Interpersonal Psychotherapy of Posttraumatic Stress Disorder for Veterans and Family Members: An Open Trial

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Objective: Military service members and veterans have high rates of posttraumatic stress disorder (PTSD), as do military family members. Exposure-based, cognitive-behavioral approaches have received ample research, but other PTSD therapies require further empirical attention. Interpersonal psychotherapy (IPT) targets affective awareness, life circumstances, and social support. IPT has shown efficacy for civilians with PTSD but awaits rigorous testing among military personnel; only two small military pilot studies and two case reports have been published. Military family members have received minimal attention from clinical outcomes research. Addressing these gaps, this open trial examined IPT for PTSD among veterans, service members, and family members, including a patient subset with comorbid PTSD and depression.

Methods: Fifty U.S. military service members, veterans, and family members (age ≥18 years) were offered 14 sessions of IPT for PTSD. Individuals with psychosis, bipolar disorder, moderate or severe substance use disorders, or high suicide risk were excluded. PTSD and depressive symptoms were assessed at baseline, midtreatment, posttreatment, and 3-month follow-up.

Results: Clinician-assessed PTSD (Clinician-Administered PTSD Scale) and depression (Hamilton Depression Rating Scale) symptoms decreased over time in the full sample and the comorbid PTSD/depression subset ($p<0.05$). Service members, veterans, and family members had similar treatment responses.

Conclusions: Patients receiving IPT showed reductions in PTSD and depressive symptoms. These open trial findings provide preliminary support for the utility of IPT in reducing PTSD symptoms among veterans and family members. This largest IPT trial to date for PTSD in military patients also bolsters the literature on treating military family members.

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American military veterans and service members face an elevated risk for trauma exposure and psychiatric illness. An estimated 21%−41% of veterans returning from recent conflicts have posttraumatic stress disorder (PTSD), and 7%−15% have syndromal depression (1). The combination of PTSD and major depression is particularly difficult to treat. A compounding risk factor for poor outcomes among veterans is their reporting of adverse experiences before and after deployment (2, 3). Beyond the personal ramifications of PTSD and depression for veterans and service members, these disorders can affect military families through marital and parental dissatisfaction, disrupted child-parent relationships, caregiver burden, and domestic violence (4, 5). These issues, in addition to elevated rates of trauma exposure unrelated to military service among military spouses, help account for high rates of PTSD and depression among military spouses,

HIGHLIGHTS

- U.S. veterans, military service members, and military family members with posttraumatic stress disorder (PTSD) who received interpersonal psychotherapy (IPT), a well-tolerated nonexposure treatment, had decreased PTSD and depressive symptoms after the treatment.
- Such symptom reductions were also observed among a subset of patients with comorbid PTSD and depression, a particularly hard-to-treat combination.
- The results add to research supporting the value of IPT in treating PTSD among veterans and provide very preliminary support for IPT's utility in treating PTSD in military family members, a high-risk yet understudied population.

family members, and caregivers (6–8). These manifold problems affecting veterans, service members, and military families require responsive interventions that can alleviate PTSD and depressive symptoms. This report describes an open trial of interpersonal psychotherapy (IPT) for treating military service members, veterans, and family members for PTSD with and without comorbid depressive disorder.

AVAILABLE PTSD TREATMENT

Guidelines from the U.S. Department of Veterans Affairs (VA) and the Department of Defense (DoD) primarily recommend exposure therapies for PTSD, including cognitive processing therapy and prolonged exposure (PE) (9). Although research supporting exposure therapy is extensive (10, 11), the limited range of available treatments for PTSD raises concerns. The very success of exposure therapies has resulted in insufficient study and clinical dissemination of other approaches. No treatment benefits everyone, and nonresponse and dropout occur even in the most robust interventions. Moreover, patients are more likely to experience improvement when given their preferred treatment (12, 13). Many clinicians and patients avoid exposure-based interventions, which ask traumatized patients to confront their worst fears. Dropout rates can be high, generally exceeding 20% (14, 15), and even though no direct comparison studies have been conducted, the outcomes of these interventions among veterans generally appear to be less favorable than among civilians (16–18). Hence, alternative treatments require investigation. Interventions targeting PTSD among military family members also need evaluation, because virtually no research has assessed mental health treatment for military family members despite well-recognized elevations in psychopathology among members of this group (7).

