Treatment Preferences of Psychotherapy Patients With Chronic PTSD

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ABSTRACT

Objective: Patient treatment preference may moderate treatment effect in major depressive disorder (MDD) studies. Little research has addressed preference in posttraumatic stress disorder (PTSD); almost none has assessed actual patients' PTSD psychotherapy preferences. From a 14-week trial of chronic PTSD comparing prolonged exposure, relaxation therapy, and interpersonal psychotherapy, we report treatment preferences of the 110 randomized patients, explore preference correlates, and assess effects on treatment outcome.

Method: Patients recruited between 2008 and 2013 with chronic *DSM-IV* PTSD (Clinician-Administered PTSD Scale [CAPS] score ≥ 50) received balanced, scripted psychotherapy descriptions prerandomization and indicated their preferences. Analyses assessed relationships of treatment attitudes to demographic and clinical factors. We hypothesized that patients randomized to preferred treatments would have better outcomes, and to unwanted treatment worse outcomes.

Results: Eighty-seven patients (79%) voiced treatment preferences or disinclinations: 29 (26%) preferred prolonged exposure, 29 (26%) preferred relaxation therapy, and 56 (50%) preferred interpersonal psychotherapy (Cochran $Q = 18.46$, $P < .001$), whereas 29 (26%) were disinclined to prolonged exposure, 18 (16%) to relaxation therapy, and 3 (3%) to interpersonal psychotherapy (Cochran $Q = 22.71$, $P < .001$). Several baseline clinical variables correlated with treatment preferences. Overall, treatment preference/disinclination did not predict change in CAPS score, treatment response, or dropout. Comorbidly depressed patients receiving unwanted treatment had worse final CAPS scores.

Conclusion: These exploratory findings are the first relating patients' PTSD psychotherapy preferences to outcome. Despite explanations emphasizing prolonged exposure's greater empirical support, patients significantly preferred interpersonal psychotherapy. Preference subtly affected psychotherapy outcome; depression appeared an important moderator of the effect of unwanted treatment on outcome. Potential biases to avoid in future research are discussed.

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I would prefer not to.

–Herman Melville, "Bartleby, the Scrivener" (1853)

Patient treatment preference, a potential predictor of clinical outcome, has received insufficient research attention,[1,2] particularly for posttraumatic stress disorder (PTSD). Individuals with PTSD may have strong feelings about such disparate treatments as exposure-based therapies and pharmacotherapy,[3] feelings that might affect treatment dropout or response. No research has assessed actual patient preferences across PTSD psychotherapies.

Individuals generally prefer psychotherapy to psychopharmacotherapy. A meta-analysis[4] of 34 studies found 75% preference for psychotherapy over medication for mood and anxiety disorders in general populations ($P < .001$) and 69% in treatment-seeking populations. Younger patients ($P = .05$) and women ($P < .01$) were more likely to choose psychotherapy. Several studies have explored treatment preference effects on outcome in randomized trials, generally finding stronger treatment alliance,[5,6] lower attrition, and sometimes better outcomes when patients receive treatments they desire.[1,7] This research is sparse and largely assesses mood disorders.[2,7–17]

Kocsis et al[2] found that, among 429 chronically depressed patients randomly assigned to nefazodone, psychotherapy, or their combination, patients preferring monotherapy at baseline had differential outcomes. Medication-seeking patients had higher remission rates if they received medication (45.5%) than if they received psychotherapy (22.2%); conversely, patients preferring psychotherapy had 50.0% remission when receiving it versus 7.7% for medication.[2] Not all mood studies have found patient preference influences outcome, however.[14–17]

Less research has explored treatment preferences for anxiety disorders, although anxious patients frequently fear medication side effects, especially somatic ones.[18] A multisite panic disorder trial[19] found patient imipramine refusal key to pretreatment attrition. A survey[20] of 89 subjects with *DSM-IV* obsessive-compulsive disorder found more preferred exposure/response prevention psychotherapy (42%) or combined treatment (43%) than serotonin reuptake inhibitors alone (16%).

Most PTSD treatment preference reports describe "analog" studies of nonpatients, mostly healthy college students, imagining hypothetical traumas, symptoms, and treatments.[21–26] Findings indicate preference for exposure-based psychotherapy over pharmacotherapy. Such results might diverge from real-life choices of treatment-seeking patients with PTSD.

A survey[3] found 74 trauma-exposed community women (72% describing traumas meeting *DSM-IV* PTSD criterion A) preferred prolonged exposure (82%) as trauma treatment

Clinical Points

- Many patients with posttraumatic stress disorder (PTSD) (79% of our sample) have feelings about the type of psychotherapy they may receive. Little research has explored preferences of treatment-seeking PTSD patients.
- Patient preferences may influence PTSD treatment outcome, but subtly. Most patients benefitted from treatment regardless of their preference. Preferences had interesting, if modest, effects on outcome.
- Comorbid depression matters in treating PTSD. Half of patients with PTSD have comorbid major depression. Comorbid major depression negatively moderated outcome for patients randomly assigned to treatment contrary to their preferences.

over treatment with sertraline (13%) or no treatment (6%). Roy-Byrne et al,[27] querying 466 assault victims in hospital emergency rooms, similarly found more preferred counseling (76%) than medication (62%). In the only randomized trial addressing patient preferences, Shalev et al[28] allowed patients with acute PTSD to decline up to 2 of 4 treatment options. Of 242 PTSD patients, 43% declined the selective serotonin reuptake inhibitor/placebo option, 5% declined waiting list, 3% declined cognitive therapy, and 1% declined prolonged exposure. No studies have assessed treatment preferences of patients diagnosed with chronic PTSD concerning psychotherapies they might actually receive, nor have they assessed the effect of these preferences on treatment outcome.

We ascertained patient preference before randomization in a randomized controlled trial[29] comparing prolonged exposure, relaxation therapy, and interpersonal psychotherapy. We present treatment preferences of the 110 randomized patients, examine baseline correlates of preference, and evaluate moderating effects of preference on treatment outcome. We hypothesized that (1) although some patients might seek prolonged exposure for its stronger research basis, more would choose interpersonal psychotherapy, lacking exposure, as less anxiety-provoking; and (2), as with major depressive disorder (MDD), receiving preferred treatment would be associated with better outcome.

METHOD

The Psychotherapies for Chronic Posttraumatic Stress Disorder study, a randomized controlled trial,[29] compared 3 distinct psychotherapies: prolonged exposure,[30] relaxation therapy,[31] and interpersonal psychotherapy[32] at the New York State Psychiatric Institute Anxiety Disorders Clinic. After telephone intake, eligible individuals received evaluation by research psychiatrists and by PhD psychologists reliably trained on the Clinician-Administered PTSD Scale (CAPS),[33] Structured Clinical Interview for *DSM-IV* (SCID),[34] Hamilton Depression Rating Scale (HDRS),[35] and other instruments.[36] The study was registered on ClinicalTrials.gov (identifier: NCT00739765).

