Benefits of a Psychodynamic Group Therapy (PGT) Model for Treating Veterans With PTSD

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Objective: To examine the effectiveness of a treatment model of psychodynamic group therapy (PGT) for combat Veterans with posttraumatic stress disorder (PTSD). **Method:** A total of 158 male Veterans with PTSD (mean age = 30.09 years) were assigned to 15 treatment groups of 7–13 patients each. PGT was a 1-year therapy, 1.5 hour, once-a-week sessions administered in the following stages: group building activities, differentiation of group members, intimacy building, and termination. Levels of PTSD and depression symptoms, functioning, and hope were assessed at pretreatment baseline, posttreatment, and 12-month follow-up. **Results:** Multilevel modeling analyses indicate that our group therapy is associated with reductions in PTSD and depressive symptoms at posttreatment, and that these effects were maintained at 12-month follow-up. The results also showed significantly improved patients' functioning by the end of therapy and at the 12-month follow-up point, and that the patients' hope level had increased. **Conclusion:** The findings show that our model of psychodynamic group therapy is associated with mental improvements in Veterans with PTSD. However, further randomized controlled trials are recommended to establish the advantages of our therapeutic method compared to other modes of therapy. © 2017 Wiley Periodicals, Inc. J. Clin. Psychol. 73:1247–1258, 2017.

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Posttraumatic stress disorder (PTSD) is associated with long-term, interpersonal, and social difficulties (Martin et al., 2016; Schottenbauer, Glass, Arnkoff, & Gray, 2008). Psychodynamically oriented group therapy (PGT) is used as a treatment approach for Veterans with PTSD in many clinical setups. PGT was designed for Veterans with PTSD to offer therapeutic effects that meet their unique needs, including the need to feel safe and not socially isolated, the need for emotional ventilation, and the need to trust others as well as the opportunity to work on grief, guilt, and suffering in war (Britvic et al., 2007; Melinda, Lumley, & Schneider, 2014).

Studies have indicated that the processing of such issues through group therapy is beneficial to the well-being of Veterans with PTSD (Britvic et al., 2007; Foy, Drescher, Watson, & Ritchie, 2011), leading to significant decrease in PTSD and depression symptoms, and can be efficacious in enhancing interpersonal skills, everyday functioning, and quality of life (Classen et al., 2011; Smith et al., 2015). However, it has not been recognized as a first-line treatment (Sloan, Feinstein, Gallagher, Beck, & Keane, 2013), even though group therapy could potentially be more cost-effective than individual therapy (Sripada et al., 2016).

Many patients with PTSD report a profound sense of hopelessness (Hassijaa, Lutereka, Naragon-Gaineya, Moorea, & Simpsona, 2012). According to Snyder et al. (1991), hope is a positive thinking based on a positive motivational state and sense of success, which leads to identifying strategies to achieve desired goals. The battlefield and the traumatic events damage

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the positive thinking, motivation, and goal achievement among Veterans with PTSD. Group therapy can retain hope by building self-confidence and a positive motivational state that fosters positive thinking about ways to reach personal goals. Moreover group therapy offers strength building and prevention by concentrating on enhancing hope and challenging the catastrophic thinking that undermines hope (Hobfoll et al., 2007).

The psychodynamic approach, including PGT, for treatment of Veterans with PTSD in many health care settings is a common approach to PTSD treatment, but few studies have examined the effectiveness of that approach and created the possibility of making it one of the first-line treatments. This state of affairs emphasizes the pressing need for increased empirical and conceptual knowledge on PGT effectiveness (Lorentzen, Rund, Fjeldstad, & Hoglend, 2013). The current study provides descriptive information on the effectiveness of guidelines of a 1-year psychodynamically oriented group therapy for Israeli Veterans with PTSD as part of an open label trial with repeated measurements at pretreatment, posttreatment, and 12-month follow-up. We expected fewer posttraumatic and depressive symptoms and higher overall functioning and levels of hope at posttreatment and follow-up compared to pretreatment.

