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Treatment Dropout Among Veterans and Their Families: Quantitative and Qualitative Findings

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Background: Psychotherapy noncompletion rates for veterans and their families are high. This study sought to (a) measure noncompletion rates of such patients at a university-based treatment center, (b) compare veteran and family member attrition rates, (c) identify dropout predictors, and (d) explore clinicians' perspectives on treatment noncompletion. ***Method:*** Using quantitative and qualitative approaches, we analyzed demographic and clinical characteristics of 141 patients (90 military veterans; 51 family members) in a university treatment center. We defined *dropout* as not completing the time-limited therapy contract. Reviewing semistructured interview data assessing clinicians' perspectives on their patients' dropout, three independent raters agreed on key themes, with interrater coefficient kappa range .74 to 1. ***Results:*** Patient attrition was 24%, not differing significantly between veterans and family members. Diagnosis of major depression (MDD) and exposure-based therapies predicted noncompletion, as did higher baseline Hamilton Depression Rating Scale (HDRS) total scores, severe depression (HDRS $>$ 20), lack of Beck Depression Inventory weekly improvement, and history of military sexual trauma. Clinicians mostly attributed noncompletion to patient difficulties coping with intense emotions, especially in exposure-based therapies. ***Conclusion:*** Noncompletion rate at this study appeared relatively low compared to other veteran-based treatment centers, if still unfortunately substantial. Patients with comorbid MDD/PTSD and exposure-based therapies carried greater noncompletion risk due to the MDD component, and this should be considered in treatment planning. Ongoing discussion of dissatisfaction and patient discontinuation, in the context of a strong therapeutic alliance, might reduce noncompletion in this at-risk population.

Clinical Impact Statement

The findings of this study have the potential to improve clinical care for veterans and family members in a number of ways. For example, providing nonexposure-based interventions to veterans, particularly to depressed patients, may reduce dropouts, and facilitate treatment completion. Furthermore, the findings suggest that openly discussing difficulties to continue treatment among patients who might consider dropping out, may lower dropout rates.

Keywords: dropout, veterans, PTSD, depression, treatment

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Veterans who initiate outpatient treatment have distressingly high dropout rates across settings and diagnoses (M = 42%, range = 36%–68%; Fischer et al., 2018; Garcia et al., 2011; Goetter et al., 2015; Steenkamp & Litz, 2013). In comparison, a recent meta-analysis found only 19.7% dropout for the general adult population, with 18.3% for manualized, time-limited treatments (Leichsenring et al., 2019; Swift & Greenberg, 2012). Recent meta-analyses have shown that patients with posttraumatic stress disorder (PTSD) alone had a higher dropout rate (22–30%) than major depressive disorder (MDD) alone (17.5%; Cooper & Conklin, 2015; Lewis et al., 2020). The use of exposure-based therapy may have raised PTSD attrition (Berke et al., 2019). Our previous randomized controlled trial (RCT) found that patients with comorbid MDD/PTSD., when randomly assigned to exposure-based therapy, dropped out nine times more than both nondepressed exposure-based patients and patients in nonexposure interpersonal psychotherapy (IPT), suggesting that comorbid MDD/PTSD is a risk factor for attrition (Markowitz et al., 2015).

Although veterans' family members also face high risk for psychopathology (Diehle et al., 2017), almost no research has addressed their treatment. Veterans' family members, whom veterans' psychiatric issues often affect (Yager et al., 2016), frequently lack access for treatment services. No studies have examined attrition rates among veterans and their family members nor compared the rates of veterans and family members. Differences in dropout rates may reflect difficulties specific to treating veterans, such as receiving treatment in the same setting that determines their eligibility for disability, and receiving treatment at no cost (Hoge et al., 2014; Kehle-Forbes et al., 2016).