IPT FOR PTSD

IPT, a nonexposure, non–cognitive-behavioral therapy approach, focuses on affect, life circumstances, and interpersonal relationships and on the interpersonal consequences of trauma, rather than on the trauma itself, distorted cognitions, or behavioral habituation (19). IPT seeks to resolve interpersonal conflicts and mobilize social support. No homework is assigned; instead, IPT encourages self-agency and includes a time limit to press patients to act in interpersonal situations.

An advantage of IPT over cognitive-behavioral therapy (CBT) for military and family populations is its targeted focus on bolstering social engagement and support and addressing feelings of isolation and estrangement to reduce psychopathology (19, 20). Military veterans and families often lack social support and feel isolated and estranged from civilians who lack military service history (21). Relocations and deployment cycles compound their social isolation and disrupt community support (5, 8). Such isolation, disconnection, and absence of social support contribute to adverse general medical and mental health and to the development and persistence of PTSD and depression (22–24). IPT and other research suggests that bolstering social support plays an important role in relieving these symptoms (19, 25).

IPT has established efficacy in treating major depressive disorder (26, 27), and numerous studies support its efficacy across other disorders and treatment populations (28). IPT for PTSD performed overall as well as PE in a randomized controlled civilian trial (29) and better than PE for patients with sexual trauma or comorbid major depressive disorder (29, 30). (Co-occurrence of PTSD and major depressive disorder is roughly 50% [31].) Patients also preferred IPT to PE (13). The VA has disseminated IPT to treat patients with major depressive disorder (32), and IPT appears in VA/DoD PTSD and depression treatment guidelines (9); however, the IPT research literature on veterans with either disorder comprises only two non-VA case reports (33, 34) and two small pilot studies of veterans with PTSD (35, 36). No previous studies of any individual psychotherapy exist for military family members.

PRESENT STUDY

We prospectively conducted an open trial of IPT for PTSD delivered to service members, veterans, and military family members at a university-based Military Family Wellness Center (MFWC) (37). Independent evaluators assessed treatment tolerability and symptom change at midtreatment, posttreatment, and a 3-month follow-up. Exploratory analyses assessed differences in symptom change between veterans/service members and family members. We hypothesized that IPT would be well tolerated and that most patients would experience reductions in PTSD and depressive symptoms with the treatment. We recognized that our small sample (N=50) would have limited statistical power to reveal outcome differences between military and family member patients. Nonetheless, because PTSD treatment is thought to have poorer outcomes for military patients than for civilians and no research has directly compared these two populations, we explored between-group outcomes. We conducted sensitivity analyses to examine symptom change among the subset of patients with comorbid PTSD and depression, symptom change while controlling for pharmacotherapy use, and symptom change while controlling for treatment delivery modality (in-person therapy vs. teletherapy).

METHODS

Participants

Fifty adult (ages ≥18 years) U.S. military service members and veterans (N=35), and individuals with close familial connections to a service member or veteran ("family members"; N=15) opted to enroll in IPT treatment at the MFWC between January 2016 and October 2019. Services were provided gratis. Patients had a primary diagnosis of PTSD and included those who did not qualify for or avoided VA care or who sought additional treatment. Exclusion criteria included a history of psychotic disorder, current unstable bipolar disorder, moderate or severe substance use disorder, and high suicide risk (plan and

intent). Patients in the subsample with comorbid PTSD and syndromal depression met diagnostic criteria for major depressive disorder or persistent depressive disorder (henceforth "depression").