Method

Participants

Participants were 158 male treatment-seeking Israel Defense Force (IDF) combat Veterans diagnosed as suffering from PTSD according to *DSM-IV Text Revision* (*DSM-IV-TR;* APA, 2000). All patients had seen combat action and their traumatic experience met DSM-IV criterion A. Specifically, 92 patients had experienced direct combat in addition to incoming mortar and rocket attacks while participating in one of Israel's major wars (e.g., "Yom Kipur War"; "Second Lebanon War"); 51 received incoming small arms fire and experienced detonations of improvised explosive devices (IEDs) while participating in one of Israel's combat operations (e.g., "Operation Cast Led"; "Operation Protective Edge"); 10 participated in clearing and searching operations while undergoing extensive Molotov cocktail and/or stone throwing attacks; and for five patients, the traumatic event was determined as personally knowing someone seriously injured or killed in one of the aforementioned wars or combat operations. There were no differences between the type of traumatic events and the severity of PTSD symptoms ($p > 0.8$). All treated Veterans were diagnosed by the IDF's Unit for Treatment of Combat-Related PTSD (UTC-PTSD), an outpatient's clinic specializing in the treatment of traumatic stress in Israeli Veterans. All participants sought clinical help from the UTC-PTSD between 2006 and 2014. Consort Figure 1 shows the flow of patients through the treatment procedures.

Participants' mean age was 30.09 years (standard deviation [*SD*] = 15.06) and the mean age at the time of the event was 23.8 years (*SD* = 5.25); mean years of education were 12.46 (*SD* = 1.55; range = 8–20). Of the participants, 84.2% were Israeli born (*N* = 133) and 15.8% (*N* = 25) were immigrants; 51.9% were single (*N* = 82) and 47.5% (*N* = 75) were married; 67.7% (*N* = 101) were employed and 32.3 % (*N* = 57) were unemployed. Finally, 83.5% (*N* = 132) were from combat maneuver components and 16.5% (*N* = 26) were from support components. The study was approved by the Ethics Committee of the IDF Medical Corps (Helsinki Committee).

Psychological Evaluation Instruments

Clinician-Administered PTSD Scale (CAPS; Blake et al., 1995). The CAPS was the primary outcome measure for the study and is a widely used, semistructured clinical interview used for measuring the frequency and intensity of PTSD symptoms according to the *Diagnostic and Statistical Manual of Mental Disorders*, *Fourth Edition* (*DSM-IV*; American Psychiatric Association [APA], 1994). The CAPS has good to excellent inter-rater reliability and convergent and diagnostic criterion validity for use with samples of Veterans (Weathers, Keane, & Davidson, 2001). CAPS scores range from 0 to 136: 0–19 asymptomatic/few symptoms, 20–39 mild symptoms, 40–59 moderate symptoms, 60–79 severe symptoms, and > 80 extreme PTSD symptoms. A total CAPS severity score ≥ 45 (total frequency + intensity across all 17 PTSD symptoms)

