Published in final edited form as:

Cogn Behav Pract. 2014 February 1; 21(1): 78–88. doi:10.1016/j.cbpra.2013.08.001.

Trauma Informed Guilt Reduction Therapy With Combat Veterans

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Abstract

Guilt related to combat trauma is highly prevalent among veterans returning from Iraq and Afghanistan. Trauma-related guilt has been associated with increased risk for posttraumatic psychopathology and poorer response to treatment. Trauma Informed Guilt Reduction (TrIGR) therapy is a 4-module cognitive-behavioral psychotherapy designed to reduce guilt related to combat trauma. The goals of this study were to describe the key elements of TrIGR and report results of a pilot study with 10 recently deployed combat veterans.

Ten combat veterans referred from a VA Posttraumatic Stress Disorder (PTSD) or mental health clinic completed TrIGR over 4 to 7 sessions. Nine veterans completed the posttreatment assessment.

This initial pilot suggests that TrIGR may help to reduce trauma-related guilt severity and associated distress. Changes in trauma-related guilt were highly correlated with reductions in PTSD and depression symptoms over the course of treatment, suggesting a possible mechanistic link with severity of posttraumatic psychopathology.

TrIGR warrants further evaluation as an intervention for reducing guilt related to traumatic experiences in combat.

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There are no real or potential conflicts of interest.

Conflict of Interest Statement

This was funded by a School of Medicine Academic Senate Award to two of the authors. One author was supported by the Center of Excellence for Stress and Mental Health, another by an NIAAA T32 fellowship, and another by an NIAAA F31 fellowship.

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Keywords

guilt; PTSD; depression; veteran; psychotherapy

Combat veterans often report perpetrating, failing to prevent, or witnessing acts during combat that violate the values they live by in their civilian lives (Litz et al., 2009; Maguen et al., 2010; Nash, 2007; Stein et al., 2012). Trauma survivors who negatively appraise their action or inaction during combat may experience guilt, a distressing emotion arising from complex cognitive appraisals, including negative self-evaluation of one's behavior in comparison to valued standards (Kubany & Watson, 2003; Lewis, 1971; Litz et al.; Tangney & Dearing, 2002; Watson, Juba, Manifold, Kucala, & Anderson, 1991). Guilt related to traumatic events has been shown to partially mediate the relationship between combat exposure and symptoms of both posttraumatic stress disorder (PTSD) and depression in veterans (Browne, Evangeli, & Greenberg, 2012; Marx et al., 2010; Watson et al., 1991) and has been implicated as a risk factor for the development of multiple forms of posttraumatic psychopathology, including PTSD, depression, and substance use disorders (Andrews, Brewin, Rose, & Kirk, 2000; Kim, Thibodeau, & Jorgensen, 2011; Leskela, Dieperink, & Thuras, 2002; Marlatt & Gordon, 1985; Meehan, O'Connor, Berry, Weiss, & Acampora, 1996). Traumatic guilt has also been shown to have a strong correlation with reexperiencing symptoms of PTSD (Stein et al.) and may contribute to suicidal ideation (Hendin & Haas, 1991; Hyer, McCranie, Woods, & Boudewyns, 1990; Kubany et al., 1996).

Trauma-related guilt can persist without appropriate treatment (Kubany & Manke, 1995). Kubany and colleagues (1995) found Vietnam veterans continued to experience high levels of posttraumatic guilt and associated distress nearly four decades after combat exposure. In a later study, Kubany and colleagues (2003) found guilt was significantly reduced in female interpersonal violence survivors who received cognitive therapy for battered women, a treatment that targets guilt cognitions in addition to PTSD, whereas guilt scores did not change significantly in a comparison condition that did not receive treatment.