Although *dropout* is an accepted term in outcome research, we have generally substituted *noncompletion* in this article in recognition of its potential stigma. Patients have various reasons for not completing treatment, and our goal is to understand rather than to blame. Understanding noncompletion is critical for improving treatment outcome in mental health services. Prior studies exploring therapist and patient characteristics influencing attrition have yielded predictors including younger age, lower intelligence, less education, ethnicity (Rizvi et al., 2009; Sánchez-Lacay et al., 2001), greater symptom severity, disability status, and comorbidities (e.g psychotic or anxiety disorders, history of traumatic brain injury; Berke et al., 2019; Fischer et al., 2018; Garcia et al., 2011; Gros et al., 2018). Other studies have contradicted these findings (Gros et al., 2013; Olfson et al., 2009; van Minnen et al., 2002). These mixed findings might partly reflect the definition of treatment noncompletion, which has varied across studies: for example, discontinuing treatment against therapist advice before the tenth session, regardless of therapy length (Brogan et al., 1999), failure to meet for a predetermined number of sessions (Beckham, 1992; Gunderson et al., 1989), and not completing the treatment contract (Maher et al., 2010). Psychotherapy type, such as exposure therapy, has also been suggested as possibly predicting noncompletion (Kehle-Forbes et al., 2016).

Although prior studies have explored patient perspectives on noncompletion, limited research has addressed therapist perspectives. One pilot study (Palmer et al., 2009) found that outpatients with substance use disorder (n = 22) and their therapists (n = 22) identified similar reasons for noncompletion: lack of social supports, staff limitations, connection issues, and readiness to change. Nordheim et al., also studying patients with substance use disorders (n = 15), reported that emotion regulation difficulties triggered noncompletion (Nordheim et al., 2018). The single study to date investigating attrition of veterans with PTSD from a patient perspective identified therapy-related (Prolonged Exposure [PE] and Cognitive Processing Therapy [CPT]) issues, including viewing treatment as ineffective, weak therapeutic alliance, practical barriers, and high stress levels in treatment (Hundt et al., 2020). Yet interpreting patient accounts of noncompletion can be difficult: some patients leave without comment, while others may offer polite excuses, obscuring actual motivations (Clinton, 1996). However, no studies have examined patient or clinician perspectives of veterans' noncompletion from IPT (Pickover et al., 2021).

To assess noncompletion rates and their correlates among veterans and their family members, we utilized data collected at a university-based clinical center between January 2016 and March 2020. Quantitative and qualitative methods identified noncompletion risk factors to deepen our understanding of treatment noncompletion in these populations. Specifically, this study sought to 1) measure noncompletion rates of such patients at a university-based treatment center, 2) compare veteran and family member on attrition rates, 3) identify noncompletion predictors, and 4) explore clinicians' perspectives on treatment noncompletion. Based on our previous RCT (Markowitz et al., 2015), we expected to find (1) higher noncompletion in patients with comorbid MDD/PTSD., and (2) higher noncompletion in exposure than in nonexposure therapy. The remaining aims were more exploratory in nature.

Method

Design and Participants

This university-based research center, located in New York City and provides cost-free assessment and treatment to active duty service members, veterans regardless of discharge status, and their first degree family members or partners/spouses (Lowell et al., 2019). The center assesses treatment needs and preferences, provides treatment, and monitors treatment outcome for mood, anxiety, and trauma-related symptoms and disorders. The center accepts patients without Department of Veterans Affairs (VA) benefits or who are not interested to seek care at the VA system, and in addition to treatments provided at the VA system, it also provides some treatments (e.g Interpersonal Psychotherapy for PTSD) that the VA typically does not. All treatments were voluntary as our center does not treat involuntary patients. Patients are recruited via advertisement (Internet, local media, flyers), referrals from community organizations and hospitals, and word-of-mouth.

Of 150 individuals evaluated and found eligible, 141 patients (90 military veterans; 51 family members) began treatment between January 2016 and March 2020. Inclusion criteria were prior or active military service, or 1st degree relatives; age ≥18, significant distress affecting social and/or occupational functioning, ability to sign informed consent, and English fluency. Exclusion criteria were history of psychosis, current unstable bipolar disorder or substance use disorder, antisocial personality disorder, unstable medical condition, and acute suicide or homicide risk.

Ten clinicians (six women, four men) with 12.1 (±9.6, range 2–32) years of experience, treated the 141 patients: one psychiatrist, three Ph.D. psychologists, two Psy.D. postdoctoral fellows, two master's level doctoral externs, a licensed master's level

social worker, and a nurse practitioner. Traumas included combat or military related, interpersonal violence, childhood physical abuse, childhood sexual abuse, traumatic loss, and terrorism or mass shooting. Intake clinical interview and standardized diagnostic assessments determined eligibility. Ineligible individuals were referred locally. Eligible patients were invited to discuss treatment options and preferences. Following team discussion, patients signed written informed consent and began treatment.

