schedule permitted participants in both conditions to be assessed at comparable time points. All assessments were conducted via telephone and recorded for interrater reliability assessment. The primary measure was the Clinician-Administered PTSD Scale for *DSM-5* (CAPS-5), with a range of 0 (no PTSD symptoms) to 80 (most severe PTSD symptoms) points.[24] The Structured Clinical Interview for *DSM-5*[25] was administered at baseline to assess for aforementioned exclusion criteria as well as other psychiatric comorbidities. Consistent with the intention-to-treat approach, all individuals who dropped out of treatment were asked to complete subsequent assessments. Training and fidelity of independent evaluators are described in eMethods 1 in Supplement 2.

Treatment dropout was defined as ending treatment before completion without a shared decision between the therapist and participant to stop treatment. Adverse events were assessed at each assessment visit by inquiring whether any major change in mental or physical health or any hospitalizations had occurred since the participant's last assessment. Adverse events were also assessed at each treatment session by the therapist asking about changes since the last session.

Procedures

Participants were primarily recruited from direct clinic referrals at each of the study sites. Additional recruitment strategies included posting study brochures in clinic areas at each site. Recruitment occurred from September 9, 2019, to April 30, 2022. The research team prescreened 396 individuals for eligibility via telephone. A total of 142 individuals were deemed ineligible, declined participation, or could not be further contacted. A total of 254 individuals consented to participate, 208 completed an eligibility and baseline assessment, and 178 were randomized (Figure 1).

Randomization and Blinding

The blocked (site and sex) randomization sequence used a 1:1 ratio. Variable block sizes of 4, 6, and 8 were entered by a study statistician into a secure, web-based application using SAS, version 9.4 (SAS Institute Inc), which was available and accessed only by the primary site (VA Boston Healthcare) project coordinator once a participant was deemed eligible. The local site project coordinator then informed the participant of their treatment assignment and assigned a therapist. The participant was subsequently contacted by the therapist to schedule the first treatment session, which typically occurred within the week. Participants were unaware of the study hypotheses and were instructed to not reveal their treatment condition to the independent evaluators. To protect against bias, a new rater was assigned if unintentional disclosure of treatment assignment occurred. Otherwise, raters were assigned based on participant scheduling preference.

Treatment

Writing exposure therapy includes 5 sessions in which individuals are instructed to write for 30 minutes about a specific index trauma with a focus on the details of the event and the feelings and thoughts that occurred during the event in the earlier sessions (ie, 1-3) and with a focus on how the event has affected their lives in later sessions (ie, 4 and 5). After 30 minutes of writing is completed, the therapist and client briefly discuss the writing experience. No between-session assignments are required.[15] The first session is 60 minutes and includes information about PTSD symptoms and a treatment rationale. Subsequent sessions are approximately 45 minutes and include providing feedback to the client about the prior written narrative. In this study, when necessary (eg, participants did not write about the traumatic event during the first 2 sessions), we permitted study therapists to add 1 or 2 additional sessions to ensure that participants received adequate exposure to the trauma memory before moving onto later sessions that focused on the effect of the event. Past randomized clinical trials of WET have not permitted additional sessions to the protocol. There was no option to end treatment before completing session 5.

Prolonged exposure therapy consists of eight to fifteen 90-minute sessions in which individuals engage in imaginal exposure during sessions focused on the most distressing traumatic memory and are instructed to conduct in vivo exposures to people, places, and situations that they have been avoiding and are related to the index trauma.[4] The sessions include 40 minutes of imaginal exposure and between-session in vivo exposures. Patients discontinue treatment by session 8 if they have a stable score on a self-reported measure of PTSD for at least 2 consecutive sessions that is below the cutoff for probable PTSD (eg, <33 on the PTSD Checklist for *Diagnostic and Statistical Manual of Mental Disorders* [Fifth Edition]),[26] and the therapist and patient agree that additional sessions are unnecessary because substantial symptom improvement has occurred.