Because posttraumatic guilt has been identified as having a role in the development and maintenance of several forms of posttraumatic psychopathology, it may be an ideal target for intervention. Among combat veterans, having comorbid problems appears to be the norm, not the exception (Goldsmith, Wilkins, & Norman, 2012). For example, of all new Operation Enduring Freedom/Operation Iraqi Freedom (OEF/OIF) veterans enrolled in a VA hospital from October 2001 to January 2008 diagnosed with mental health disorder, 29% were diagnosed with two disorders, and 33% were diagnosed with three or more disorders (Seal et al., 2009). These findings suggest the need for consideration of how to most effectively and efficiently address comorbidity and the complex array of problems with which veterans present to treatment. One possible pathway is to develop interventions that target a mechanism thought to underlie multiple highly prevalent disorders, such as guilt. However, as of yet, there are no empirically supported treatments that take a transdiagnostic approach to targeting guilt among combat veterans. To date, treatments for posttraumatic psychological health issues have been disorder specific (Lang et al., 2012).

Evidence-based treatments for PTSD such as Prolonged Exposure Therapy (PE) and Cognitive Processing Therapy (CPT) can help individuals successfully process traumatic guilt (Smith, Duax, & Rauch, 2013), but not all who have posttraumatic distress have PTSD. Clinicians who treat combat veterans report that the diagnosis of PTSD does not fully account for the presentations of trauma-related guilt and other forms of posttraumatic distress that they frequently see in their patients (Becker, Zayfert, & Anderson, 2004; Drescher et al., 2011). These clinicians further report that they would like additional guidance on how to help their patients resolve complex issues such as trauma-related guilt (Nash, 2007). Indeed, research suggests that trauma-related guilt appears to be less amenable to change by exposure-based treatments such as PE (Foa & Meadows, 1998; Nishith, Nixon, & Resick, 2005; Owens, Chard, & Cox, 2008; Pitman, Altman, Greenwald, & Longpre, 1991; Resick & Schnicke, 1992) and has been found to impede the processing of fear and other emotions related to traumatic events (Arntz, Tiesema, & Kindt, 2007; Brewin, Dalgleish, & Joseph, 1996; Foa & Meadows, 1997; Joseph, Williams, & Yule, 1997; Monson et al., 2006; Riggs, Dancu, Gershuny, Greenberg, & Foa, 1992). It has been suggested that cognitive-focused treatments, such as CPT, may be more effective in reducing posttraumatic guilt (Resick, Nishith, Weaver, Astin, & Feuer, 2002). While one investigation suggests that CPT may reduce some but not all types of trauma-related guilt cognitions in female rape victims (Resick et al., 2002), a later study failed to find significant pre-to-post differences in posttraumatic guilt in Vietnam veterans receiving CPT (Owens et al., 2008). After evaluating the effects of CPT and PE on trauma-related guilt, Resick and colleagues (2002) suggested that certain types of guilt cognitions might require more formal cognitive intervention. It has also been suggested that for those with posttraumatic guilt, increased therapeutic focus on cognitive techniques to reduce cognitions related to guilt may lead to reduced avoidance and may help to reduce PTSD symptom severity (Owens, Walter, Chard, & Davis, 2012; Stein et al., 2012). In summary, evidence-based treatments for PTSD have been shown to reduce guilt; however, the extent to which they reduce guilt has not yet been sufficiently examined in randomized controlled trials and, based on available research, additional treatment options are warranted.

Moreover, approximately 20% to 36% of individuals who begin best practice treatments, including CPT and PE, dropout before receiving what is considered to be a therapeutic dose (Bradley, Greene, Russ, Dutra, & Westen, 2005; Imel, Laska, Jakupcak, & Simpson, 2013). Among those with PTSD who complete these interventions, close to one half of individuals continue to meet diagnostic criteria for PTSD (Resick et al., 2002; Schnurr et al., 2007). In addition, data indicate that patients have better compliance to psychotherapy when they receive a preferred treatment approach (Kwan, Dimidjian, & Rizvi, 2010). Taken together, these findings support the need for evaluation of additional treatment options that target a mechanism that is highly distressing, challenging to treat, and associated with the development and maintenance of multiple disorders (Goldsmith et al., 2012; Lang et al., 2012).