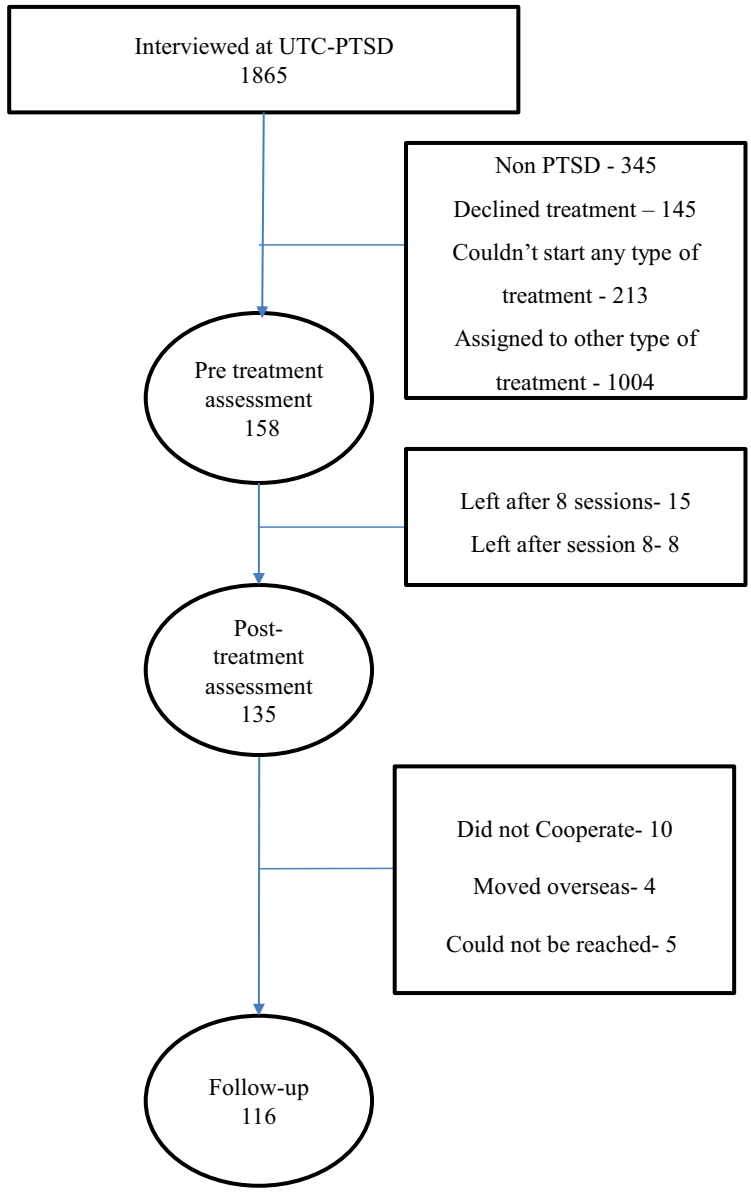

Figure 1. Flow of patients throughout the study.

served as the clinical cutoff in the current study (Weathers, Ruscio, & Kean, 1999). Cronbach's alpha of the CAPS in other studies has shown acceptable internal consistency (.97; see Pupo et al., 2011). In the current study, Cronbach's alphas at the pretreatment, posttreatment, and follow-up were .94, .96, and .93, respectively.

Montgomery and Asberg Depression Rating Scale (MADRS; Montgomery & Asberg, 1979). The MADRS is a semistructured, clinician-rated interview used to assess the magnitude of nine core depressive symptoms: reported sadness, inner tension, reduced sleep, reduced appetite, concentration difficulties, lassitude, inability to feel, pessimistic thoughts, and suicidal thoughts. The interviewing clinician rated the severity of each symptom on a scale ranging from 0 to 6 using predetermined probing questions and anchor points. Scores range

from 0 to 60: 0–6 indicates no depression, 7–19 mild depression, 20–34 moderate depression, and > 35 severe depression. Previous studies suggest acceptable Cronbach's alpha internal consistency scores (.89; (Santen, Danhof, & Pasqua, 2009). In the current study, Cronbach's alphas measured at pretreatment, posttreatment, and follow-up were .92, .96, and .94, respectively.

Psychotherapy Outcome Assessment and Monitoring System–Trauma Version (POAMS-TV) Assessment Questionnaire (Green, Lowry, & Kopta, 2003). This self-report questionnaire was used to assess participant functioning and comprises 10 items that measure functioning in different life spheres: work, study, partner relationships, relationships with children, social activities and friendships, sexual functioning, quality of life, health, and financial management. Each item is rated on a 5-point scale ranging from 0 (*extreme distress or dissatisfaction*) to 4 (*optimal functioning or satisfaction*). A score of 3 or more suggests healthy functioning. A global functioning score was obtained by averaging across items. One item, which probed relationships with patient's children, was relevant only to a subsample of patients and so was excluded from analyses. The POAMS-TV's reliability in previous samples of IDF Veterans ranged from $\alpha = .84$ to .90 (e.g., Svetlicky, Solomon, Benbenishty, Levi, & Lubin, 2010). In the current sample, Cronbach's alphas measured at the pretreatment, posttreatment, and follow-up were .82, .92, and .91, respectively.