Measures

Most patients (N=38) were administered the Structured Clinical Interview for DSM-5–Research Version (SCID-5-RV) (38); the other patients (N=12) received the Mini-International Neuropsychiatric Interview for DSM-IV (MINI) (39) before a clinic protocol change. The Clinician-Administered PTSD Scale for DSM-5 (CAPS-5) (40) was used to assess PTSD. Possible scores on the CAPS-5 range from 0 to 80, with higher scores indicating more severe PTSD symptoms. Depression severity was assessed by clinician-administered Hamilton Depression Rating Scale, 17-item version (HAM-D) (41). Possible scores range from 0 to 54, with higher scores indicating more severe depression. Intraclass correlations indicated excellent interrater agreement (intraclass correlation coefficient [ICC]=0.99) for the CAPS-5 and acceptable agreement for the HAM-D (ICC=0.75).

Procedures

Patients underwent a 30-minute phone screen by a research assistant and then an in-person assessment by a licensed psychologist, postdoctoral fellow, or psychology extern. Assessments included a clinical interview and standardized clinician-administered and self-report measures. After clinical team review, patients were assigned to a therapist. Clinician and patient selected the treatment together. Patients were always offered multiple treatment options, typically CBT, PE, and IPT, with balanced descriptions of each treatment and its research support (13). Most opted for IPT. The institutional review board of the New York State Psychiatric Institute approved all procedures. Patients provided informed written consent before receiving treatment.

IPT for PTSD comprised 14 sessions of 50 minutes. Eight therapists delivered IPT following the IPT manual (19), with weekly supervision and review of videotaped sessions by its author; no other formal adherence ratings were conducted. Therapists included one early-career licensed psychologist, four postdoctoral fellows, two psychology externs, and a licensed social worker. Geographically remote patients or those having transportation difficulties were offered treatment via HIPAA-compliant video conferencing; 10 (20%) of the patients received partial or full teletherapy. When therapy was delivered remotely, research assistants aided patients in setting up the video-conferencing software before the first remote therapy session and thereafter as needed for technical support. In-person and remote treatment protocols were otherwise identical. Assessments were repeated at midpoint, posttreatment, and 3-month follow-up.

Thirty patients (60%) received concurrent pharmacotherapy. Most were already receiving long-established pharmacotherapy; an MFWC psychiatrist modified the regimen or prescribed new medication to 10 patients (20%). The modal medication was a serotonin reuptake inhibitor.

Data Analysis Plan

The data distributions contained no outliers. We used generalized estimating equation (GEE) analyses (by using SPSS, version 25) with unstructured correlation matrices, which use all available data points and can account for correlated, within-subject, repeated-measures data (42), to examine changes in PTSD and depression symptoms over time. Number of assessments completed (and thus included in the main GEE analyses) at baseline, midpoint, posttreatment, and 3-month follow-up were 50, 40, 36, and 26, respectively. We examined main effects of time (across the time points), status (veteran/service member vs. family member), and time × status interaction effects to detect whether symptom change differed between veterans/service members and family members. In post hoc sensitivity analyses testing the robustness of our main findings, we reran analyses on data from the subset of patients with comorbid PTSD and depression (the numbers of assessments at each time point were 37, 30, 27, and 21, respectively). Sensitivity analyses also included GEE models with teletherapy and MFWC pharmacotherapy added as covariates; these analyses were run for the full sample and for the subsample of patients with comorbid PTSD and depression.