Both treatments were delivered in weekly sessions. Treatment sessions were recorded for fidelity assessments. Consistent with current VA practice, all participants were offered treatment delivered either face to face or remotely through video teleconference technology. As recruitment mainly occurred during the COVID-19 pandemic, most participants (146 [82.0%]) received treatment remotely. Therapists were mental health clinicians, all of whom held doctorate degrees in clinical psychology and were on staff at the study sites. Additional information regarding the therapists and treatment fidelity ratings is described in eMethods 2 in Supplement 2. Detailed information on the study design is reported elsewhere.[27]

Statistical Analysis

Data were analyzed from January 1 to March 31, 2023. Sample size calculations were based on the primary aim of testing noninferiority of WET vs PE on the primary outcome of changes in CAPS-5 total scores. Our assumptions were standard values of $P = .05$, power = 0.80, and a target noninferiority margin of 10 for the CAPS-5 with an SD of 20, consistent with past WET noninferiority trials,[17,18] and corresponds to an effect size of Cohen $d = 0.50$. Power calculations conducted using SAS proc power indicated that a sample size of 100 would provide power greater than 0.80, which was conservatively in-

Table 2. CAPS-5 Mean Scores and PTSD Diagnosis Rates by Condition and Assessment Period[a]

	Assessment period			
	Baseline	10 wk	20 wk	30 wk
CAPS-5 total score				
WET	34.51 (32.88 to 36.14)	27.69 (25.39 to 29.98)	26.17 (23.88 to 28.46)	26.58 (24.06 to 29.11)
PE	35.20 (33.65 to 36.75)	30.10 (28.12 to 32.08)	24.78 (22.29 to 27.27)	26.33 (23.75 to 28.91)
Mean difference	−0.69 (−2.94 to 1.56)	−2.42 (−5.69 to 0.86)	1.38 (−2.38 to 5.15)	0.25 (−3.90 to 4.40)
CAPS-5 plus PTSD diagnosis, No./total No. (%)				
WET	88/88 (100)	49/75 (65.3)	34/68 (50.0)	35/58 (60.3)
PE	90/90 (100)	50/69 (72.5)	31/58 (53.4)	33/55 (60.0)
Odds ratio (95% CI) comparison	NA	0.72 (0.35 to 1.46)	1.15 (0.57 to 2.32)	1.01 (0.48 to 2.16)

Abbreviations: CAPS-5, Clinician-Administered PTSD Scale for *DSM-5*; NA, not applicable; PE, prolonged exposure therapy; PTSD, posttraumatic stress disorder; WET, written exposure therapy.

[a] CAPS-5 scores range from 0 (no PTSD symptoms) to 80 (most severe PTSD symptoms) points.

creased twice, first by 25% to account for attrition and then by 20% to account for examining noninferiority at 3 time points, resulting in the target sample size of 150. We evaluated the noninferiority hypothesis by examining whether the entire 95% CI of the mean difference score in the CAPS-5 total score from baseline to 20 weeks after the first treatment session was less than the margin of 10 points. The primary time point between-condition (Cohen d[28] and odds ratio) and within-condition (standardized mean gain scores) effect sizes were also calculated to characterize treatment effects on mean levels of PTSD and diagnostic rates at follow-ups. Our primary outcome period was 20 weeks, but we examined treatment outcome at all assessment periods. Growth curve models were specified to characterize within-condition effects of treatment on PTSD. Analyses were conducted using all randomized participants (ie, intention to treat), and missing data in all analyses were handled using multiple imputation procedures within Mplus.[29]

It should be noted that we had planned to examine quality of life assessed via a self-report measure as a secondary treatment outcome. However, given the conditions of the COVID-19 global pandemic, participant response rate for returning the measure via mail was very poor (eg, less than 50%) and thus we are underpowered to test this secondary outcome.

Results

Among the 178 participants randomized to WET and PE, 134 were men (75.3%) and 44 were women (24.7%). The mean (SD) age was 44.97 (13.66) years). In terms of race, 37 participants (20.8%) were Black, 112 (62.9%) were White, 11 (6.2%) were more than 1 race, and 18 (10.1%) were of other race (including American Indian or Alaska Native, Asian, and Native Hawaiian or Other Pacific Islander [some participants did not specify their race when selecting the category "other"]); in terms of ethnicity, 19 participants (10.7%) were Hispanic. Participants did not significantly differ in age, educational level, or household income and were not more likely in either condition to identify as male or Hispanic. Participants did not significantly differ in PTSD symptom severity at baseline (t_{176} = −0.59; P = .55). Among treatment completers, the mean (SD) number of treatment sessions was 12.48 (2.31) for PE and 6.18 (0.87) for WET. Although PE can be completed in 8 sessions, only 5 participants (5.6%) did so. At the 10-week assessment, 47 participants (52.2%) were still completing PE and 2 (2.3%) were still completing WET. All participants had completed treatment by the 20-week assessment.