Patients were aged 18–65 years, were anglophone, had a primary diagnosis of chronic *DSM-IV* PTSD, had a minimum CAPS score ≥ 50 (indicating at least moderately severe PTSD), and avowed their willingness to accept any study treatment. The patients were recruited between 2008 and 2013. Exclusions included bipolar and psychotic disorders; antisocial, schizotypal, schizoid personality disorders; unstable medical condition; active substance dependence; active suicidal ideation; and concurrent treatment (including psychotropic medication). Eligible individuals were offered 14-week treatment.

The principal investigator (PI) met each prospective patient to obtain informed written institutional review board–approved consent. Patients read the consent form detailing the protocol and informational sheets describing each treatment. The PI, reviewing the protocol, presented a balanced, scripted explanation, which he had composed and reviewed with study therapists delivering the 3 treatments, and elicited patient preferences for or against each treatment. He explained that the study treatments, none of which were placebo, differ considerably and vary in degree of supporting empirical evidence and that the study goal was to understand which approach best helps patients recover from PTSD. He explained usually in this order:

> *Prolonged exposure* is a treatment that directly confronts the trauma you've been through. When you've suffered through something awful enough, you try not to think about it, but you can't help thinking about it: the thoughts and images leak back in and make you anxious. Many things may remind you of the trauma. The more you avoid a thought or situation, the scarier, the more seemingly dangerous it becomes. Meanwhile, the more you face it and realize you're now safe, the less frightening the fear will get. Prolonged exposure consists of ten 90-minute sessions in which you will have the chance to systematically confront your trauma and put together the story of what happened to you. With your therapist and in homework, in your imagination and in real life exercises, you'll repeat it again and again until you realize that the thoughts are no longer dangerous: until you habituate and extinguish the frightening thoughts, and thinking about the trauma no longer bothers you. The prolonged exposure therapists have long experience and will not push you farther than you're comfortable. Prolonged exposure is the best researched—has received the most research—of the PTSD treatments in this study.
>
> *Relaxation therapy* doesn't focus on your trauma. It's based on the fact that, when you're anxious, your body tenses up for danger in a "fight or flight" response. Your muscles tense, your heart rate and blood pressure go up, you may feel a knot in your stomach, find it hard to catch your breath, or have headaches. That physical tenseness then feeds back to your brain, making you more anxious. You can see how that might form a vicious cycle? Anxiety leads to tension, tension leads to more anxiety. Relaxation therapy consists of 10 sessions lasting up to 90 minutes and homework exercises that help you to systematically relax your body and breathing. Doing that not only feels good and relaxing—a little bit like self-hypnosis or

massage—but you stop the message from your body to your mind saying, 'Tense!' That helps you to feel less anxious. So, relaxing your body relaxes your mind. Your therapist will give you tapes to take home and practice with. It may sound simple, but this approach has also been tested in randomized clinical trials, and it really works to relieve PTSD symptoms.

Interpersonal psychotherapy takes a still different approach to PTSD. It doesn't focus on the trauma you've been through or on physical relaxation. Instead, it looks at the effect of having been traumatized on your current social functioning: on how hard PTSD makes it to trust your environment and the people in it. People with PTSD withdraw from others because the world feels so unsafe. Interpersonal psychotherapy helps you pay attention to your emotions, which in PTSD can go numb or feel overwhelming. Understanding your feelings is crucial to understanding how you're getting along with other people, and whether you can trust them; understanding relationships is important for getting the social support that we know is important to getting better. So this treatment, in fourteen 50-minute weekly sessions, focuses on your feelings and on improving your day-to-day interactions with other people in the present, not on the trauma that happened to you. Interpersonal psychotherapy has been shown to work for depression and eating disorders; there's some evidence it may work for PTSD too.

Patients were asked whether they thought the treatment approaches made sense; had questions about treatments, which the interviewer answered; and did or did not prefer each treatment. For each therapy, we recorded strong (rated 2) or mild (rated 1) preference, strong (−2) or mild (−1) disinclination, or no opinion (0). Participants could express preference for none, 1, or 2 psychotherapies, but not all 3; similarly, disinclination toward 0–2 therapies.

Statistical Analysis

We transformed the 3 treatment attitude variables by collapsing mild and strong preferences into 1 level (preference) and mild and strong disinclinations into 1 level (disinclination). Thus, each treatment preference variable has 3 categories: preference, disinclination, and no opinion. First, we evaluated whether patients' attitudes toward treatments differed using Cochran Q test[37] for comparison of proportions based on correlated samples. Second, we assessed whether baseline characteristics distinguished among patients preferring, disinclined to, or having no opinion toward each treatment. We evaluated each treatment separately, using χ^2 tests for categorical baseline characteristics and analyses of variance for continuous ones. As treatment attitudes can be considered ordered variables (treatment disinclination/no opinion/preference), when a baseline characteristic significantly differed among patients in the 3 categories, we tested for differences against ordered alternatives, using χ^2 linear trend test for categorical variables and Jonckheere-Terpstra test for continuous variables.[38] Groups defined by the categories of each treatment attitude variable were compared on 31 baseline characteristics. We report P values unadjusted for multiple testing, as views might differ concerning how to correctly adjust for exploratory analyses in this case.

Finally, we investigated relationships between pre-randomization attitude toward received treatment and the outcomes: (1) posttreatment PTSD severity (continuous, measured by week 14 CAPS); (2) response (binary, defined a priori as ≥ 30% decrement from baseline CAPS); and (3) dropout status (binary). Subjects were grouped into nonoverlapping categories based on attitude toward their randomly assigned treatment. The variable *receiving preferred/disinclined treatment* has 4 categories: (a) having no opinion about any treatment, (b) having an opinion (preference/disinclination) and receiving preferred treatment, (c) having an opinion and receiving unwanted treatment, and (d) having an opinion and getting neither preferred nor unwanted treatment. To assess effects of receiving preferred or unwanted treatment on outcome, we modeled the 3 outcomes as functions of the receiving preferred/disinclined treatment variable. A linear regression model was used for continuous measure, logistic regression models for binary ones. All models controlled for baseline CAPS scores, comorbid MDD status, and treatment assignment. In addition, the following comparisons between a priori–defined categories of subjects were evaluated: (1) having no opinion about any treatment (a) versus all remaining categories of the variable receiving preferred/disinclined treatment (b, c, and d) and (2) receiving unwanted treatment (c) versus all remaining categories of the variable receiving preferred/disinclined treatment (a, b, and d). We also explored the role of comorbid MDD on the effect of receiving preferred treatment on outcomes by including interaction terms between MDD and receiving preferred/disinclined treatment. Given the exploratory nature of this investigation, all tests are reported unadjusted for multiple testing, and significance everywhere is judged at level $\alpha = .5$, 2-sided.