Procedure

Upon obtaining written consent, clinicians discussed with patients the available, appropriate treatment options, both exposure- and nonexposure-based (Markowitz et al., 2015; Schneier et al., 2012), which included IPT, PE., time-limited Cognitive Behavioral Therapy (CBT), CPT, Brief Supportive Psychotherapy (BSP), Emotion Focused Therapy (EFT) for couples, and group CBT for Insomnia (CBT-I), either as monotherapy or combined with pharmacotherapy. Contributing factors included known differential therapeutics, response to previous treatments, the patient's preference regarding the treatment focus (interpersonal relationship in IPT, trauma exposure in PE), and so forth Treatment duration ranged from six (CBT-I) to 14 weekly sessions (IPT for PTSD). We defined dropout as not completing the therapy contract upon which patient and therapist agreed on in their initial meeting prior to signing consent. This definition encompasses noncompleters across stages of therapy (Beckham, 1992; Brogan et al., 1999; Gunderson et al., 1989; Leichsenring et al., 2019; Maher et al., 2010; Swift & Greenberg, 2012). Following missed sessions, staff members routinely attempted to contact patients by phone and voicemails. Patients who did not reply after two to three weeks were mailed a formal noncompletion letter.

Measures

Data were gathered retrospectively from electronic medical records, session notes, intake reports, and the clinical center research database. Clinicians used either the Structured Clinical Interview for *DSM–5* Research Version (SCID-5-RV; First et al., 2015) or Mini-International Neuropsychiatric Interview (MINI; Sheehan et al., 1998) for diagnosis. Measures included demographic, Military Sexual Trauma (MST), and the Life Events Checklist (LEC; F. W. Weathers et al., 2013) questionnaires at baseline.

We used the Clinician Administered PTSD Scale-5 (CAPS-5, Weathers et al., 2018), a 30-item structured interview (range 0–80), for diagnosing *DSM–5* PTSD., and the PTSD Checklist for *DSM–5* (PCL-5, Blevins et al., 2015), as a self-report measure for PTSD symptoms. For the diagnosis of depression, we used the Hamilton Depression Rating Scale (HDRS; Hamilton, 1960), a 17-item structured interview (range 0–52). A score of 20 or more was considered severe depression. We used the CAPS-5, PCL-5, and HDRS at baseline, mid-, posttreatment, and 3- and 12-month follow-up; Beck Depression Inventory-II (BDI-II., 21-item self-report questionnaire for depression symptoms, range 0–63; Beck et al., 1996), and Intent to Attend (ITA; a 0–9 patient self-rating of likelihood of attending the next session) scale weekly (Leon et al., 2007). The CAPS-5 and PCL-5 were only repeated after baseline for individuals reporting trauma history.

Data Analysis

Quantitative Analysis

Statistical analyses were carried out using IBM SPSS software, Version 26.0. Pearson's chi-square tested possible associations between treatment completers/noncompleters and demographic characteristics as sex, patient's status (veteran vs. family member), country of birth, marital status, race, ethnicity, sexual orientation, level of education, employment, and level of annual salary. Independent sample t-tests were used to compare mean score differences between treatment completers/noncompleters on continues variables as age and baseline clinical measures (CAPS-5 and HDRS). Logistic regressions were used to compare categorical variables as diagnosis, level of depression (HDRS $\geq$20), treatment type, and use of medications between completers and noncompleters, accounting for possible confounders. Repeated measure ANOVAs were used to compare BDI-II mean scores (continuous variables) between completers and noncompleters. A two-tailed p-value of .05 determined statistical significance. For this exploratory study, we did not employ Bonferroni correction for multiple comparisons.

Qualitative Analysis

Three authors (Doron Amsalem, Andrea Lopez-Yianilos, and Yuval Neria) developed two semistructured qualitative interviews. The first, comprising fourteen open-ended and four yes/no questions, assessed clinician perspectives on patient noncompletion. The second included nine open-ended questions assessing patient perspectives on noncompletion. The first author conducted clinician interviews between September 2018 to March 2020. All interviews were recorded and transcribed verbatim. Three raters independently reviewed the transcriptions for emerging themes, then discussed them and reached agreement on each item (see Table 2). Interrater agreement (kappa), calculated separately for each rater dyad, ranged from .74 to 1. Due to low compliance (25%) among patients who had dropped out, we decided not to include the data from patient interviews.