RESULTS

Patient Characteristics

The 50 patients had a mean±SD age of 43.0±13.0 years, 74% (N=37) were men, and the patients had diverse racial-ethnic backgrounds and trauma histories (Table 1). Twenty-four (48%) were veterans, five (10%) were active duty service members, five (10%) served in the Army Reserves, one (2%) was a military contractor, and 15 (30%) were family members. Family members comprised eight children, one step-child, two spouses, one ex-spouse, one sibling, one grandchild, and one close friend. Among veterans and service members, 12 (34%) received diagnoses of PTSD without syndromal depression, and 23 (66%) had diagnoses of comorbid PTSD and depression. All but one family member and all but one teletherapy patient had comorbid PTSD and depression. Teletherapy patients did not differ from in-person patients, nor did patients who received a new medication differ from other patients, on baseline CAPS-5 and HAM-D scores. Table 2 presents symptom scores for the full sample and the patients with comorbid PTSD and depression. As expected, baseline HAM-D scores were higher among patients with comorbid PTSD and depression than among patients with PTSD alone ($t=-3.15$, $df=48$, $p=0.003$). No other statistically significant clinical differences were observed.

Treatment Tolerability

Fourteen patients (28%) dropped out before completing the contractually agreed-upon number of sessions: 10 had

TABLE 1. Sample demographic and clinical characteristics of 50 active duty and military veterans and their family members

Characteristic	Veterans/ service members (N=35)		Family members (N=15)	
	N	%	N	%
Gender				
Male	28	80	9	60
Female	5	14	6	40
Prefer not to respond	2	6	0	—
Race				
White	13	37	8	53
Black/African American	12	34	3	20
Other	10	29	4	27
Educational degree				
No undergraduate degree	11	31	5	33
Associates or bachelors	14	40	7	47
Masters	8	23	2	13
Prefer not to respond	2	6	1	7
Employment status				
Full-time	11	31	4	27
Part-time	3	9	0	—
Student	4	11	0	—
Unemployed	3	9	2	13
Disabled	4	11	3	20
Retired	7	20	2	13
Prefer not to respond	3	9	4	27
Annual income ($)				
<30,000	10	29	7	47
30,000–59,999	9	26	1	7
60,000–89,999	9	26	4	27
≥90,000	4	11	3	20
Prefer not to respond	3	9	0	—
Marital status				
Single or never married	13	37	7	47
Married	8	23	6	33
Divorced or separated	11	31	3	20
Widowed	1	3	0	—
Prefer not to respond	2	6	0	—
Eligible for VA services				
Yes	32	91	NA	—
No	3	9	NA	—
Prefer treatment in a non-VA environment[a]				
Yes	16	46	NA	—
No	19	54	NA	—
Trauma type[b]				
Combat or military related	21	60	0	—
Military sexual trauma	5	14	0	—
Interpersonal violence	5	14	6	40
Childhood physical abuse	10	29	4	27
Childhood sexual abuse	6	17	4	27
Traumatic loss	11	31	3	20
Terrorism or mass shooting	3	9	2	13
Diagnosis				
Major depressive disorder	18	51	11	73
Persistent depressive disorder	9	26	6	40
Other depressive disorder	1	3	0	—
Generalized anxiety disorder	2	6	4	27
Obsessive-compulsive disorder	1	3	2	13
Social anxiety disorder	1	3	1	7
Alcohol use disorder	1	3	1	7
Substance use disorder	1	3	0	—
Eating disorder	1	3	1	7
Adjustment disorder	1	3	0	—
Attention-deficit hyperactivity disorder	1	3	1	7
Medication				
SSRI/SNRI[c]	13	37	4	27
Bupropion	2	6	2	13
Tetracyclic antidepressant	1	3	0	—
Stimulant	4	11	1	7
Sedative or anxiolytic	6	17	4	27
Antipsychotic	3	9	0	—
Narcotic	0	—	1	7
Gabapentin	2	6	1	7
Beta blocker	2	6	2	13
Prazosin	3	9	0	—
Lamotrigine	0	—	1	7

[a] NA, not applicable.
[b] Criterion A trauma, indicated as most distressing during clinical interview. Patients could indicate one or more most distressing traumas.
[c] SSRI, selective serotonin reuptake inhibitor; SNRI, selective norepinephrine reuptake inhibitor.

comorbid PTSD and depression (nine veterans/service members and one family member); the other four were veterans/service members with PTSD alone. Chi-square analyses revealed significant attrition differences between veterans/service members and family members: overall, 37% (N=13) of veterans/service members and 7% (N=1) of family members dropped out (χ^2=4.84, N=50, df=1, p=0.028). Among the subset with comorbid PTSD and depression, 39% (N=9) of veterans/service members and 7% (N=1) of family members dropped out of treatment (χ^2=4.52, N=37, df=1, p=0.034).