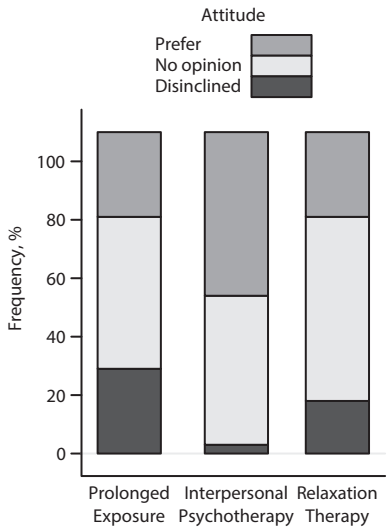
RESULTS

Treatment Preference

The 110 unmedicated randomized patients were 70% female; 28% Hispanic; and 65% white, 17% African American, 8% Asian/Pacific Islander, and 9% not identified. Eighty-seven patients (79%) voiced at least 1 treatment preference or disinclination.

Preference for interpersonal psychotherapy was higher than for prolonged exposure or relaxation therapy: 50% (n = 56) preferred interpersonal psychotherapy, 26% (n = 29) preferred prolonged exposure, and 26% (n = 29) preferred relaxation therapy (Cochran $Q = 18.46$, $P < .001$). Disinclination was lower for interpersonal psychotherapy than for prolonged exposure or relaxation therapy: 26% (n = 29) were disinclined to prolonged exposure, 16% (n = 18) to relaxation therapy, and only 3% (n = 3) to interpersonal psychotherapy (Cochran $Q = 22.71$, $P < .001$) (Figure 1).

Figure 1. Patient Attitudes Toward Treatment: Preferences and Disinclinations



Preference Correlates

Demographics. Gender, age, education, race/ethnicity, religion, and employment status showed no significant relationship to treatment attitude for any treatment, except that women had odds of expressing an opinion about prolonged exposure (preference or disinclination) 4.59 (95% CI, 1.77–12.92; $P < .001$) times larger than men, and patients with lower than median education level preferred relaxation therapy more often than those with education levels above the median (OR = 3.29; 95% CI, 1.37–7.69; $P < .013$) (Table 1; see also Supplementary eTable 1 at PSYCHIATRIST.COM).

Clinical variables. Patients with differing attitudes toward prolonged exposure differed in age at primary trauma ($P = .038$), duration of primary trauma ($P = .039$), baseline Social Adjustment Scale[42] scores ($P = .006$); rates of interpersonal trauma ($P = .035$), sexual trauma ($P = .029$), and recurrent depression status ($P = .036$) (Table 1). On the basis of Jonckheere-Terpstra test and χ^2 test for linear trend, these relationships increased monotonically from disinclined, to no opinion, to prefer, with earlier age and longer duration of primary trauma, worse baseline social functioning, and higher prevalence of sexual abuse, interpersonal abuse, and recurrent depression all associated with more positive attitude toward prolonged exposure.

Patients with differing attitudes about interpersonal psychotherapy varied in trauma chronicity and baseline CAPS severity. As the disinclined to interpersonal psychotherapy category contained only 3 subjects, we compared interpersonal psychotherapy preference to no opinion: patients preferring interpersonal psychotherapy had higher chronic trauma prevalence (OR = 2.66; 95% CI, 1.23–5.91). When the 3 patients disinclined to interpersonal psychotherapy were excluded, baseline CAPS severity between no opinion and preference was nonsignificant. Attitudes about relaxation therapy differed only in prior psychotherapy history. Patients with opinions about relaxation therapy (either preferring or disinclined) more likely had psychotherapy than those with no opinion.

For all 3 treatments, preferences did not significantly differ among patients reporting physical abuse, Axis II diagnosis, lifetime alcohol or substance abuse, psychotropic treatment history, comorbid general anxiety disorder, HDRS score, or interpersonal distress.[43]

Effect of Receiving Preferred/ Undesired Treatment on Outcome

Table 2 gives raw mean CAPS scores and response and dropout proportions for each of the 4 receiving preferred/disinclined treatment categories. No overall between-group differences emerged for CAPS, response, or dropout outcomes. Patients without therapy opinions had mean baseline CAPS score 12 points higher than the other 3 categories (SD = 3.81, $P < .01$). Model-based inferences showed that patients having opinions and receiving preferred treatment (n = 36) improved by a mean 25.9 CAPS points (standard error [SE] = 5.4); patients having an opinion who received unwanted treatment (n = 16) improved by 13.5 points (SE = 8.1); patients with opinions receiving neither preferred nor unwanted treatment (n = 35) improved by 28.0 points (SE = 4.6); and patients without opinion (n = 23) improved by a mean of 35.2 CAPS points (SE = 6.1). The overall test for difference among the 4 groups was $F_{3,80} = 1.62$, $P = .19$. For response, overall difference among groups was marginally significant ($\chi^2_3 = 7.26$, $P = .064$). Overall, patients with no treatment opinion fared marginally better than all other patients, with respect to both CAPS score and response rate (see Table 2). Patients receiving undesired treatment did worse than the other groups with respect to response ($P = .048$).

Attrition rates were 25% for patients receiving their preferred treatment, 31% for those assigned to unwanted treatment, 26% for those not receiving preferred/unwanted treatments, and 17% for those with no opinion ($\chi^2_3 = 1.93$, $P = .58$). Six individuals dropped out postrandomization but before beginning therapy, 2 per assigned treatment. We presumed their attrition might have reflected randomization against preference, yet 3 actually received their preferences and only 1 reported disinclination toward her assigned therapy.

Further exploratory analyses revealed a significant 2-way interaction between MDD and receiving preferred/disinclined treatment. Final CAPS mean (SD) scores of comorbidly depressed patients who received unwanted treatments were 43.4 (16.9) points poorer than those without preference/disinclination ($P = .01$) and 36.4 (18.0) points poorer than patients receiving preferred treatments ($P = .05$) (Table 3).

DISCUSSION

This report is the first to formally assess and address effects of psychotherapy preferences on outcomes of treatment-seeking patients with chronic PTSD. Most patients reported treatment preferences. Despite presentations emphasizing

Table 1. Baseline Characteristics[a]