Dispositional Hope Scale (Snyder et al., 1991). This scale comprises 12 items measuring two constructs–Agency (determination to accomplish goals) and Pathways (planning strategies to accomplish goals)—and responses ranged from 1 (*definitely false*) to 4 (*definitely true*). The study used the total score, namely, the combined agency and pathways subscores. Total scores can range from 8 to 32, with higher scores reflecting greater hope. Previous studies suggest acceptable Cronbach's alpha internal consistency scores (.80.; see Pacico, Bastianello, Zanon, & Hutz, 2013). Cronbach's alphas measured at pretreatment, posttreatment, and follow-up were .90, .87, and .83, respectively.

Intake and Treatment Procedures

Veterans with a diagnosis of PTSD were assigned to PGT using a semistructured psychiatric interview (including the CAPS and MADRS questionnaires) and the self-report questionnaires (POAMS and Hope Scale). At the UTC-PTSD, a PGT group is opened twice a year. If a PGT group was about to open at the time patients applied for therapy, then they were offered PGT. If not, then they were offered other types of treatments available at the UTC-PTSD (see Consort Figure 1). Psychiatrists, clinical psychologists, and social workers with at least 12 years of experience in PTSD diagnosis and treatment conducted diagnostic interviews. All therapists completed the mandatory IDF service and were familiar with the language, manners, behavioral norms, belief system, dress code, and rituals of Israeli military culture (Moore & Penk, 2011). Group leaders were 10 therapists specializing in PGT (nine with a master's degree and one doctoral degree).

In this connection, it is important to emphasize that although many evidence-based treatments list cognitive-behavior therapy (CBT) as the empirically supported treatment for PTSD, many of the therapists working in real-word settings have been primarily trained in psychodynamic therapy (PDT). Thus, it is only natural for these therapists to choose to deliver the type of treatment that is more familiar to them. All therapists attended weekly supervision sessions with a senior therapist to discuss their groups and patients in relation to the relevant PGT protocol stages (described below). Supervision sessions included follow-up and monitoring of treatment progression.

After the diagnostic stage, we told each participant about the study's aims (which were to monitor the efficacy of treatments offered by the UTC-PTSD) and asked them if they wished to participate. At this stage, all those who were asked ($N = 158$) agreed to participate and provided written informed consent. Patients who later decided to decline the offered PGT were excluded from analyses and were offered one of the alternative treatments available at the unit (CBT), individual PDT, or pharmacotherapy.

The group therapy approach that the UTC-PTSD uses is a well-defined PGT approach that combines support, a developmental approach to personality, examination of internal representations of interpersonal relationships, emphasis on interpersonal aspects of combat trauma, resolution of interpersonal problems, normalization of stress reactions, examination of psychological causation and the effect of unconscious individual and group processes on the participant, and interpretive techniques (Kudler, 2011; Lorentzen et al., 2013; Melinda et al., 2014). PGT encourages self-reflection and intrapsychic and interpersonal insight. Therapist interventions included clarification and mirroring, confrontation, and interpretation. Transference, countertransference, and resistance were also processed in the group (Herman, 1992). The theoretical framework of the provided PGT followed the suggestions of Kanas, Schoenfeld, Marmar, and Koller (1994).

The first stage of our model is the pregroup stage and the preparatory group session. The clinical literature on PGT describes different ways of dealing with this stage (Rutan & Stone, 2001; Yalom & Leszcz, 2005). The goals of the pregroup stage were to establish the group's composition through individual meetings between patients and therapists, thus, advancing therapeutic alliance, commitment to therapy, and coordinating client expectations from therapy. Having established the group's composition, we invited participants for a preparatory group session, scheduled 2 weeks before the group's official start date. This session provided a chance for participants to experience being part of a group with a therapeutic goal in mind and to consider whether group therapy in fact suits them. Participants had a chance to introduce themselves and meet other members of the group. The preparatory meeting also allowed therapists to share information about the therapy, this time in a group forum.