Results

Quantitative

Sample Demographic Characteristics

The study sample comprised 90 veterans (64%) and 51 family members (36%). Of the 141 patients, 107 (76%) completed treatment ("completers") and 34 (24%) did not ("noncompleters"). Noncompleters attended 4.1 ($\pm$3.4) mean sessions (range 1–10). Completers and noncompleters did not significantly differ by age, sex, marital status, country of birth, race, ethnicity, sexual orientation, education, or income (see Table 1). Although veteran and family member noncompletion rates did not significantly differ, veterans were more likely to be male (73 [83%] vs 21 [41%], χ^2 = 25.7, $p < .000$), nonwhite (60 [67%] vs 26 [51%], χ^2 = 16.5, p = .035), Hispanic (24 [34%] vs 6 [15%], χ^2 = 5.1, p = .024), and reportedly heterosexual (66 [93%] vs 31 [76%], χ^2 = 5.4, p = .04). Veterans and family members did not differ in age, country of origin, marital status, education level, employment, or annual salary. *M* ITA score at last attended session was 8.4 ($\pm$1.4) for completers

Table 1
Demographic Data for Groups Treatment Completer (n = 107) and Treatment Dropout (n = 34)

Item	Completer *n* (%) or (*M* ± *SD*)	Dropout *n* (%) or (*M* ± *SD*)	χ^2	*p*
Age	(41.9 ± 13.6)	(39.7 ± 12.1)	.799[a]	.43
Sex				
Male	70 (66.0)	25 (73.5)	0.66	.42
Patient status	67 (62.6)	23 (67.6)	2.83	.59
Veteran				
Country of birth	71 (78.9)	22 (75.9)	3.13	.21
United States				
Marital status				
Single	58 (63.5)	20 (69.0)	2.30	.89
Ethnicity				
Hispanic	21 (23.3)	9 (31.0)	1.77	.41
Race				
White	42 (56.1)	12 (52.9)	8.04	.62
Sexual orientation				
Heterosexual	75 (83.3)	22 (75.9)	5.35	.25
Level of education				
College degree or higher	43 (48.9)	10 (35.7)	15.6	.16
Employment				
Full-time or part-time work	42 (47.7)	13 (46.4)	1.96	.96
Annual salary				
More than $50,000	42 (47.2)	10 (39.3)	14.9	.13

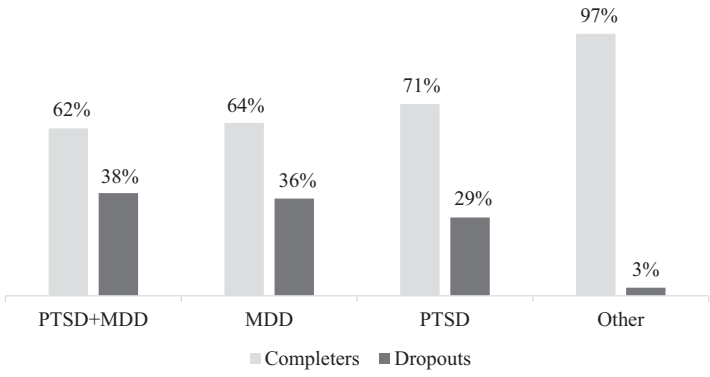
[a] Independent *t* test.

versus 7.8 (±2.1) for noncompleters, indicating all patients reported high motivation to attend the following session. Noncompletion by clinician ranged from 18% to 27%, with no significant difference between clinicians.