Full Sample

PTSD change. Overall, the mean CAPS-5 score for the full sample fell from 35.7±8.9 (indicating syndromal PTSD; N=50) to 20.4±11.9 (indicating subthreshold PTSD; N=26) from pretreatment to the 3-month follow-up (Figure 1A). GEE analysis yielded a main effect of time (Wald χ^2=3.67, df=3, p<0.001); CAPS-5 scores decreased significantly for all patients between baseline and all time points (p≤0.001), and between midpoint and posttreatment (p=0.028) (Table 2).

Depression change. The mean HAM-D score fell from 16.0±6.0 (N=50) to 9.4±6.2 (N=26) from pretreatment to the 3-month follow-up. GEE analysis revealed a main effect of time on the HAM-D score (Wald χ^2=45.27, df=3, p<0.001) (Figure 1B); like CAPS-5 scores, HAM-D scores declined significantly for all patients from baseline and between time points (p≤0.012), and between midpoint and posttreatment (p=0.001). No statistically significant interaction effect or main effect of status (veteran/service member vs. family member) was detected.

TABLE 2. Symptom scores for veterans/service members and family members

	Full sample				Subset with comorbid PTSD and depression			
	Veterans/service members (N=35)		Family members (N=15)		Veterans/service members (N=23)		Family members (N=14)	
Scale and time point	M	SD	M	SD	M	SD	M	SD
CAPS-5[a]								
Pretreatment	34.8	9.7	36.7	10.4	36.9	6.0	37.7	6.6
Midpoint	27.3	10.2	30.2	8.8	24.3	13.8	25.2	13.7
Posttreatment	20.2	14.3	21.9	14.8	20.4	13.8	21.6	14.0
Follow-up	18.9	10.1	21.7	9.3	23.2	15.1	23.2	15.1
HAM-D[b]								
Pretreatment	14.6	6.0	16.6	6.0	19.0	4.7	19.3	4.7
Midpoint	13.2	5.1	14.7	5.2	14.0	7.5	14.6	7.6
Posttreatment	11.1	7.4	12.7	7.2	9.5	6.2	10.4	6.9
Follow-up	9.4	6.4	10.9	6.8	9.6	6.1	9.6	6.1

[a] CAPS-5, Clinician-Administered PTSD Scale for DSM-5. Possible scores range from 0 to 80, with higher scores indicating more severe PTSD symptoms.
[b] HAM-D, Hamilton Depression Rating Scale, 17-item version. Possible scores range from 0 to 54, with higher scores indicating more severe depression. Assessments completed for veterans/service members at pretreatment, midpoint, posttreatment, and 3-month follow-up were 35, 26, 22, and 17, respectively, and for family members were 15, 14, 14, and 9, respectively. Assessments completed for veterans/service members with comorbid PTSD and depression at pretreatment, midpoint, posttreatment, and 3-month follow-up were 23, 17, 14, and 12, respectively, and for family members with comorbid PTSD and depression were 14, 13, 13, and 9, respectively.