As shown in Figure 1, participants assigned to PE were significantly more likely to drop out prematurely (32 [35.6%]) compared with participants assigned to WET (11 [12.5%]; χ^2 = 12.91; Cramer V = 0.27; P < .001). Notably, of the 32 participants who dropped out of PE, 30 did so by session 7; thus, the increased dropout in PE was not related to the greater number of treatment sessions. There were no significant differences between those who dropped out and those who completed by baseline PTSD symptom severity, depression diagnosis at baseline, mean age, sex, race, or time since traumatic event.

PTSD Symptom Severity and Diagnosis

Table 2 shows the imputed means with 95% CIs for PTSD symptoms and the mean difference scores with 95% CIs between conditions in CAPS-5 total scores. The noninferiority hypothesis was supported by the finding that the entire 95% CI of the mean difference in CAPS-5 scores was less than the a priori margin of 10 points at the 20-week assessment, as well as the other postbaseline assessment periods (**Figure 2** and eFigure in Supplement 2). In both conditions, 60% of participants continued to meet PTSD diagnostic criteria at the final assessment. Patients were not significantly more likely to meet PTSD diagnostic criteria in the WET or PE conditions at any assessment (largest difference, 49 of 75 [65.3%] for WET vs 50 of 69 [72.5%] for PE at the 10-week assessment; odds ratio, 0.72 [95% CI, 0.35-1.46]) (Table 2).

Within-condition effect sizes were moderate to large in magnitude and statistically significant for both conditions at each assessment (**Table 3**). Between-condition effect sizes were small at each assessment. The largest between-condition effect size was observed at the 10-week assessment (Cohen d = 0.23 [95% CI, −0.53 to 0.06]), with WET showing slightly improved levels of PTSD symptoms compared with PE (mean CAPS-5 difference, 2.42 [95% CI, 0.35-1.46] points).

Within-condition growth curve modeling analyses indicated that CAPS-5 total scores showed significant effects of linear change over time in both the WET (mean [SE], -7.76 [1.39]; $P < .001$) and PE (mean [SE], -7.77 [1.40]; $P < .001$) conditions (eFigure in Supplement 2). In addition, a quadratic growth term explained significant variance over and above a linear term in both the WET (mean [SE], 1.75 [0.39]; $P < .001$) and PE (mean [SE], 1.53 [0.41]; $P < .001$) conditions. Completer analyses displayed the same pattern of findings as the intention-to-treat analysis, indicating WET is noninferior to PE (eTable 1 in Supplement 2).

Adverse Events

Six patients randomized to PE reported a total of 7 serious adverse events and 4 patients randomized to WET reported a total of 4 serious adverse events. There were no significant condition differences in the severity of adverse events reported, and only 1 event was deemed to be possibly related to the study, which was in the PE condition. The other 10 events were unrelated to the study (eg, hospitalized for medical issues). More details about events are provided in the eAppendix in Supplement 2.

Discussion

Our findings add support for WET as an effective PTSD treatment. We found WET was noninferior to PE, a treatment that includes more treatment sessions, longer sessions, and between-session assignments. Only 12.5% of participants who received WET dropped out prior to completion compared with 35.6% in PE. The number of dropouts in this study is lower than that reported for WET in the only other effectiveness study of WET among veterans.[19] The greater percentage of participants receiving treatment remotely through a secure video teleconference platform may account for the better retention observed in this study relative to the prior study with veterans.[19] Indeed, the number of dropouts among those receiving PE in this study is substantially lower than those seen in other PTSD treatment outcome studies with veterans[22] but consistent with those in home telemedicine-based PE studies.[30]