Sample Clinical Characteristics

All patients had at least one *DSM–5* based diagnosis. Most patients (84%) received diagnoses of either PTSD only (64%), MDD only (65%), or both (45%). Eighty-seven percent (*n* = 123) were treated with IPT or PE. Diagnosis of MDD., either alone (36% attrition) or combined with PTSD (38%) increased noncompletion risk, while PTSD diagnosis alone (29%) did not significantly raise noncompletion, and patients with neither MDD nor PTSD diagnosis (3%) had lower attrition risk (see Figure 1). Furthermore, MDD with or without PTSD predicted noncompletion ($p = .001$, CI [1.87–11.39]). Baseline HDRS total scores and percentage of HDRS > 20 (defining severe depression) significantly differentiated completers from noncompleters: noncompleters were more depressed, with higher rates of severe depression (see Table 2). In contrast, PTSD measures (CAPS-5, PCL-5) did not

Figure 1
Comparison of Treatment Completer and Treatment Dropout (n = 34; 24%) Groups on Diagnosis



Note. Treatment completers (*n* = 107; 76%); treatment dropouts (*n* = 34; 24%). MDD = major depressive disorder; PDD = persistent depressive disorder; SAD = social anxiety disorder; GAD = general anxiety disorder; OCD = obsessive compulsive disorder; PD = panic disorder; ADHD = attention-deficit/hyperactivity disorder; SUD = substance use disorder. PTSD + MDD ($\chi^2 = 7.54$, $p = .006$), MDD ($\chi^2 = 10.95$, $p = .001$), other ($\chi^2 = 8.52$, $p = .004$).

Table 2
Comparison of Groups Treatment Completer (n = 107) and Treatment Dropout (n = 34) on Clinical Scores, Psychotherapy Type, and Use of Medication

Item	Completer	Dropout	*t*	*p*
		Clinical score		
CAPS-5	35.14	36.33	0.52	.60
PCL-5	48.62	46.00	0.61	.55
HDRS	14.19	18.06	2.72	.007
HRDS ≥20[a]	29 (27%)	17 (50%)	6.15	.015
		Psychotherapy		
IPT	78 (80.4)	19 (19.6)		
PE and CPT	16 (61.5)	10 (38.5)	17.8	.003
Other[b]	12 (66.7)	6 (33.3)		
		Pharmacotherapy		
	53 (73.6)	19 (26.4)	0.41	.51

Note. CAPS-5 scores were included only for people diagnosed with PTSD. IPT = interpersonal psychotherapy; PE = prolonged exposure; CPT = cognitive processing therapy.
[a] Pearson chi-square; percentage of total score of 20 and above (severe depression) on baseline HDRS scores. [b] Other = cognitive-behavioral therapy, emotionally focused therapy for couples, cognitive-behavioral therapy for insomnia group, and supportive therapy.

significantly differ between completers and noncompleters (see Table 2). Psychotherapy type significantly differed between completers and noncompleters: patients treated in PE were more likely to drop out. Furthermore, in the subgroup of patients with comorbid MDD/PTSD., PE predicted noncompletion (p = .037, CI [1.06–7.55]). Pharmacotherapy use did not significantly differ between completers and noncompleters (see Table 2). Veterans were more likely to be treated with IPT (67 [76%] vs 30 [59%], p = .032), whereas family members were more likely to be treated in PE (11[13%] vs 15 [29%], p = .014).

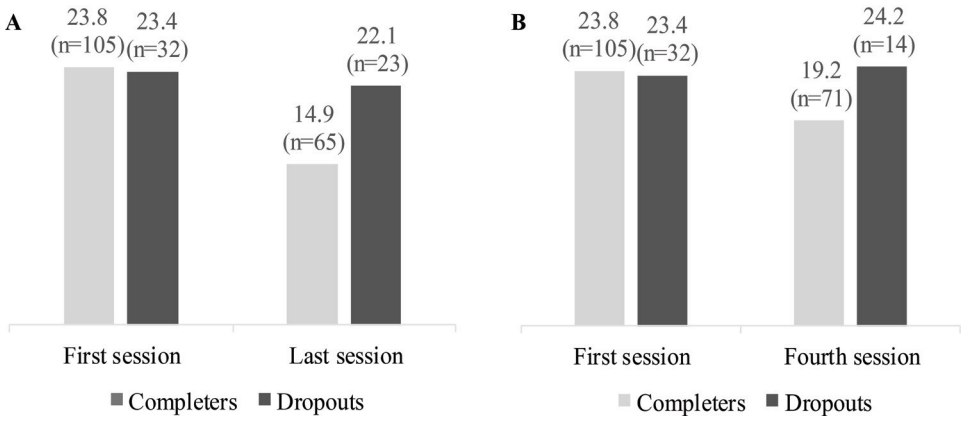
Weekly BDI scores showed a similar completer/noncompleters pattern. Two 2X2 group-by-time ANOVAs were conducted, one comparing the first and last attended session of each group (Figure 2A), the latter using completers' fourth session as time 2, as session 4 was the mean final session for dropouts (Figure 2B). The first analysis revealed a significant group by time interaction (F = 6.99, p = .010): completers' BDI scores significantly decreased during treatment, while noncompletion scores did not decrease at all. Groups did not differ at baseline (t = .28, p = .784), noncompleters' last session BDI scores were significantly higher than completers' last session scores (t = 2.28, p = .025). The second ANOVA yielded no significant interaction effect; time showed a significant main effect (F = 10.28, p = .002). Completers' BDI scores significantly decreased at session 4 (t = 4.59, $p < .001$), whereas noncompleters' BDI scores did not decrease (see Figure 2).