We explained the difference between the preparatory group session and the regular group therapy sessions. First, we stressed that the preparatory group session was structured, while therapy sessions were basically open to unstructured interaction. Next, we explained that the preparatory group session starts when most invitees are present and not necessarily at the set time, and that the meeting duration is flexible and ends when all questions have been asked and answered. The therapeutic sessions on the other hand are to start and end exactly on time. This symbolically establishes a transition from the pregroup stage to the actual group therapy.

Group therapy began a week after the preparatory group session and comprised the following stages: (a) group building activities, which were designed to establish a sense of togetherness and group cohesion; (b) differentiation of group members, which focused on the personal, unique, and different characteristics of each group member; (c) intimacy, which aimed to establish intimacy and mutuality between group members and encourage intrapsychic and interpersonal insights; (d) termination stage, which facilitated separation from the group.

In the first stage, we established another important element of the therapeutic model, namely, the "exit station." The exit station is an agreed-upon part of the group contract that allows a participant to leave the group and end therapy after eight sessions. Providing an exit station after eight sessions is based on clinical experience and observation that eight sessions is sufficient for participants to judge the demands of group therapy and how it affects them. A patient can decide whether his needs and expectations are being met, and by this time, the group is sufficiently strong to cope adaptively with one of its members leaving. Having a legitimate exit station allows participants with an initial ambivalence toward group therapy to decide whether they wish to continue.

When a participant leaves the group, the group contract requires them to participate in a "separation session" in the next session, thus providing an ending and closure. Closure is important therapeutically because our experience indicates that war Veterans with PTSD commonly show a behavioral–emotional pattern of "nonending" and "nonclosure" in many life situations. Closure for the remaining participants as well as the therapist also reduces abandonment anxieties, which the group can process (Yalom & Leszcz, 2005).

PGT allows patients to confront their traumatic experience and construct a viable narrative for it that stresses the interpersonal aspects of combat trauma (Melinda et al., 2014). This process happens whenever a patient describes their traumatic experience to the group. First, the patient describes what actually happened (e.g., "The first shots were fired at 06:00"), and then explores his thoughts and feelings about the facts with the support of other group members,

who listen, share experiences, and have shared knowledge of Israeli military norms, customs, and atmosphere. This aspect of the therapy is closely aligned with narrative therapy and aims to help patients engage emotionally with their traumatic memory and successfully process the event (Jaycox, Foa, & Morral, 1998) .

In the current study, we report data from 15 PGT groups with 7–13 participants in each, all using the same therapeutic procedure and framework described above. One male and one female therapist led each group. The therapists were well trained in group therapy for PTSD, with excess of at least 3 years of experience. One pair of therapists treated seven groups, another pair treated three groups, two pairs treated two groups each, and one pair treated one group.

Once a group started, no new patients could join it. PTSD and depression symptoms, general functioning, and hope were assessed before treatment started during the diagnostic intake (pretreatment), at the end of the final group session (posttreatment), and at a 12-month follow-up. The dropout rate during treatment was 13.2% (21 patients). A total of 8.2% (13 patients) dropped out at the exit station and 26.6% (42 patients) did not attend the follow-up meeting.

Data Analysis

Outcome data were analyzed using multilevel modeling (MLM) procedures. MLM is a wider applicability psychotherapy research because of its ability to account for multiple levels of data (Kahn & Schneider, 2013). MLM is designed for data comprising dependent observations and thus does not assume independence of errors; it allows for examination of covariates and does not assume that the relationship between dependent variables and covariates is the same across groups. MLM also accounts for missing data without reducing power of the experimental design (Quené & Bergh., 2004; Tasca & Gallop, 2009).

In the current study, we conducted MLM analyses as two-level models (measures within participants) using the SPSS mixed procedure. Time was coded from 0 (pretreatment) to 1 (posttreatment) and 2 (follow-up), allowing the intercept to represent pretreatment. Age at beginning of treatment, age at the time of the event, years of education (continuous), place of birth (immigration), marital status, employment, and military occupation (dummy coded) were entered as covariates. The intercept was specified as random. For both levels of the models, unstructured covariance was used. Predictors were either continuous or dichotomous; outcomes (CAPS, MADRS, POAMS-TV, and Dispositional Hope Scale) were continuous.