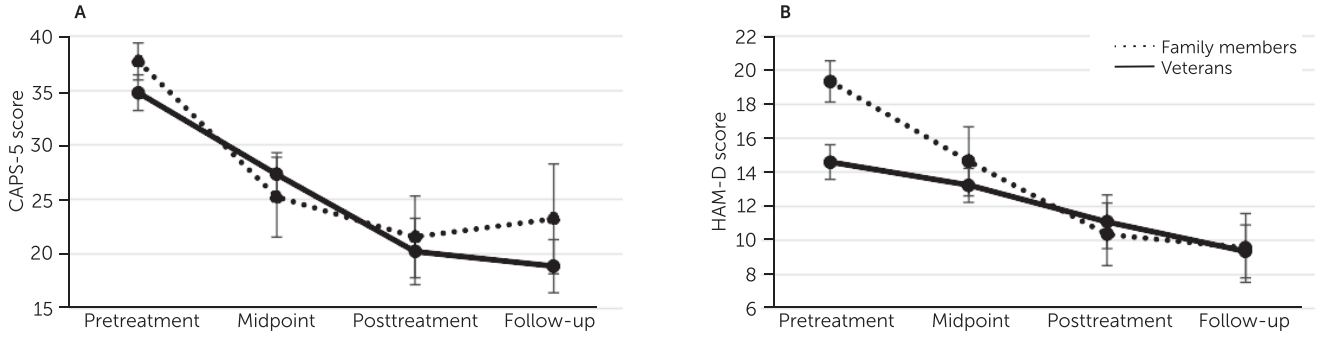
Sensitivity Analyses

Symptom change among patients with comorbid PTSD and depression. Patients with comorbid PTSD and depression showed an improvement pattern similar to that of the overall sample. GEE analysis revealed a main effect of time on the CAPS-5 score (Wald χ^2=43.50, df=3, $p<0.001$) (Figure 2A); scores decreased significantly for all patients across all time points ($p\leq0.001$) and between midpoint and posttreatment (p=0.025) (Table 2). Likewise, GEE analyses revealed a main effect of time on the HAM-D score (Wald χ^2=32.74, df=3, $p<0.001$) (Figure 2B); HAM-D scores decreased significantly for all patients between baseline and all time points and between midpoint and posttreatment ($p\leq0.012$). Neither analysis yielded a statistically significant interaction effect or main effect of status.

Controlling for pharmacotherapy. Controlling for pharmacotherapy did not alter the results of the main PTSD analysis or either comorbidity subanalysis. However, in an analysis of the sample of patients with depression that controlled for medication, a trend-level effect emerged for the status × time interaction (Wald χ^2=7.84, df=3, p=0.050): HAM-D scores of family members decreased more steeply between baseline and midpoint (b=4.23, SEb=2.17, Wald χ^2=3.80, df=1, p=0.051) and between pre- and posttreatment (b=5.73, SEb=2.13, Wald χ^2=7.21, df=1, p=0.051) than did the scores of veterans/service members.

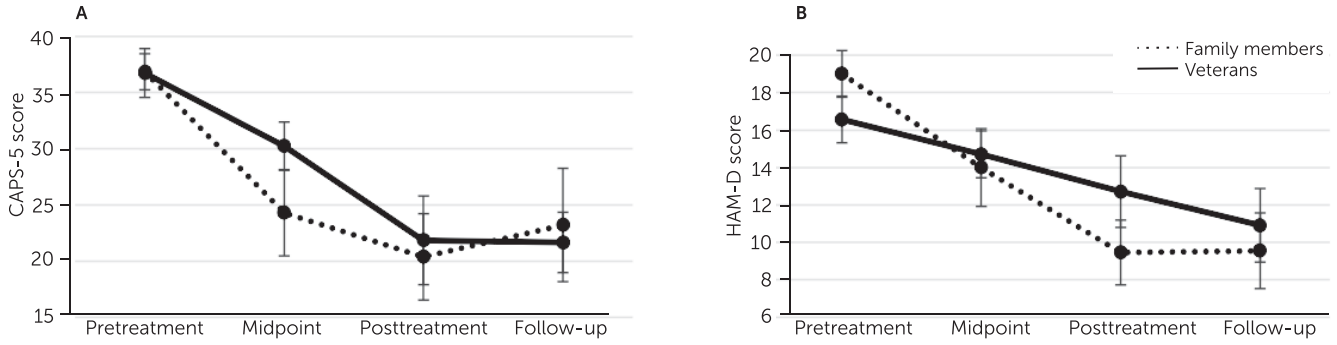
Controlling for teletherapy. When added as a covariate to the main PTSD analysis, teletherapy significantly contributed to the model (b=16.39, SEb=7.86, Wald χ^2=4.34, df=1, p=0.037). On average, CAPS-5 scores decreased over time in both groups, with the exception of no change between posttreatment and follow-up CAPS-5 scores among patients receiving in-person treatment (Figure 3). However, patients receiving teletherapy scored higher than those receiving in-person treatment on the CAPS-5 at pre-, mid-, and posttreatment (scores were roughly equivalent for both groups at the