Characteristic	Attitude to Prolonged Exposure			Attitude to Interpersonal Psychotherapy			Attitude to Relaxation Therapy		
	Disinclined (n = 29)	No Opinion (n = 52)	Prefer (n = 29)	Disinclined (n = 3)[b]	No Opinion (n = 51)	Prefer (n = 56)	Disinclined (n = 18)	No Opinion (n = 63)	Prefer (n = 29)
Demographics									
Age, mean (SD), y	38.41 (11.78)	40.82 (11.97)	40.52 (10.82)	42.94 (9.36)	41.09 (12.15)	39.05 (11.20)	42.70 (8.96)	38.08 (10.98)	42.89 (13.54)
Female gender, n (%)	***25 (86.2)***^{A}	***28 (53.9)***^{B}	***24 (82.8)***^{A}	3 (100)	31 (60.8)	43 (76.8)	14 (77.8)	41 (65.1)	22 (75.9)
Race, n (%)									
White	18 (62.1)	35 (67.3)	19 (65.5)	3 (100)	32 (62.8)	37 (66.1)	13 (72.2)	39 (61.9)	20 (69.0)
African American	3 (10.3)	3 (5.8)	3 (10.3)	0 (0)	4 (7.8)	5 (8.9)	2 (11.1)	5 (7.9)	2 (6.9)
Asian/Pacific Island	6 (20.7)	11 (21.2)	2 (6.9)	0 (0)	9 (17.7)	10 (17.9)	3 (16.7)	12 (19.1)	4 (13.8)
Other	2 (6.9)	3 (5.8)	5 (17.2)	0 (0)	6 (11.8)	4 (7.1)	0 (0)	7 (11.1)	3 (10.3)
Hispanic ethnicity, n (%)	5 (17.2)	18 (34.6)	8 (27.6)	0 (0)	16 (31.4)	15 (26.8)	2 (11.1)	23 (36.5)	6 (20.7)
Marital status, n (%)									
Single	19 (65.5)	32 (61.5)	22 (75.9)	2 (66.7)	32 (62.8)	39 (69.6)	11 (61.1)	46 (73.0)	16 (55.2)
Married/ cohabitating	3 (10.3)	11 (21.2)	3 (10.3)	1 (33.3)	10 (19.6)	6 (10.7)	4 (22.2)	6 (9.5)	7 (24.1)
Divorced	7 (24.1)	9 (17.3)	4 (13.8)	0 (0)	9 (17.7)	11 (19.6)	3 (16.7)	11 (17.5)	6 (20.7)
Education, mean (SD), y	15.97 (2.20)	15.79 (2.34)	15.59 (1.78)	15.67 (0.58)	15.82 (2.36)	15.75 (3.03)	15.94 (2.15)	15.98 (2.08)	15.24 (2.28)
Clinical characteristics									
No. of traumas, mean (SD)	2.66 (1.72)	2.85 (1.82)	2.86 (1.92)	4.33 (2.52)	2.71 (1.91)	2.80 (1.67)	3.00 (2.14)	2.89 (1.79)	2.48 (1.64)
Acute trauma (vs chronic), n (%)	11 (37.9)	25 (48.1)	10 (34.5)	**2 (66.7)**^{AB}	**27 (52.9)**^{A}	**17 (30.4)**^{B}	9 (50)	24 (38.1)	13 (44.8)
Trauma type, n (%)									
Interpersonal	**24 (82.7)**^{A}	**49 (94.2)**^{AB}	**29 (100)**^{B}	3 (100)	46 (90.2)	53 (94.6)	18 (100)	58 (92.1)	26 (89.7)
Sexual abuse	**7 (24.1)**^{A}	**16 (30.8)**^{AB}	**16 (55.2)**^{B}	0 (0)	19 (37.3)	20 (35.7)	7 (38.9)	24 (38.1)	8 (27.6)
Physical abuse	20 (69.0)	31 (59.6)	17 (58.6)	3 (100)	27 (52.9)	38 (67.9)	13 (72.2)	37 (58.7)	18 (62.1)
Age at primary trauma, mean (SD), y	**28.06 (14.24)**^{A}	**27.93 (15.19)**^{A}	**20.00 (12.11)**^{B}	37.72 (8.69)	26.94 (15.67)	24.20 (13.34)	25.64 (14.60)	23.50 (12.49)	31.02 (17.34)
Years since primary trauma, mean (SD)	**10.34 (13.15)**^{A}	**12.69 (14.55)**^{A}	**19.25 (12.22)**^{B}	5.22 (6.77)	14.15 (14.21)	13.86 (13.92)	14.77 (11.93)	14.37 (14.11)	11.87 (14.80)
Trauma onset, n (%)									
Early (age ≤ 13 y)	5 (17.2)	10 (19.6)	7 (25)	0 (0)	12 (23.5)	10 (18.5)	2 (11.8)	15 (24.2)	5 (17.2)
Adolescent (age 14–20 y)	4 (13.8)	5 (9.8)	8 (28.6)	0 (0)	5 (9.8)	12 (22.2)	4 (23.5)	9 (14.5)	4 (13.8)
Adult (age ≥ 21 y)	20 (69.0)	36 (70.6)	13 (46.4)	3 (100)	34 (66.7)	32 (59.3)	11 (64.7)	38 (61.3)	20 (69.0)
Prior treatment, n (%)									
Psychotherapy	21 (72.4)	36 (70.6)	25 (86.2)	3 (100)	39 (78)	40 (71.4)	***17 (94.4)***^{A}	***38 (61.3)***^{B}	***27 (93.1)***^{A}
Pharmacotherapy	11 (37.9)	27 (51.9)	14 (48.3)	2 (66.7)	28 (54.9)	22 (39.3)	9 (50)	28 (44.4)	15 (51.7)
Current MDD, n (%)	13 (44.8)	25 (48.1)	17 (58.6)	0 (0)	25 (49.1)	30 (53.6)	11 (61.1)	35 (55.6)	9 (31.0)
Recurrent MDD, n (%)	**7 (25.9)**^{A}	**16 (32)**^{AB}	**14 (58.3)**^{B}	0 (0)	20 (41.7)	17 (33.3)	6 (40)	24 (40)	7 (26.9)
Comorbid GAD, n (%)	1 (4.4)	9 (20)	4 (17.4)	2 (66.7)	6 (14.3)	6 (13.0)	4 (30.8)	8 (14.8)	2 (8.3)
Any Axis II disorder, n (%)	10 (34.5)	26 (50)	18 (62.1)	2 (66.7)	20 (39.2)	32 (57.1)	10 (55.6)	31 (49.2)	13 (44.8)
Lifetime substance abuse, n (%)	3 (10.3)	3 (5.8)	6 (20.7)	1 (33.3)	6 (11.8)	5 (8.9)	1 (5.6)	5 (7.9)	6 (20.7)
Lifetime alcohol abuse, n (%)	7 (25.9)	11 (23.4)	4 (16)	1 (33.3)	12 (25.5)	9 (18.4)	1 (7.1)	14 (24.6)	7 (25)
Outcome variables at baseline									
CAPS, mean (SD)	66.43 (15.71)	72.63 (17.42)	68.63 (16.71)	**52.67 (3.21)**^{A}	**74.28 (14.60)**^{B}	**66.99 (18.12)**^{A}	68.29 (17.22)	72.19 (16.19)	66.18 (17.92)
PSS-SR,[39] mean (SD)	74.04 (21.12)	78.35 (20.94)	81.12 (16.09)	67.94 (7.16)	81.26 (21.28)	75.06 (18.54)	78.16 (20.90)	76.53 (20.39)	81.10 (18.61)
HDRS, mean (SD)	18.39 (5.60)	19.19 (6.16)	22.08 (8.46)	16.33 (5.03)	19.93 (6.69)	19.73 (7.00)	19.86 (6.48)	20.74 (7.04)	17.32 (5.91)
SAS, mean (SD)	***2.43 (0.54)***^{A}	***2.72 (0.51)***^{AB}	***2.96 (0.51)***^{B}	2.59 (0.36)	2.77 (0.53)	2.63 (0.57)	2.92 (0.48)	2.67 (0.57)	2.66 (0.52)
Q-LES-Q,[40] mean (SD)	47.64 (15.36)	44.00 (12.49)	38.38 (11.80)	48.00 (2.83)	42.48 (13.94)	44.46 (13.25)	39.42 (9.83)	43.73 (14.13)	45.55 (13.43)
IIP,[41] mean (SD)	1.49 (0.69)	1.59 (0.46)	1.77 (0.59)	1.57 (0.65)	1.69 (0.64)	1.54 (0.47)	1.65 (0.57)	1.56 (0.56)	1.72 (0.57)

[a]Mean and standard deviation values and proportions of subjects with given demographic or clinical characteristics are shown, as well as baseline values of outcomes among those with a specific attitude to a psychotherapy (prolonged exposure, interpersonal psychotherapy, or relaxation therapy) (column percentages). Summaries are in bold when the test for differences between the 3 attitudes toward a given psychotherapy is significant at level α = .05; those in bold and italic are significant at level α = .01. When the overall test for differences between categories of subjects was significant, pairwise comparisons between the 3 categories were performed and are indicated by uppercase superscript *A*, *B*, and *AB*. Mean or proportion values indexed with identical letters are not different from each other, whereas mean or proportion values indexed by different letters are statistically significant at level α = .05, 2-sided.