On the MST questionnaire, 39.1% of veteran noncompleters reported military sexual trauma, versus 13.4% of veteran completers (χ^2 = 11.93, p = .001). Almost one fifth of veterans (18%; n = 15) endorsed experiencing uninvited or unwanted sexual attention or being forced or threatened to engage in sexual contact while in the military, and 60% (n = 9) of them dropped out.

Qualitative

Clinicians were asked to describe each dropout patient's reported reason for prematurely discontinuing treatment. Of the 34 cases, clinicians reported possible reasons for 27 patients. From their own perspective, clinicians reported an external cause as their patients' self-reported reason for noncompletion in 22 of 27 cases (81%): moving out of state, problems commuting to the clinic, and increased life demands or responsibilities. Conversely, in most cases (70%) clinicians also attributed noncompletion to an internal, treatment-related cause rather than an external cause. While stratifying by treatment method, in 17 cases (63%), clinicians' and patients' attributions for dropout were discrepant. In noncompletion during exposure-based therapies (n = 10), clinicians indicated an internal reason for 80% (8 of 10) of dropout cases, compared to 53% of IPT cases (10 of 19).

Figure 2
Comparison of Treatment Completers and Treatment Dropouts on Beck Depression Inventory



Note. Last session for dropouts was the last therapy session before the patient dropped out of treatment (range 0-10, average of 4.22, mode of 4). Panel A: First session and last attended session. Panel B: First session and fourth session attended.

Three thematic reasons for noncompletion emerged: difficulty coping with intense emotions, readiness for change, and suitability for outpatient treatment. Therapists in 13 cases explicitly described the intensity of emotions experienced during treatment itself, mostly (n = 11) as an outcome of an exposure (see Table 3, quote #1). One clinician described noncompletion as an outcome of exposure-related anxiety during CBT treatment (quote #2), while other clinician identified difficulty of coping with emotions aroused during IPT (quote #3). Second, clinicians reported that five patients lacked motivation or readiness to change (quote #4). Third, in four cases clinicians attributed noncompletion to the suitability of the clinical center for the patients' needs, feeling they required a level or type of care beyond what the clinic could offer (quote #5).

Although most clinicians identified the treatment itself as a possible reason for noncompletion, the clinicians nonetheless asserted the chosen treatment was the appropriate treatment for 79% of patients who eventually dropped out, that the selected treatment did not lead to noncompletion in 74% of the cases, and that a different treatment would not have changed the course (71%, quote #6). Having affirmed the selected treatment type, 68% of clinicians reported that, in hindsight, they could have acted differently. They emphasized the importance of early detection in eight cases (quote #7). Others described the need to discuss noncompletion with the patient (quote #8). Although 87% of patients did not forewarn clinicians of dropout, resulting in no termination session, clinicians reported thinking they had good rapport with 77% of dropouts, and 93% denied a mismatch between themselves and the patient (quote #9).

Discussion

This retrospective study sought to determine rates of, identify predictors of, and describe clinicians' perspectives on treatment dropout. Twenty-four percent of patients dropped out of treatment, without significant attrition differences between veterans and family members. Noncompletion was associated with MDD diagnosis, with or without PTSD. Exposure-based therapies (i.e PE and CPT) for PTSD were both associated with noncompletion and predicted dropout among patients with comorbid MDD/PTSD. Noncompletion was associated with higher HDRS scores, severe depression, and lack of BDI improvement during treatment.