FIGURE 1. Reductions in PTSD and depression symptoms among veterans, service members, and family members who received interpersonal psychotherapy[a]



[a]CAPS-5, Clinician-Administered PTSD Scale for DSM-5; HAM-D, Hamilton Depression Rating Scale, 17-item version.

FIGURE 2. Reductions in symptoms among veterans, service members, and family members with comorbid PTSD and depression who received interpersonal psychotherapy[a]



[a]CAPS-5, Clinician-Administered PTSD Scale for DSM-5; HAM-D, Hamilton Depression Rating Scale, 17-item version.

follow-up). Nevertheless, t tests did not indicate that these differences were statistically significant. We note that the assessment counts were low for the small sample of teletherapy patients (10, nine, eight, and seven at the four time points, respectively) and that the small sample size may have limited our ability to detect significant differences. Alternatively, veteran versus family member status may have confounded the outcomes analysis of teletherapy, because teletherapy patients comprised mostly veterans/service members (six, six, five, and five, at the four time points, respectively). When this status was removed from the analysis, teletherapy was no longer statistically significant.

Controlling for teletherapy did not alter findings of the comorbidity subanalysis but did yield a statistically significant effect of teletherapy (b=15.03, SEb=7.65, Wald χ^2=3.86, df=1, p=0.049); t tests indicated higher CAPS-5 scores (i.e., less improvement) among teletherapy patients at midpoint (t=−2.74, df=28, p=0.011) and posttreatment (t=−2.30, df=25, p=0.030). Controlling for teletherapy did not alter the results of either HAM-D analysis; in neither instance was teletherapy associated with a change in HAM-D score (p>0.050).

DISCUSSION

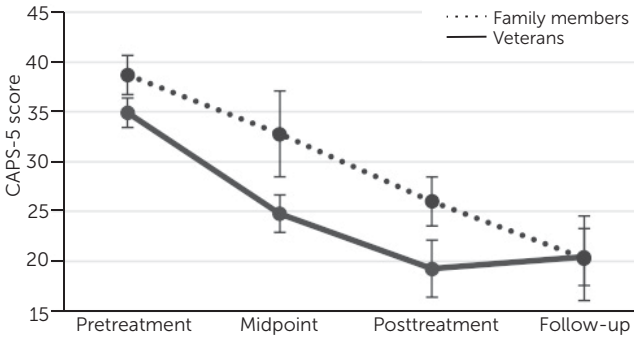
As hypothesized, veterans, service members, and family members receiving IPT in an open trial had improvements in PTSD and depression symptoms over time. These positive results replicate previous findings in a civilian population (29) and extend them to veterans in the largest study of IPT for PTSD among veterans to date (35, 36). The findings support the growing recognition that focused systematic exposure to reminders of trauma, while often useful, may not be essential to treat all patients with PTSD (43, 44).

This open trial is the first study to evaluate IPT—and, to our knowledge, any individual psychotherapy—for military family members. Extant research on military family members is scant and limited to couples or family interventions (45). This study is the first to directly compare clinical outcomes between veterans/service members and military family members receiving IPT. Previous literature hints that veterans fare less well than civilians in PTSD treatment studies (18), but we found comparable treatment responses among veterans/service members and quasi-civilian military family members. Attrition was higher for veterans/service members than for family members, consistent with trends reported in the larger PTSD treatment literature (15).