Based on the above rationale, we developed Trauma Informed Guilt Reduction (TriGR; Allard, Wilkins, & Norman, 2010; Norman, Wilkins, & Allard, 2010) a brief (4-module) manualized intervention designed to reduce trauma-related guilt and distress in combat veterans. The intervention is based on a model that proposes that guilt has the potential to

serve a pro-social function in that it may encourage someone to apologize, take reparative action, or make a commitment to change behavior (Tangney, Stuewig, & Mashek, 2007). For example, a sense of guilt due to offending someone may lead to a commitment to behave differently in similar situations in the future. However, individuals who experience PTSD and other forms of posttraumatic distress (e.g., substance use, depression) often avoid trauma memories and associated negative thoughts and feelings (Foa, Steketee, & Rothbaum, 1989; Held, Owens, Schumm, Chard, & Hansel, 2011), therefore stunting the potential for evaluating and processing feelings of guilt adaptively (Henning & Frueh, 1998; Joseph et al., 1997; Kubany & Ralston, 1998; Lee, Scragg, & Turner, 2001). Unexamined guilt over a specific event can turn to more global shame attributions, such that conclusions about guilt related to a single event generalizes to the entire self and becomes the focus of the emotional experience (e.g., “I am evil,” “I am a monster,” “I deserve to suffer,” Kubany & Watson, 2003). Global attributions of shame are also associated with high risk of psychopathology (Kim et al., 2011; Robinaugh & McNally, 2010; Tangney & Dearing, 2002). The avoidance involved in posttraumatic stress reactions also interferes with individuals living according to their values, which further contributes to posttraumatic distress (Kubany & Watson, 2003).

The goals of this study are to describe the key elements of TrIGR and present pilot data from a sample of 10 recently deployed combat veterans who served in OEF/OIF. Following the stage model of behavioral therapy research (Rounsaville et al., 2001), we conducted a pilot study to assess feasibility, tolerability, and potential efficacy of the TrIGR protocol. In the pilot study, we hypothesized that veterans with trauma-related guilt would engage in TrIGR, report high satisfaction and acceptability of the intervention, and show reductions in trauma-related guilt cognitions and guilt severity, PTSD symptoms, and depression symptoms following completion of TrIGR.

Intervention

TrIGR was developed as a therapeutic tool to help veterans accurately appraise their combat trauma-related guilt and reidentify and reengage in their values to aid in their recovery from posttraumatic distress. TrIGR is based on the work of Kubany and colleagues (Kubany et al., 1995; Kubany, 2000; Kubany & Watson, 2003), who identified four types of cognitive errors present in individuals who experience trauma-related guilt. These cognition errors are hindsight-bias (i.e., believing that the outcome was known at the time of the trauma), lack of justification (i.e., believing there was no justification for the course of action one chose to take), responsibility (i.e., believing one was solely or mostly responsible for the traumatic event), and wrongdoing (i.e., believing one purposely did something that was wrong or violated important values). Kubany and colleagues posit that correction of such beliefs should lead to reductions in posttraumatic guilt and related distress (Kubany et al., 2004; Kubany & Ralston, 1998).

Additionally, posttraumatic guilt is often related to a violation of a personal value (e.g., “I feel guilty because I did something I believe is wrong”; Kubany & Ralston, 1998) and in our work we found that veterans were often wary to let go of guilt and associated distress because the guilt was a way to live in line with values (“If I didn’t feel guilty about what I

did, what would stop me from doing it again and hurting more people?”). Kubany and colleagues also posited that taking steps to live in line with values can help individuals to reduce guilt-related distress by increasing positive views of oneself (Kubany et al., 2004; Kubany & Ralston). Based on this, the conceptualization for TrIGR also includes focus on identifying personal values and setting a plan to live in line with values in a meaningful, positive way going forward (Orsillo & Batten, 2005).

TrIGR consists of four modules: (1) psychoeducation regarding the role of guilt in posttraumatic distress and common types of combat related guilt; (2) appraisal of hindsight-bias, responsibility, justification, and wrongdoing, and helping the patient recall the fuller, more accurate context of what occurred; (3) helping individuals identify important values, both ones that may have been violated during the trauma and ones important to the individual now; and (4) collaboratively developing a plan that will allow the patient to live in-line with important values going forward. The therapy can be administered during four to seven 90-minute sessions.