[b]There are only 3 subjects in the disinclined to interpersonal psychotherapy category; therefore, the inferences regarding differences between the 3 groups defined by the attitude to interpersonal psychotherapy variable should be considered very tentative. When the no opinion and prefer groups with respect to the trauma variable was compared, the χ^2 test for independence was significant ($P = .03$).

Abbreviations: CAPS = Clinician-Administered PTSD Scale; GAD = generalized anxiety disorder; HDRS = Hamilton Depression Rating Scale, 24-item version; IIP = Inventory of Interpersonal Problems, 64-item version; MDD = major depressive disorder; PSS-SR = Posttraumatic Stress Scale, Self-Report; Q-LES-Q = Quality of Life Enjoyment and Satisfaction Questionnaire; SAS = Social Adjustment Scale, Self-Report version.

Table 2. Effect of Receiving Preferred/Undesired Treatment on Outcome[a]

Variable	n	Raw CAPS Score, Mean (SD) Baseline	Raw CAPS Score, Mean (SD) Week 14	Model-Based Difference, Baseline–Week 14	Response n	Response %	Dropout n	Dropout %
Preferred/undesired treatment category								
(a) No opinion about any treatment	23	79.4 (14.1)	37.3 (28.0)	35.2 (SE = 6.1)	15	65	4	17
(b) Has opinion and received preferred treatment	36	66.7 (16.3)	38.8 (24.1)	25.9 (SE = 5.4)	17	47	9	25
(c) Has opinion and received undesired treatment	16	66.7 (19.7)	46.0 (33.1)	13.5 (SE = 8.1)	4	25	5	31
(d) Has opinion and did not receive preferred/undesired treatment	35	68.4 (15.8)	42.8 (28.9)	28.0 (SE = 4.6)	19	54	9	26
Overall difference between the 4 categories of subjects				$F_{3,80} = 1.62$, $P = .190$	$\chi^2_3 = 7.26$, $P = .064$		$\chi^2_3 = 1.93$, $P = .58$	
No opinion about any treatment vs remaining 3 categories				$F_{1,82} = 3.58$, $P = .062$	$\chi^2_1 = 3.54$, $P = .060$		$\chi^2_1 = 1.49$, $P = .221$	
Received undesired vs remaining 3 categories				$F_{1,82} = 2.58$, $P = .112$	$\chi^2_1 = 3.90$, $P = .048$		$\chi^2_1 = 0.10$, $P = .75$	

[a]Subjects are classified into 4 nonoverlapping categories: (a) having no opinion about any of the treatments, (b) having an opinion about some treatments and received preferred treatment, (c) having an opinion about some treatments and received undesired treatment, and (d) having an opinion about some treatments, but did not receive preferred or undesired treatment.
Abbreviations: CAPS = Clinician-Administered PTSD Scale, SE = standard error.

Table 3. Comorbid MDD and Effect of Receiving Preferred/Undesired Treatment on CAPS Scores at Week 14[a]

Contrast[b]	Comorbid Current MDD n	CAPS at Week 14, LS Mean Difference[c] Comorbid Current MDD Mean (SD) [*P* value]	No Comorbid Current MDD n	CAPS at Week 14, LS Mean Difference[c] No Comorbid Current MDD Mean (SD) [*P* value]
Received undesired treatment vs Received preferred treatment	7 / 13	36.4 (18.0) **[.047]**	9 / 23	4.7 (11.3) [.677]
Received undesired treatment vs No opinion	7 / 13	43.4 (16.9) **[.013]**	9 / 10	11.5 (12.3) [.353]
Received undesired treatment vs Not receiving preferred/undesired treatment	7 / 22	29.3 (16.6) [.081]	9 / 13	13.2 (11.9) [.271]
Received preferred treatment vs No opinion	13 / 13	7.0 (12.1) [.566]	23 / 10	6.8 (11.1) [.541]
Received preferred treatment vs Not receiving preferred/undesired treatment	13 / 22	−7.1 (10.9) [.517]	23 / 13	8.4 (9.4) [.372]
No opinion vs Not receiving preferred/undesired treatment	13 / 22	−14.1 (10.4) [.179]	10 / 13	1.6 (11.5) [.886]

[a]Results are based on a model for CAPS at week 14 as a function of receiving preferred/undesired treatment, MDD status, and their interaction, controlling for treatment received and CAPS scores at baseline.
[b]Significant findings are in bold.
[c]Statistically significant *P* values are shown in bold.
Abbreviations: CAPS = Clinician-Administered PTSD Scale, LS = least squares, MDD = major depressive disorder.

prolonged exposure's greater empirical support, study patients with chronic PTSD preferred interpersonal psychotherapy (Figure 1). Our subjective impression was that most patients appeared to appreciate all 3 rationales. Many stated they believed relaxation therapy helpful but, being familiar with yoga or meditation, they wanted something different. While some patients wanted to "kill the trauma" (as one said) through prolonged exposure, others acknowledged fear of recounting their traumas and reported having already found the evaluation process "harrowing." Recognizing social mistrust and isolation as problems, they considered the interpersonal psychotherapy focus on interpersonal issues and social support convincing. To anxious patients, avoiding exposure may have had more appeal than empirical data. This confirmed our first hypothesis and contrasts with analog studies wherein nonpatients expressed opinions on treatments they would not actually undergo.[21–26]

Our second hypothesis was not confirmed. Treatment preference did not globally predict PTSD severity, response, or attrition outcomes. Patients without treatment opinions (n = 23), however, had significantly greater mean CAPS improvement than patients receiving undesired treatment (n = 16): 35.2 vs 13.5 points ($P = .03$). Strikingly, comorbidly depressed patients receiving undesired treatment fared poorly: clinicians can envision that such patients anticipated not receiving their choice, viewed their random assignment as confirmation that life always goes wrong, and approached therapy with resignation and hopelessness, vitiating its effect. Echoing Bartleby, receiving unwanted treatment had predictive value, particularly in the setting of comorbid depression. Echoing some of the MDD literature, our results suggest depression influenced the effect of receiving preferred or unwanted treatment on PTSD patients' outcome.