As previously found (13), patients with comorbid PTSD and depression who received IPT for PTSD experienced relief of their symptoms. PTSD-depression comorbidity is typically associated with clinical challenges, including treatment dropout and nonresponsivity (46, 47). Consistent with these complexities, the dropout rate among veterans with comorbid PTSD and depression was 39%, comparable to the 36% rate reported for veterans receiving other forms of PTSD treatment (15). However, attrition among family members with comorbid PTSD and depression was much lower (7%), lower even than observed among civilian patients with comorbid PTSD and depression in a previous study in which we compared IPT for PTSD (20%), PE (50%), and relaxation therapy (27%) (29). Because this study treated only 15 family members with PTSD-depression comorbidity, it is premature to draw conclusions regarding treatment tolerability. Among patients who remained in treatment, responses followed a similar improvement pattern, regardless of comorbid condition or veteran/service member versus family member status. The preliminary evidence for IPT's popularity and durability among veterans, and among patients with diagnostically complex conditions, makes the case for further research on IPT's utility in the VA system and other settings where veterans seek treatment. IPT's tolerability among family members further suggests its potential value in broader settings, although the small sample size precludes definitive recommendations.

Although teletherapy was not the focus of the present study, we found that patients who selected teletherapy had somewhat more severe baseline symptoms. These patients also showed declines in PTSD and depression symptoms with treatment. Telehealth for mental health treatment, particularly video conferencing, had gained popularity because

FIGURE 3. PTSD symptom reduction among patients receiving in-person interpersonal psychotherapy versus via teletherapy[a]



[a]CAPS-5, Clinician-Administered PTSD Scale for DSM-5.

it is cost-effective and increases access to high-quality care for rural or incapacitated patients (48) even before its wholesale adoption in the wake of the COVID-19 pandemic (49). Relevant to our sample, to veterans and to individuals with PTSD generally, teletherapy may benefit patients who avoid in-person treatment because of concerns about stigma (50). Yet, as in this study, telehealth may be a modality that patients with more severe symptomatology prefer, reflecting clinical symptoms of avoidance or behavioral withdrawal (which are often targets of treatment). Tele-IPT research is needed to address its costs and benefits.

Limitations of this open trial included small sample and subsample sizes, attrition, and lack of a control condition, which precludes drawing conclusions about causality. Selective attrition may have yielded inflated estimates of symptom improvement during the treatment. Lack of randomization (all patients had opted for IPT), and the fact that assessors were not blind to treatment or delivery modality, might have biased our findings. Some patients received modifications of their pharmacotherapy regimens, limiting conclusions about treatment outcomes. Some patients received teletherapy, whose equipotency to in-person IPT remains unestablished (49). Patients receiving tele-IPT appeared to benefit from the treatment, but our teletherapy analyses were likely underpowered. Our military sample findings may not generalize to nonveterans or to patients in VA settings. Future research should use a randomized controlled outcome design to compare IPT with other treatments for military patients. An as yet unpublished multisite randomized VA trial for PTSD and a planned randomized trial for military sexual trauma, both comparing IPT and PE treatments, should provide important comparative data on IPT for PTSD among veterans. Military family members deserve further treatment and research as well. Finally, our data were not well suited to address therapist effects on therapy outcomes; future studies should address these effects. These limitations notwithstanding, there is converging evidence that IPT for PTSD is well tolerated and effective, including for patients presenting diagnostically complex cases.

CONCLUSIONS

Among a combined sample of U.S. veterans, service members, and military family members who received IPT for PTSD in an open trial, both PTSD and depression symptoms were reduced after the IPT treatment. Symptom reductions were also observed among a subset of patients with comorbid PTSD and depression. These results add to research supporting the value of IPT in treating veterans for PTSD and provide very preliminary support for its utility in PTSD treatment of military family members. Larger, controlled clinical studies that expand on these promising findings will be clinically valuable.

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