Module 1 is split into Sessions 1a and 1b. Session 1a is an optional module recommended for participants who have not previously completed trauma-specific treatment or who could benefit from a review of common reactions to trauma. The focus of this session is on psycho-education regarding common posttraumatic reactions such as symptoms of PTSD and depression. The “fight, flight, or freeze” reaction to traumatic events is reviewed as we have found that veterans frequently blame themselves for responding during trauma in a way that may have been physiologically beyond their control (e.g., “I failed my unit because I froze”).

The focus of Session 1b is to provide psychoeducation regarding traumatic guilt. We review our model of trauma-related guilt highlighting that guilt can be adaptive, but when unexamined, distressing feelings of guilt can be taken as evidence of wrongdoing (“I feel bad, so I must have done something wrong”), which can create and perpetuate a cycle of feeling increasingly worse and more certain of wrongdoing as time goes by. We then review information that shows that guilt is common following trauma and review common sources of combat-related traumatic guilt (Kubany, 1994; Opp & Samson, 1989). Examples of the common sources of guilt we review include taking part in or witnessing atrocities, failing to perform a duty, believing that one should have been able to do something that would have led to a better outcome, and enjoying or feeling nothing when killing. Review of these common sources includes a discussion with patients about which types of guilt they experience and psychoeducation about why people may have reacted in these ways. For example, if someone feels guilty because they felt pleasure during the moment of killing someone, the therapist describes how physiologically it is common to feel a rush of positive feeling when a threat is removed from the environment. Homework following each session of module 1 includes rereading the modules in the workbook, completing a worksheet to identify guilt cognitions (modified from Kubany et al., 2004) and listening to a recording of the session at least one time.

Module 2 uses cognitive restructuring techniques to help patients evaluate the four types of cognitive errors contributing to trauma-related guilt as recommended by Kubany and

colleagues (Kubany, 2000; Kubany & Manke, 1995; Kubany & Ralston, 1998). To identify cognitions that are associated with guilt (e.g., “I should have...” or “I shouldn’t have...”), the therapist conducts a fairly detailed review of the traumatic event with the patient at the beginning of the session. This detailed review is needed because what may initially appear to be the source of guilt (e.g., “I killed someone”) may in fact turn out to be a far more nuanced cognition upon further exploration (e.g., “I was justified in killing the insurgent, but I shouldn’t have enjoyed it”). Each of the four cognitive errors is reviewed; however, the amount of time dedicated to each error is tailored to the patient’s needs and experiences. Examples are used to illustrate each concept and then the concept is discussed in relation to the patient’s traumatic event. For example, a source of guilt may be shooting someone who looked as if he or she may be a threat but later turned out to be unarmed. In the hindsight bias analysis, the patient may express beliefs that “I knew he wasn’t a threat, but I shot anyway.” The therapist leads the patient through several exercises to normalize how common it is to come to believe after the fact that someone had information that they did not actually have until later. Therapists then explore with patients what they actually knew at the time versus what they came to believe they knew after the fact given the negative outcome. Patients are thus given the opportunity to come to a different conclusion (e.g., “I wish I had known they were unarmed, but I didn’t know one way or the other”).

In the justification analysis, the therapist and patient explore what choices were truly available at the time of the trauma as people frequently believe after the fact that there must have been a way for there to have been a better outcome. Patients write down all of the choices available to them during the event (e.g., shooting the person who is suspected to be strapped with a bomb who is ignoring orders to not come any closer, not shooting) and the potential pros and cons of each option that was available to them at that time. This is often helpful when someone has been focusing on the perceived positive outcome of an alternative choice without consideration of the possible negative consequences of that choice, or similarly, focused on the negative outcome of the choice that was made without consideration of the positive aspects of that choice (e.g., “Had I not shot, I would have put my entire unit at risk”). This examination generally leads to the realization that there were no “good” options, all options would have led to some undesirable outcome that could also contribute to regret, that an idealized option they may think of now did not exist at the time (because they were not trained, it did not occur to them without the luxury of time, etc.), or that the option taken by the patient was either the best of the available options in some way or no worse than the other available options.