Previous research reported a mean 42% dropout rate among veterans receiving clinical care (exposure and nonexposure therapies), rising to 68% for veterans treated for PTSD (Goetter et al., 2015). Our 24% dropout rate, while lower, may also reflect the fact that our university-based center does not accept patients with bipolar disorder, psychotic disorder or substance abuse, diagnoses that often carry higher noncompletion rates (Fischer et al., 2018; Garcia et al., 2011; Gros et al., 2018). Veterans have higher noncompletion rates than general population patients across diagnoses and settings (Leichsenring et al., 2019; Swift & Greenberg, 2012). Age and ethnicity did not differentiate completers from

Table 3
Quotes

	First theme, difficulty coping with intense emotions
1	"He just got overwhelmed. We were doing Prolonged Exposure and it was too much. He just couldn't tolerate the anxiety." "She was starting to get very emotionally aroused during the imaginal exposures and while doing the homework . . . she couldn't handle the emotions anymore; it was too much for her." "I believe that when we got to the hot spot [most arousing aspect of the trauma], that's when things got a little too intense for her."
2	"It was really anxiety-provoking for her, and I think she used it [knee surgery] as an excuse not to come . . . from my understanding, she gave up. She succumbed to her fears and avoidance."
3	"He was starting to feel more anger, which means that the treatment was working, and he didn't like that."
	Second theme, readiness for change
4	"I think the patient wasn't ready to engage in therapy . . . [the patient preferred] to get more medications rather than do the work of psychotherapy." "I think that he had trouble committing to even starting the treatment . . . he was never really, on some level, on board with it."'Asking him to change a lot . . . was something that was going to be too disruptive . . . he was used to what his routine was already." "I think there was just some part of him that just didn't want to deal with it, wasn't fully committed."
	Third theme, suitability for outpatient treatment
5	"We were eager to provide treatment and he was a veteran . . . he wasn't the kind of guy who was appropriate for our setting. I think he needed more formal structure, like a partial hospitalization or outpatient day program." "I don't think he was a good fit for our center . . . he needed something that our clinic was not designed to do."
	Role of treatment and communication
6	"I would still choose IPT for him. Like I said, he made a lot of progress. I think this is what he needed"; "I don't think I would have chosen a different treatment for her [PE]. If I were back in that position, I think my train of thought made sense." "I didn't want to reinforce the thought that she couldn't handle this, to discontinue treatment, that she couldn't handle the negative emotions." "IPT was the appropriate choice for him . . . I don't think that other treatment modality would have addressed that, and that was something that was salient for him."
7	"I could have maybe pointed out more directly to him earlier on in the treatment that guardedness and kind of fear of intimacy with me and others." "I should have taken more into consideration that her being able to complete the therapy was going to be an issue and this should have been spoken about in each and every session." "I wish that, in the last moment, in the last session, I had sensed she was uneasy, and I wish that I would have stopped the session to say, 'What is going on today? You seemed unsettled,' and to encourage her to tell me . . . I wish I had found the way to tell her what was bothering her . . . and I think if I could have done that, she would have continued treatment."
8	"We didn't discuss it at all, I took it for granted that she would come back after the knee surgery and I think this is where I might have missed." "I should have been more aware and made her more aware of this potential stress that she can, you know, get up and leave."
9	"She felt very comfortable here, she would voice that." "He felt comfortable talking about things that he didn't talk about with anyone else." "We had a great relationship I would say, our alliance was very strong."

noncompleters, whereas previous research had found younger age and Hispanic ethnicity predicted noncompletion in PTSD (for PE and CPT; Rizvi et al., 2009) and MDD (Karyotaki et al., 2015). Additional prospective research needs to address this clinical concern.

Our findings indicating high dropout (36%) among patients with MDD., and especially those with severe depressive symptoms (41%, HRDS ≥ 20), exceed those reported in a meta-analysis finding 20% overall and 17% IPT dropout rates for MDD (Cooper & Conklin, 2015). Our finding that exposure-based therapies predicted dropout among patients with PTSD accords with previous PE and CBT studies (Goetter et al., 2015; Gros et al., 2018). We found higher attrition in patients with comorbid MDD/PTSD (38%). However, more research is needed to define depression and/or exposure-based therapies as predictors to noncompletion.