Patients preferring prolonged exposure (n = 29) reported more distant primary traumas, more sexual abuse, more depressive episodes, and worse social functioning. This clustering suggests these patients had temporal distance from trauma, recognized their severe suffering, and hence felt more willing to confront their traumas. Symptom burden may have bred desire for strongly evidence-based treatment, raising toleration for facing reminders of their worst fears. This implies patients—at least those entering randomized trials—recognize their tolerance for different treatment approaches. Although preference was not significantly associated with dropout, the overall study found comorbidly depressed patients receiving prolonged exposure

had higher dropout.[29] Within this comorbid subgroup, only 1 of the 6 patients preferring and receiving prolonged exposure responded.

Interpersonal psychotherapy, the least-tested PTSD treatment, was most preferred and least unwanted among study enrollees. Its focus on current interpersonal functioning may have appealed to patients who struggled interpersonally and, by diagnostic definition, feared facing trauma reminders.

Patients denying treatment opinions, a hitherto understudied population, had higher baseline CAPS scores. They showed greater CAPS improvement and response rates than patients receiving unwanted treatments. No preference, like prolonged exposure preference, might signal patient awareness of symptomatic burden and consequent willingness to accept any treatment.

As the 3 treatments differ starkly, we were surprised patient preference did not strongly predict outcome. Has treatment preference less prognostic value for patients seeking PTSD treatment than antidepressant treatment? Comorbid MDD influenced PTSD outcomes: it seems clinically plausible that depressed patients randomized to unwished-for treatment fared worse. Depression may have worsened mistrust patients with PTSD experience toward others, including therapists, worsening treatment alliance. But overall, perhaps the study enrollment process selected patients willing to accept any treatment, who kept open minds and took advantage of nonpreferred treatment. Most patients symptomatically improved across treatments, although prolonged exposure and interpersonal psychotherapy outperformed relaxation therapy.[29]

We considered potential study biases. Patients, who had an average 16 years of education, could have researched the PI and associated him with interpersonal psychotherapy; this knowledge might have influenced their seeking out the study or their response to his presentation of treatment choices. The PI, despite personal conviction that all the study treatments work (as they generally did) and that he delivered balanced, scripted treatment presentations with equanimity and clinical equipoise, might have unintentionally biased patient preference responses. He had consulted study therapists but not their supervisors about the descriptive scripts. After the trial, he belatedly consulted the other psychotherapy supervisors. Karina Lovell, PhD (University of Manchester, United Kingdom), relaxation therapy supervisor, approved (written communication, October 6, 2014); Elizabeth Hembree, PhD (University of Pennsylvania), the prolonged exposure supervisor, felt the description of prolonged exposure should have emphasized patients facing trauma memories rather than traumas themselves and, hence, might have frightened patients away from prolonged exposure (written communication, October 6, 2014). The scripted description of prolonged exposure emphasized its having been "best" researched; although in practice the PI clarified that prolonged exposure was also the best *proven* treatment, the text in retrospect might have stated this more explicitly. Researcher allegiance can influence outcomes and might operate partly through influencing patient treatment preference.[44] If so, this bias would have had to overcome explicit presentation of prolonged exposure's greater research basis.

As further counterbalance to interpersonal psychotherapy bias, the New York State Anxiety Disorders Clinic had previously been associated with prolonged exposure, not interpersonal psychotherapy. Two prolonged exposure trials were conducted before and during the period of the current study.

In our experience, patients entering clinical treatment often express minimal psychotherapy preferences. They cannot always distinguish among treatments. It thus seems plausible that study patients reacted to objective therapy descriptions in choosing preferences. Most patients with chronic PTSD very likely felt more frightened by exposure to fear reminders than convinced by stated evidence, tending to prefer therapy not requiring exposure.[29] Characterized by avoidance, PTSD might well steer patients to avoid even the best-proven therapy if that therapy contravened avoidance. The most symptomatic patients seemed motivated to overcome this fear.

Study limitations include the relatively small sample size. The nonrandom sequence of therapy presentation might have produced an ordering effect whereby patients preferred the last-mentioned treatment. Patients were largely nonmilitary and entirely unmedicated, limiting generalizability. Study strengths include a protocol based on an organized preference assessment protocol, attempts to balance allegiance by reviewing scripts with study therapists, and presentation of treatments to patients with equipoise. In retrospect, all study supervisors should have vetted psychotherapy descriptions at trial outset. Patient self-rating of preferences would have been an alternative to observer rating. The preference interviews could have been taped to check for potential bias.

These exploratory findings invite research to replicate or contradict our results. Interpersonal psychotherapy for PTSD requires extended empirical research to justify its patient popularity. Future research might explore the rationales behind patients' stated treatment preferences and the outcomes of patients denying treatment preference. At this preliminary juncture, however, patients with chronic PTSD apparently have frequent treatment preferences, they prefer interpersonal psychotherapy to better-tested exposure treatment, and their treatment predilections subtly influence outcome in treatment with expert therapists.

Drug names: imipramine (Tofranil and others), sertraline (Zoloft and others).

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Supplementary Material

Article Title: Treatment Preferences of Psychotherapy Patients With Chronic PTSD

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List of Supplementary Material for the article

1. eTable 1 Baseline Characteristics

Disclaimer

This Supplementary Material has been provided by the author(s) as an enhancement to the published article. It has been approved by peer review; however, it has undergone neither editing nor formatting by in-house editorial staff. The material is presented in the manner supplied by the author.

Supplementary eTable 1. Baseline Characteristics. Proportion of subjects with a specific attitude to a psychotherapy (PE, IPT, or RT) among those with a given demographic or clinical characteristics or baseline value of the outcome (row percentages). Summaries are in **bold** when the test for differences between the three attitudes towards a given psychotherapy is significant at level α=0.05; in ***bold and italic*** when the test is significant at level α=0.01.