In the responsibility analysis, patients initially rate the percent they believe they are responsible for what happened on a scale from 0% to 100%. The therapist then leads the patient through an exercise to demonstrate that there are multiple factors responsible for all outcomes. For example, the clinician may hit the speaker button on the office phone and ask why there is a loud beeping sound, to which the patient generally responds, “Because you turned your phone speaker on.” The therapist agrees and then points out that a properly electrically wired building, working phone lines, and the invention of electricity and telephones also contributed to the sound. The patient and therapist then brainstorm together to identify all of the other factors that contributed to the patient’s traumatic event (e.g., orders under which they were operating, rules of engagement, being under constant threat,

how much sleep the patient had had in the days leading up to the event, other relevant circumstances such as that 2 days prior, others in the unit had been killed by a suicide bomber, etc.) and the percent to which the patient feels each was responsible for what happened. Patients are then able to view their self-assigned level of responsibility (e.g., 90%) relative to the total of these other factors (e.g., which, in most cases, add up to much higher than 100%). Therapists are instructed never to try to talk patients out of a sense of responsibility (e.g., to say things like “You were just doing your job” or “It wasn’t your fault”) as combat veterans often find these kinds of statements alienating and inauthentic. Rather, therapists help their patients take the full context in which the traumatic event occurred into account.

Finally, in the wrongdoing analysis, the difference between intentionally setting out to do harm and an unfolding bad outcome are discussed. An illustrative example might be breaking a glass by knocking it off a table by accident versus throwing a glass against a wall with the intent to break it. This discussion is generally straightforward for many combat traumas where veterans can acknowledge that they did not intend to cause harm (e.g., switching patrols with someone who ended up getting killed, being the survivor of an explosion when others were killed). However, this discussion may be more complicated with a veteran whose guilt is due to having hurt or killed others outside of the rules of engagement; for example, someone who went back to a village some time after a battle and killed additional people. In such cases, helping the veteran consider the context of war, emotions that were at play such as anger and grief, the extent of the veteran’s guilt/remorse now and how much he or she has suffered since the event, or if the person ever intends to do anything similar in the future can help give some context to the concept of wrongdoing. To reiterate, the goal is not to try to lead someone to believe that the trauma “was not his fault” but rather to help people put the traumatic event and their actions/choices into context to help them to move toward a more positive life marked by less suffering and impairment.

Module 2 can be repeated for veterans who have more than one source of trauma-related guilt. Module 2 ends with a discussion of the purpose that guilt has served in the patient’s life and what it might mean to feel less guilt. This discussion often reveals beliefs about the function of the guilt and reasons the individual may be hesitant to feel less guilty. For example, veterans have reported to us that guilt helps them keep from perpetrating further harmful acts (e.g., “If I didn’t feel guilty, I would really be a monster), that guilt is a way to honor the people they lost in the trauma, or that they do not deserve to feel happy either because of what they did or because they did not deserve to live any more than the person(s) who died. Identification of the function of guilt is important to help the patient identify alternative ways to express and live according to the values that underlie this function. Homework following each session of Module 2 includes rereading the module in the workbook, completing a worksheet to identify and challenge guilt cognitions (modified from Kubany et al., 2004), to listen to a recording of the session at least one time and, leading into Module 3, to complete an activity log to track the activities in which the patient is spending time.

Discussing the function of the guilt at the end of Module 2 allows the therapist and patient to transition to Modules 3 and 4 where the focus is on identifying the patient’s values and ways

to live a value-driven life. The patient and therapist work collaboratively to identify values in domains that are important to the patient (e.g., family, work, spirituality), to set long- and short-term goals consistent with these values, and troubleshoot how to overcome potential obstacles. During these modules, if a patient expresses a strong desire to take reparative action for their role in the trauma (for example, doing something for family members of a deceased unit member), the therapist helps the patient make a realistic plan to do so in a way that minimizes the likelihood of possibly distressing others and helps set realistic expectations for the outcome (i.e., the patient cannot control the outcome of the event even with the best intentioned plan). Homework following Module 3 includes completing the values worksheet (used to identify important values in multiple life domains) that was initiated in session, to reread the module in the workbook, to continue to identify and challenge guilt cognitions, and to listen to the session recording at least one time. Following Module 4, patients are asked to continue to track progress toward their value driven goals and to continue to identify and challenge guilt cognitions.