In a previous trial, we had found IPT had lower dropout and therefore better outcome than PE among patients with comorbid MDD/PTSD (Markowitz et al., 2015). That study randomized treatment regardless of patient preference (Markowitz et al., 2015, 2016), whereas the current nonrandomized trial respected patient choice. This corroborates and reinforces the importance of the finding. However, the risk in the comorbid group appeared to stem from the presence of the MDD., rather than PTSD per *SE* We also found higher MST rates among dropouts. To our knowledge, no prior research has examined the association between MST and treatment dropout, although research has linked MST, child abuse, and suicidal ideation (Bryan et al., 2015; Wilson et al., 2015). The complexity of MDD., PTSD and MST may contribute to elevated dropout rates.

Although family members face elevated psychopathology rates, they do not typically receive free care, and no individual outcome research has assessed their mental health treatment (Johnson et al., 2007; Ramchand et al., 2017; Sheppard et al., 2010). Family member and veteran dropout rates did not significantly differ; family members were more likely to report nonheterosexual orientation and being white. Army regulations like "Do not ask, do not tell" (1994–2011) could help explain differences in reported sexual orientation. In addition, we found veterans were more likely to prefer IPT treatment, whereas family members more often preferred PE. One explanation of this finding could be that nonexposure therapies are not frequently offered in VA clinics, leading veterans to seek out our clinic (Lowell et al., 2019). No research has previously compared dropout rates of veterans and family members. Family members of veterans, a high risk but understudied group, warrant treatment research.

Clinicians primarily attributed dropout to general treatment-related factors, yet said their patients mostly cited external causes for dropout. Clinician reports suggested three underlying themes for dropout: difficulty coping with intense emotions (mostly in exposure-based therapies), lack of readiness for change, and unsuitability of the treatment setting. Most clinicians reported good rapport with dropouts and denied a therapist-patient mismatch. Yet, clinicians believed they, in conjunction with patient preference, had employed the appropriate treatment (e.g IPT, PE., CBT) and that treatment elements specific to those modalities did not account for dropout. Future dropout studies should focus on aspect of communication between the patient and the clinician, around the decision to terminate the treatment, preferably immediately after dropout. Furthermore, future studies should measure the therapeutic alliance to gain deeper understanding of the clinician-patient relationship.

That patients, per clinician reports, mostly attributed dropout to external reasons contradicts a previous qualitative study on veterans' perspectives of their treatment dropout from exposure-based therapies, which reported therapy-related barriers as the most common reason (Hundt et al., 2020). Some clinicians felt that because treatment was free, patients hesitated to express their discontent, and proffered external reasons to conceal their disappointment. Yet therapy-related barriers such as "too stressful" treatment and not committing to specific therapy tasks were similar to themes in the current study (Hundt et al., 2020). Those themes seem inherent to the diagnoses of PTSD and MDD., which most of our patients met, themes that clinicians would probably have reported for both completers and dropouts. Moreover, most of our clinicians reported good communication with patients and having the appropriate treatment (chosen with the patient), factors known to increase retention and decrease treatment dropout (Gros et al., 2013; Markowitz et al., 2016).

Several study limitations bear mention. First, sample size (N = 141) was relatively small and included both veterans and families, who might have different characteristics. Second, in this retrospective, *post hoc* study, knowing that the patient had dropped out may have influenced clinician accounts. However, dropout is inherently a finding that could be assessed only in hindsight. Third, while clinicians reviewed their intake evaluations and session notes prior to this study, patients had dropped out over the course of the past two years before the interview, also introducing potential recall bias. Future studies should prospectively (or at least, immediately after dropout) compare patient and clinician reports to facilitate deeper understanding of reasons for dropout. Finally, despite our attempts to assess patient views, few responded, precluding understand of patients' perspectives.

In conclusion, MDD and exposure-based treatment were each associated with dropout. Future studies should further explore risk factors. Most patients did not communicate their intention to leave treatment, and clinicians often failed to predict it. Identifying these risk factors and openly discussing them early in treatment might lower dropout rates. The difficulty of predicting dropout emphasizes the need for deeper understanding predictors (quantitative and qualitative), and for developing strategies to reduce the likelihood of treatment discontinuation. Family members of veterans, and especially minorities, should be encouraged to seek treatment. Future studies should prospectively measure both patients and clinicians' perspectives regarding dropout.

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