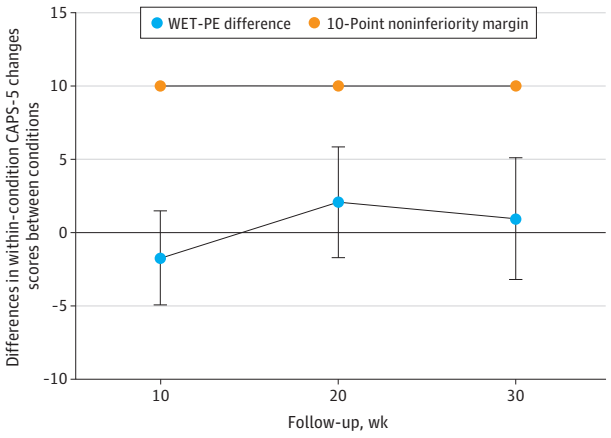
The large observed within-treatment condition effect sizes, in combination with approximately half of participants still meeting diagnostic criteria for PTSD, is consistent with the general PTSD treatment outcome literature for veterans and service members.[31] One possible explanation for this is that veterans and service members tend to have more chronic and severe PTSD and may, therefore, be more difficult to treat.[32] Identification of treatment moderators is necessary to better understand this pattern of findings, and future studies should explore relevant factors that may influence treatment outcomes for these 2 important groups.

Our findings add to the evidence that good PTSD treatment outcomes can be achieved with fewer sessions and less exposure to trauma-related stimuli than previously assumed.[33-35] These findings have important clinical implications given that a brief PTSD treatment would have far greater accessibility and perhaps appeal than the standard PTSD treatments that include approximately 12 sessions and significant intersession homework. The standard PE protocol has an additional barrier of 90-minute sessions, which is not usually feasible in most clinical settings. Briefer treatments such as WET can be delivered easily in standard clinical settings as well as other settings in which only brief interventions are possible (eg, primary care and medical and psychiatry inpatient units), which further increases access to evidence-based treatment. The finding herein and in a prior study[19] that WET is effective when delivered via telehealth further promotes the accessibility of the intervention.

Limitations

This study has some limitations. It was primarily conducted during a global pandemic, when participants encountered a variety of stressors, including serious illness or death of family members, loss of employment, and childcare challenges; these unanticipated stressors might have affected our outcomes. Furthermore, most participants were men, and all were military

Figure 2. Noninferiority Margins for Clinician-Administered PTSD Scale for *DSM-5* (CAPS-5) Change Scores



PE indicates prolonged exposure therapy; PTSD, posttraumatic stress disorder; WET, written exposure therapy. Error bars indicate 95% CIs.

Table 3. Within- and Between-Condition Effect Sizes for CAPS-5 Scores

	Effect size by assessment period (95% CI)		
	10 wk	20 wk	30 wk
Within-condition comparison with baseline, ESsg			
WET	−0.70 (−0.96 to −0.45)	−0.87 (−1.15 to −0.59)	−0.77 (−1.04 to −0.49)
PE	−0.58 (−0.81 to −0.35)	−1.01 (−1.28 to −0.73)	−0.84 (−1.10 to −0.57)
Between-condition, Cohen *d*	−0.23 (−0.53 to 0.06)	0.12 (−0.17 to 0.41)	0.02 (−0.27 to 0.31)

Abbreviations: CAPS-5, Clinician-Administered PTSD Scale for *DSM-5*; ESsg, standardized mean gain score; PE, prolonged exposure therapy; PTSD, posttraumatic stress disorder; WET, written exposure therapy.

veterans, which may limit the generalizability of the findings. Nevertheless, the sample was racially diverse and had baseline PTSD symptom severity that is consistent with that observed in other PTSD clinical trials.[8] Additionally, we used a 10-point noninferiority margin to be consistent with prior studies; however, even if we had used a 5-point CAPS-5 noninferiority margin, our findings would not have changed.

Conclusions

The accumulating evidence for WET suggests that it may be an efficacious and effective PTSD treatment that is associated with less treatment dropout and can be implemented for a variety of trauma survivors, including military veterans, who may be more difficult to treat and are more likely to drop out of treatment. Written exposure therapy has now demonstrated noninferiority compared with both CPT[17,18] and PE, which are the 2 PTSD treatments that have the most empirical support and are much more time intensive than WET. Although the findings are very promising, both PE and CPT have a larger evidence base, as these treatments have been in existence longer than WET. Additional research is needed to investigate the effectiveness of WET in different settings, such as primary care, and conducted by investigators other than the developers of the intervention.

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Author Contributions: Drs D. M. Sloan and Marx had full access to all of the data in the study and take responsibility for the integrity of the data and the accuracy of the data analysis.
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