Characteristics	Attitude to PE			Attitude to IPT			Attitude to RT		
	Dis-inclined n=29	No opinion n=52	Prefer n=29	Dis-inclined n=3†	No opinion n=51	Prefer n=56	Dis-inclined n=18	No opinion n=63	Prefer n=29
Demographics									
Age: M*= 38.8									
<Median : n (%)	**20 (37.8%)+**	**21 (39.6%)**	**12 (22.6%)**	1 (1.9%)	22 (41.5%)	30 (56.6%)	5 (9.4%)	34 (64.2%)	14 (26.4%)
>=Median :n (%)	**9 (15.8%)**	**31 (54.4%)**	**17 (29.8%)**	2 (3.5%)	29 (50.9%)	26 (45.6%)	13 (22.8%)	29 (50.9%)	15 (26.3%)
Years of Education : M=16									
<Median : n (%)	11 (28.9%)	16 (42.1%)	11 (28.9%)	1 (2.6%)	18 (47.4%)	19 (50%)	**5 (13.2%)**	**17 (44.7%)**	**16 (42.1%)+**
>=Median :n (%)	18 (25%)	36 (50%)	18 (25%)	2 (2.8%)	33 (45.8%)	37 (51.4%)	**13 (18.1%)**	**46 (63.9%)**	**13 (18.1%)**
Gender: n (%) Female	***25(32.5%)+***	***28(36.4%)+***	***24(31.2%)***	3 (3.9%)	31 (40.3%)	43 (55.8%)	14 (18.2%)	41 (53.2%)	22 (28.6%)
Male	***4 (12.1%)***	***24 (72.7%)***	***5 (15.1%)***	0 (0%)	20 (60.6%)	13 (39.4%)	4 (12.1%)	22 (66.7%)	7 (21.2%)
Race: n (%)									
White	18 (25%)	35 (48.6%)	19 (26.4%)	3 (4.0%)	32 (44.4%)	37 (51.6%)	13 (18.1%)	39 (54.2%)	20 (27.8%)
African-American	3 (33.3%)	3 (33.3%)	3 (33.4%)	0 (0%)	4 (44.4%)	5 (55.6%)	2 (22.2%)	5 (55.6%)	2 (22.2%)
Asian/Pacific Island	6 (31.6%)	11 (57.9%)	2 (10.5%)	0 (0%)	9 (47.4%)	10 (52.6%)	3 (15.8%)	12 (63.2%)	4 (21%)
Other	2 (20%)	3 (30%)	5 (50%)	0 (0%)	6 (60%)	4 (40%)	0 (0%)	7 (70%)	3 (30%)
Ethnicity: n (%) Hispanic	5 (16.1%)	18 (58.1%)	8 (25.8%)	0 (0%)	16 (51.6%)	15 (48.4%)	2 (6.5%)	23 (74.2%)	6 (19.3%)
Non-Hispanic	24 (30.4%)	34 (43%)	21 (26.6%)	3 (3.8%)	35 (44.3%)	41 (51.9%)	16 (20.2%)	40 (50.6%)	23 (29.2%)
Marital Status: n (%)									
Single	19 (26.1%)	32 (43.8%)	22 (30.1%)	2 (2.7%)	32 (43.8%)	39 (53.5%)	11 (15.1%)	46 (63%)	16 (21.9%)
Married/cohabitating	3 (17.6%)	11 (64.7%)	3 (17.7%)	1 (5.9%)	10 (58.8%)	6 (35.3%)	4 (23.5%)	6 (35.3%)	7 (41.2%)
Divorced	7 (35%)	9 (45%)	4 (20%)	0 (0%)	9 (45%)	11 (55%)	3 (15%)	11 (55%)	6 (30%)
Clinical Characteristics									
Number of traumas: M=2									
<Median : n (%)	9 (25%)	18 (50%)	9 (25%)	0 (0%)	20 (55.6%)	16 (44.4%)	7 (19.4%)	20 (55.6%)	9 (25%)
>=Median :n (%)	20 (27%)	34 (46%)	20 (27%)	3 (4%)	31 (41.9%)	40 (54.1%)	11 (14.9%)	43 (58.1%)	20 (27%)
Trauma: n (%)									
Acute	11 (23.9%)	25 (54.4%)	10 (21.7%)	**2 (4.3%)**	**27 (58.7%)+**	**17 (37%)+**	9 (19.6%)	24 (52.2%)	13 (28.2%)
Chronic	18 (28.1%)	27 (42.2%)	19 (29.7%)	**1 (1.5%)**	**24 (37.5%)**	**39 (61%)**	9 (14.1%)	39 (60.9%)	16 (25%)
Trauma type : n (%)									
Interpersonal	**24(23.5%)+**	**49(48%)**	**29(28.5%)**	3 (2.9%)	46 (45.1%)	53 (52%)	18 (17.6%)	58 (56.9%)	26 (25.5%)
Non-Interpersonal	**5 (62.5%)**	**3 (37.5%)**	**0 (0%)**	0 (0%)	5 (62.5%)	3 (37.5%)	0 (0%)	5 (62.5%)	3 (37.5%)
Sexual abuse	**7 (18%)**	**16(41%)**	**16(41%)+**	0 (0%)	19 (48.7%)	20 (51.3%)	7 (18%)	24 (61.5%)	8 (20.5%)
No Sexual abuse	**22 (31%)**	**36 (50.7%)**	**13 (18.3%)**	3 (4.2%)	32 (45.1%)	36 (50.7%)	11 (15.5%)	39 (54.9%)	21 (29.6%)
Physical abuse	20 (29.4%)	31 (45.6%)	17 (25%)	3 (4.4%)	27 (39.7%)	38 (55.9%)	13 (19.1%)	37 (54.4%)	18 (26.5%)
No Physical abuse	9 (21.4%)	21 (50%)	12 (28.6%)	0 (0%)	24 (57.1%)	18 (42.9%)	5 (11.9%)	26 (61.9%)	11 (26.2%)