In an effort to balance some of the shortcomings of measuring the statistical significance of treatment outcomes, Jacobson and Truax (1991) developed a measurement approach that evaluates therapy-produced, clinically meaningful changes. For a recorded change in symptoms to qualify as clinically significant after treatment ("recovered"), the patient must (a) show reliable change (i.e., a statistically significant improvement) and (b) cross the cutoff point for a clinically significant change. For a patient to demonstrate just a reliable change ("improved"), a minimal pre- to posttreatment change is necessary. Patients who demonstrate points falling below the reliable change were indicated "deteriorated" and all others were classified as "unchanged" (Jacobson & Truax, 1991).

For the CAPS, we determined a cutoff score (lower than 45) based on Blake et al. (1995) and used test-retest reliability (0.82) from Weathers et al. (2001) to determine reliable pre- to posttreatment change for the CAPS. To be considered recovered, a participant's posttreatment CAPS score had to be lower than 45 and had to decrease from pre- to posttreatment by at least 15.2 points. To be considered improved, a participant's CAPS score had to decrease from pre- to posttreatment by at least 15.2 points.

For the MADRS, we determined a cutoff score (lower than 7) based on Montgomery and Asberg (1979) and used test-retest reliability (0.94) from Mohammad et al. (2016). To be considered recovered, a participant's posttreatment MADRS score had to be lower than 7 and had to decrease from pre- to posttreatment by at least 8.2 points. To be considered improved, a participant's MADRS score had to decrease from pre- to posttreatment by at least 7.2 points.

For the POAMS-TV, we determined a cutoff score (higher than 30) based on Green et al. (2003) and used test-retest reliability (0.68) from Lating 3, Sherman, and Peragine (2006). To be considered recovered, a participant's posttreatment POAMS-TV score had to be higher than

30 and had to increase from pre- to posttreatment by at least 11.2 points. To be considered improved, a participant's POAMS-TV score had to increase from pre- to posttreatment by at least 11.2 points.

For the Dispositional Hope Scale, we determined a cutoff score (higher than 17) based on Snyder et al. (1991) and used test-retest reliability (0.80) from Chan, Megan, and Ricky (2013). To be considered recovered, a participant's posttreatment Dispositional Hope Scale score had to be higher than 30 and had to increase from pre- to posttreatment by at least 7.2 points. To be considered improved, a participant's Dispositional Hope Scale score had to increase from pre- to posttreatment by at least 7.2 points.

Results

Consort Figure 1 shows the flow of patients through the treatment procedures of the study. A total of 158 patients (8.5% of all patients in UTC-PTSD during the data collection period) agreed to participate and to being treated with PGT. Of these, 135 (85.4%) completed the posttreatment assessment, and 116 (73.4%) completed the 12-month follow-up assessment. Comparing treatment completers and noncompleters on all background variables revealed that those who dropped out before treatment ended were younger (mean age [*Mage*] = 27.1 years; *SD* = 5.66) than those who completed treatment (*Mage* = 41.1 years; *SD* = 15.2), $t(155) = -432$, $p = .000$. In contrast, participants who did not provide follow-up data (*Mage* = 51.0; *SD* = 12.2) were older than those who did (*Mage* = 39.5 years; *SD* = 15.1), $t(132) = 3.15$, $p = .002$. There were no differences between the completers and noncompleters on any of the other sociodemographic variables (all $ps > 0.10$).

Treatment Outcomes

Table 1 presents the means and standard deviations for PTSD, depression, global functioning, and hope at pretreatment, posttreatment, and follow-up.