Age at Primary Trauma: M=24.7 <Median : n (%) >=Median :n (%)		**11 (20.4%)** **18 (32.7%)**	**23 (42.6%)** **28 (50.9%)**	**20 (37%)**+ **9 (16.4%)**	0 (0%) 3 (5.4%)	25 (46.3%) 26 (47.3%)	29 (53.7%) 26 (47.3%)	9 (16.7%) 9 (16.4%)	32 (59.3%) 30 (54.5%)	13 (24%) 16 (29.1%)
Years since Primary Trauma: M=9 <Median : n (%) >=Median :n (%)		***17 (33.3%)*** ***12 (21%)***	***29 (56.9%)*** ***22 (38.6%)***	***5 (9.8%)***+ ***23 (40.4%)***	2 (3.9%) 1 (1.7%)	26 (51%) 25 (43.9%)	23 (45.1%) 31 (54.4%)	**5 (9.8%)** **12 (21.1%)**	**27 (52.9%)** **35 (61.4%)**	**19 (37.3%)**+ **10 (17.5%)**
Trauma Onset: n (%) Early(age<=13) Adolescent(14-20) Adult(>=21)		5 (22.7%) 4 (23.5%) 20 (29%)	10 (45.5%) 5 (29.4%) 36 (52.1%)	7 (31.8%) 8 (47.1%) 13 (18.8%)	0 (0%) 0 (0%) 3 (4.3%)	12 (54.5%) 5 (29.4%) 34 (49.3%)	10 (45.5%) 12 (70.6%) 32 (46.4%)	2 (9.1%) 4 (23.5%) 11 (15.9%)	15 (68.2%) 9 (53%) 38 (55.1%)	5 (22.7%) 4 (23.5%) 20 (29%)
Prior treatment : n (%) Psychotherapy No-Psychotherapy		21 (25.6%) 8 (29.63%)	36 (43.9%) 15 (55.56%)	25 (30.5%) 4 (14.81%)	3 (3.7%) 0 (0%)	39 (47.6%) 11 (40.7%)	40 (48.7%) 16 (59.3%)	***17(20.7%)***+ ***1 (3.7%)***	***38(46.3%)***+ ***24 (88.9%)***	***27(33%)***+ ***2 (7.4%)***
Pharmacotherapy No-Pharmacotherapy		11 (21.2%) 18 (31%)	27 (51.9%) 25 (43.1%)	14 (26.9%) 15 (25.9%)	2 (3.8%) 1 (1.7%)	28 (53.9%) 23 (39.7%)	22 (42.3%) 34 (58.6%)	9 (17.3%) 9 (15.5%)	28 (53.9%) 35 (60.3%)	15 (28.8%) 14 (24.2%)
Current MDD: n (%) **No Current MDD :n (%)**		13 (23.6%) 16 (29.1%)	25 (45.5%) 27 (49.1%)	17 (30.9%) 12 (21.8%)	0 (0%) 3 (5.4%)	25 (45.5%) 26 (47.3%)	30 (54.5%) 26 (47.3%)	11 (20%) 7 (12.7%)	35 (63.6%) 28 (50.9%)	9 (16.4%) 20 (36.4%)
Recurrent MDD: n (%) **No Recurrent MDD: n (%)**		**7 (18.9%)** **20 (31.3%)**	**16(43.2%)** **34 (53.1%)**	**14(37.9%)**+ **10 (15.6%)**	0 (0%) 2 (3.1%)	20 (54.1%) 28 (43.8%)	17 (45.9%) 34 (53.1%)	6 (16.2%) 9 (14.1%)	24 (64.9%) 36 (56.2%)	7 (18.9%) 19 (29.7%)
Comorbid GAD: n (%) **No Comorbid GAD: n (%)**		1 (7.1%) 22 (28.6%)	9 (64.3%) 36 (46.7%)	4 (28.6%) 19 (24.7%)	2 (14.3%) 1 (1.3%)	6 (42.9%) 36 (46.8%)	6 (42.8%) 40 (51.9%)	4 (28.6%) 9 (11.7%)	8 (57.1%) 46 (59.7%)	2 (14.3%) 22 (28.6%)
Any Axis II dx: n (%) **No Axis II dx: n(%)**		10 (18.5%) 19 (33.9%)	26 (48.2%) 26 (46.4%)	18 (33.3%) 11 (19.7%)	2 (3.7%) 1 (1.8%)	20 (37%) 31 (55.3%)	32 (59.3%) 24 (42.9%)	10 (18.5%) 8 (14.3%)	31 (57.4%) 32 (57.1%)	13 (24.1%) 16 (28.6%)
Lifetime substance abuse: n (%) **No Lifetime substance abuse:**		3 (25%) 26 (26.5%)	3 (25%) 49 (50%)	6 (50%) 23 (23.5%)	1 (8.3%) 2 (2.1%)	6 (50%) 45 (45.9%)	5 (41.7%) 51 (52%)	1 (8.3%) 17 (17.3%)	5 (41.7%) 58 (59.2%)	6 (50%) 23 (23.5%)
Lifetime alcohol abuse: n (%) **No lifetime alcohol abuse:**		7 (31.8%) 20 (26%)	11 (50%) 36 (46.7%)	4 (18.2%) 21 (27.3%)	1 (4.5%) 2 (2.6%)	12 (54.6%) 35 (45.4%)	9 (40.9%) 40 (52%)	1 (4.6%) 13 (16.9%)	14 (63.6%) 43 (55.88%)	7 (31.8%) 21 (27.3%)
Outcome variables at baseline										
CAPS: **M=**68.00	<Median :n(%) >=Median :n (%)	14 (28%) 14 (24.6%)	19 (38%) 33 (57.9%)	17 (34%) 10 (17.5%)	3 (6%) 0 (0%)	18 (36%) 32 (56.1%)	29 (58%) 25 (43.9%)	10 (20%) 7 (12.3%)	27 (54%) 35 (61.4%)	13 (26%) 15 (26.3%)
PSS-SR: **M=**79.00	<Median :n(%) >=Median :n (%)	11 (26.1%) 11 (25.6%)	22 (52.4%) 21 (48.8%)	9 (21.4%) 11 (25.6%)	2 (4.8%) 0 (0%)	17 (40.5%) 24 (55.8%)	23 (54.7%) 19 (44.2%)	6 (14.3%) 6 (14%)	27 (64.3%) 25 (58.1%)	9 (21.4%) 12 (27.9%)
HAM-D: **M=**19.00	<Median :n(%) >=Median :n (%)	13 (30.2%) 12 (21.8%)	22 (51.2%) 26 (47.3%)	8 (18.6%) 17 (30.9%)	2 (4.6%) 1 (1.8%)	18 (41.9%) 28 (50.9%)	23 (53.5%) 26 (47.3%)	6 (13.9%) 10 (18.2%)	23 (53.5%) 34 (61.8%)	14 (32.6%) 11 (20%)
SAS: **M=**2.65	<Median :n(%) >=Median :n (%)	15 (37.5%) 7 (17.1%)	18 (45%) 21(51.2%)	7 (17.5%) 13(31.7%)	1 (2.5%) 1 (2.4%)	16 (40%) 24 (58.6%)	23 (57.5%) 16 (39%)	4 (10%) 7 (17.1%)	25 (62.5%) 25 (61.%)	11 (27.5%) 9 (21.9%)
QLESQ: **M=**41.00	<Median :n(%) >=Median :n (%)	7 (20%) 15 (31.3%)	17 (48.6%) 23 (47.9%)	11 (31.4%) 10 (20.8%)	0 (0%) 2 (4.2%)	21 (60%) 21 (43.7%)	14 (40%) 25 (52.1%)	6 (17.1%) 6 (12.5%)	22 (62.9%) 29 (60.4%)	7 (20%) 13 (27.1%)
IIP: **M=**1.63	<Median :n(%) >=Median :n (%)	12 (28.6%) 10 (23.3%)	21 (50%) 21 (48.8%)	9 (21.4%) 12 (27.9%)	1 (2.4%) 1 (2.3%)	22 (52.4%) 19 (44.2%)	19 (45.2%) 23 (53.5%)	4 (9.5%) 8 (18.6%)	28 (66.7%) 24 (55.8%)	10 (23.8%) 11 (25.6%)

Legend: CAPS= Clinician-Administered PTSD Scale; HAM-D= Hamilton Depression Rating Scale, 24-item version; IIP= Inventory of Interpersonal Problems, 64-item version; PSS-SR= Posttraumatic Stress Scale, Self-Report; QLES= Quality of Life Enjoyment and Satisfaction Questionnaire; SAS= Social Adjustment Scale, Self-Report version

† There are only 3 subjects in the "disinclined to IPT" category, therefore the inferences regarding differences between the three groups defined by the "Attitude to IPT" variable should be considered very tentative. Comparing only the "no opinion" and "prefer" groups with respect to the trauma variable, the χ^2 test for independence is significant (p=0.03).

* Indicates the median, the value at which a continuous variable is split in half: "low" and "high" values at baseline.
+ When the overall test for association between a demographic/clinical/baseline-outcome variable and the opinion of a given psychotherapy is significant, we perform comparisons between the prevalence of a given opinion of the psychotherapy at different levels of the demographic/clinical/baseline-outcome variavle. "+" indicates the psychotherapy opinion category, the prevalence of which is different at different levels of the demographic, clinical or baseline outcome variables, i.e., differences between percentages in the same column.