Analyses were conducted to confirm that each of the dependent variables (CAPS, MADRS, POAMS-TV, Dispositional Hope Scale) significantly changed over time. The outcome measures evidenced significant reductions in PTSD symptoms (CAPS) and depression symptoms (MADRS) pre- to posttreatment, and significant increases in general functioning

Table 1
Means and Standard Deviations of PTSD Symptoms (CAPS,), Depression (MADRS), Functioning (POAMS), and Hope at Pretreatment, Posttreatment, and Follow-up Meeting

	Mean	*SD*	*N*	*a*	*# of items & Range*
CAPS1	79.41	22.90	158	.938	17
CAPS2	68.51	25.70	135	.960	0–136
CAPS3	63.11	20.01	116	.934	
MADRS1	26.49	12.12	158	.925	10
MADRS2	23.77	10.76	135	.920	0–60
MADRS3	23.56	10.72	116	.943	
Function1	19.95	7.17	158	.816	10
Function2	23.80	8.42	135	.916	0–40
Function3	23.12	8.50	116	.909	
Hope1	19.00	5.99	156	.899	8
Hope2	20.76	5.35	135	.866	1–32
Hope3	22.26	4.36	116	.834	

Note. PTSD = posttraumatic stress disorder; CAPS = Clinician-Administered PTSD Scale; MADRS = Montgomery and Asberg Depression Rating Scale; POAMS-TV = Psychotherapy Outcome Assessment and Monitoring System–Trauma Version.

Table 2
Participants Who Reported Clinically Reliable Change–Improvement and Deterioration–for Each Outcome Measure in the Pretreatment–Posttreatment Tests (n=135), and Pretreatment–Follow-up Tests (n=116)

	Improved	Recovered	Deteriorated	Unchanged
CAPS Pre-posttreatment	64	30	8	33
	(47.4%)	(22.3%)	(5.9%)	(24.4%)
Pre-Follow-up	65	28	12	11
	(56.0%)	(24.1. %)	(10.3%)	(9.5%)
MADRS Pre-posttreatment	72	21	8	34
	(53.4%)	(15.5%)	(5.9%)	(25.2%)
Pre-Follow-up	42	25	12	56
	(31.1%)	(18.6%)	(8.8%)	(41.5%)
POAMS-TV Pre-posttreatment	45	23	9	58
	(33.3%)	(17.0%)	(6.7%)	(43.0%)
Pre-Follow-up	41	12	9	54
	(35.4%)	(10.3%)	(7.7%)	(46.6%)
Dispositional Hope Scale	38	38	7	52
Pre-posttreatment	(28.1%)	(28.1%)	(5.2%)	(38.6)
Pre-Follow-up	42	42	9	23
	(36.2%)	(36.2%)	(7.7%)	(19.9%)

Note. CAPS = Clinician-Administered PTSD Scale; MADRS = Montgomery and Asberg Depression Rating Scale; POAMS-TV = Psychotherapy Outcome Assessment and Monitoring System–Trauma Version.

(POAMS-TV) and Hope (Dispositional Hope Scale): *B*s = −11.00 (standard error [*SE*] = 2.33), −2.40 (SE = 1.16), 3.68 (*SE* = .75), and 1.73 (*SE* = .63), respectively, *p*s = .0001. A similar pattern of significant change was observed for pretreatment to 12-month follow-up results: *B*s = −16.56 (*SE* = 2.45), −1.97 (*SE* = 1.22), 2.73 (*SE* = .79), 3.08 (*SE* = .66), *ps* = .0001.

We also conducted analyses to determine if any of the following variables were associated with the trajectory of change on the CAPS, MADRS, POAMS-TV, and Dispositional Hope Scale: age at beginning of treatment, age at the time of the event, years of education, immigration, marital status, employment, and military occupation. These variables were examined as control variables. The CAPS trajectory was significantly predicted by immigration ($B = 8.42$, $p = .034$), and MADRS was significantly predicted by employment status ($B = -3.42$, $p = .019$). No other significant effects were found.

Finally, Table 2 presents the differences between improved (clinically significant change), recovered, deteriorated, and unchanged. Most of the participants were recovered or improved in each of the dependent variables CAPS, MADRS, POAMS-TV, and Dispositional Hope Scale pre- to posttreatment and pretreatment to 12-month follow-up. The minority of the participants were deteriorated.

Discussion

The current open trial examined the effectiveness of a 1-year PGT model for Veterans with PTSD. Analyses seem to reflect a significant reduction in PTSD and depressive symptoms and increases in general functioning and hope among treatment completers. These effects were maintained at 12-month follow-up. Moreover, most of the participants met the criteria of clinically recovered or improved after treatment and the minority were deteriorated. The results also indicate that PGT helped participants to retain hope.

Regarding the finding of retained group therapy benefits after one year, we assume that the group was creating a feeling of relief from the sense of social isolation, which is a characteristic of these Veterans with PTSD. These elements are important and significant in facilitating adaptive coping with the outcomes of exposure to the traumatizing event in a way that their life functioning

was improved. This supports the importance of PGT for treating combat related Veterans with PTSD (Kingsley, 2007; Mendelsohn et al., 2011).

Given the complexity of combat-related PTSD, the stubbornness of the symptoms, and the fact that patients have very different attitudes to treatment, it is useful to provide an array of therapeutic options including PGT to ensure optimal care (Kudler, 2011; Schottenbauer et al., 2008). The current results suggest that PGT could be one tool in this arsenal for treatment of PTSD in combat Veterans.

The therapists' belief that their approach can improve patients' mental and physical functioning may have affected the results (therapist effect). We know that allegiance to a particular approach can positively influence therapist expectations and hence patient expectations. Positive expectations are believed to contribute to successful psychotherapy (Frank, 1968). These factors, namely, therapist effect and therapist allegiance, may be part of the answer to the question, "What works in the treatment of PTSD?" (Wampold et al., 2010). Because therapist effect and therapist allegiance are not measured or addressed in this study, we recommend studying this in the future.

We also note the relatively low dropout rate of participants in this study, compared to other group therapy studies showing higher dropout rates (Goetter et al., 2015; Imel, Laska, Jakupcak, & Simpson, 2013). Most of the participants who dropped out in this study all left at the exit station. We suggest that the low dropout rate in the current study (14.6% of the participants failed to complete treatment, and 26.6% dropped out between posttreatment and follow-up) was because of, on the one hand, our planned and systematic promotion of cohesion, intimacy, confidence, and trust and a high level of commitment in the groups, and, on the other hand, the closed group framework. Though PGT therapies are effective and have some empirical support (Lorentzen et al., 2013), they also lack the elements just listed, which may explain the high dropout rates (26.5%) in previous studies (Sloan et al., 2013).

Limitations

Several limitations are noted, most of which are regularly found in studies of routine treatments in real-life settings (Shadish, Navarro, Matt, & Phillips, 2000). First, the current study lacked a control group. Nevertheless, given the fact that our participants did not engage in any parallel therapy during the 1-year PGT period, it is reasonable to infer beneficial therapeutic effects of our treatment model.

Second, there was possible selection bias to participate in a group therapy. Participants in this study were referred after an intake procedure and staff discussions. Because the staff selected only patients they felt would benefit from PGT, the study design limits our ability to attribute treatment gains to the treatment protocols per se. The UTC-PTSD is instructed to provide immediate care access for Veterans, which precludes direct control over basic factors such as the simple passage of time. Relatedly, lack of random assignment to treatment type also limits inference concerning the observed uniformity in therapeutic gains among patients. Third, although therapists received ongoing weekly supervision, specific treatment manuals were not used and therapy sessions were not directly monitored. Thus, we could not rigorously assess adherence to treatment protocol. For a discussion of this issue, see Foa and Meadows (1997).

Fourth, although it is common to find incomplete data in routine practice settings (Greasley & Small, 2005), incomplete data nevertheless limit inference ability. Patients who complete treatment and are administered posttreatment measures are more likely to have agreed with their therapists on ending the treatment than patients who did not complete treatment (Barkham et al., 2006), and more likely to have improved during treatment (Stiles, Barkham, Clark, & Connell, 2008). While this may constrain research and analyses (for discussion of this issue, see Imel et al., 2013), it reflects an even more serious problem for treatment retirement among Veterans with PTSD in the "real world." The concern of missing data is alleviated to some extent by the use of MLM, which takes into account missing data under the missing at random assumption.

Conclusion

We believe that PGT comprises the elements considered necessary for effectively treating Veterans with PTSD. However, more work needs to be done based on solid protocols in evaluating this treatment approach. This way, PGT could be recognized as a first-line treatment.

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