Method

Participants

Ten post-9/11 combat veterans completed treatment, 9 of whom completed a posttreatment assessment (out of 22 who were referred and screened eligible, and 14 who were enrolled). Demographic and deployment characteristics of participants and dropouts are presented in Table 1. Inclusion criteria were having guilt and distress related to a combat-related trauma that occurred while serving in OEF/OIF. Exclusion criteria were having acute safety concerns (i.e., suicidality, homicidality, substance use requiring acute treatment), and/or a primary bipolar or psychotic disorder.

Procedure

Data were collected between May 2010 and May 2011. Veterans who indicated (verbally or on a screening measure) that they were struggling with guilt related to a combat trauma during a mental health intake or other meeting with a mental health provider at a VA hospital were offered participation in the TrIGR pilot study. Interested veterans completed consent procedures and baseline assessments with the study assessor after which they met with a therapist weekly to complete the four TrIGR modules over 4 to 7 sessions, with Module 2 repeated up to three times depending on the number of different events/sources of trauma-related guilt participants endorsed. Participants did not take part in any other form of psychotherapy during TrIGR; however, no restrictions were placed on pharmacotherapy. Therapists for this pilot were the three developers of TrIGR. The therapists met weekly for group consultation. To ensure treatment fidelity, therapists listened to audio recordings of each others' sessions while following along with the manual. Consistent with stage 1 behavioral therapy research, formal rating sheets were still under development. Participants met with the assessor again following completion of TrIGR to complete the follow-up assessment battery. Participants received \$25 each for the pre- and posttreatment assessments.

Measures

Participants completed the following psychometrically validated measures pre- and post-intervention: the Clinician Administered PTSD Scale (CAPS; Blake et al., 1995), the Physician Health Questionnaire – 9 (PHQ-9; Kroenke & Spitzer, 2002), and the Client Satisfaction Questionnaire (CSQ-8; Attkisson & Zwick, 1982). PTSD diagnoses were made using the CAPS. Symptoms were considered present if a frequency rating of one or more and intensity rating of two or more were given (Weathers, Ruscio, & Keane, 1999). Total (symptom severity) scores were also calculated for the CAPS and PHQ-9. Trauma-related guilt was measured via a 32-item validated self-report measure: the Trauma-Related Guilt Inventory (TRGI; Kubany et al., 1996). The TRGI has three scales (4-item global guilt; 6-item distress; 22-item guilt cognitions), and three subscales within the guilt cognitions scale (7-item hindsight-bias/responsibility, 5-item wrongdoing, and 4-item lack of justification). Given the short time frame of the intervention (4 to 7 weeks), participants were queried about symptoms (CAPS, PHQ-9) and guilt during the past week.

Analyses

Mean differences pre- to posttreatment in trauma-related guilt and symptom scores were examined with *t*-tests and effect sizes (Cohen's *d*). The Shapiro-Wilk test of normality was conducted, and the data were found to be normally distributed. In addition, pre- to posttreatment changes in symptom scores were examined on an individual basis and were evaluated for clinically noticeable change in PTSD (10-point decrease on the CAPS; defined as representing a meaningful improvement in the life of someone with chronic PTSD; Schnurr et al., 2007; Schnurr, Friedman, Lavori, & Hsieh, 2001; Weathers, Keane, & Davidson, 2001) and a clinically significant decrease in depression (5-point decrease on the PHQ-9; Kroenke & Spitzer, 2002) symptoms. Specifically, a 5-point change on the PHQ-9 has been shown to correspond with a moderate effect size on multiple domains of health-related quality of life and functional status (Kroenke & Spitzer). Change in guilt scores over the course of treatment were correlated with change in PTSD and depression symptom scores.

Results

Feasibility and Satisfaction

We completed a baseline screening with 21 male and 1 female outpatient veterans. Eight participants who qualified for the study chose not to enroll because they decided guilt was not their primary concern, chose another treatment option, preferred not to participate in research, decided not to pursue any psychotherapy, or did not return follow-up calls. We enrolled 13 male and 1 female outpatient veterans. Ten completed treatment and 9 completed their posttreatment assessment. Four participants (all male) dropped from the study, all between Modules 1 and 2. Reported reasons were moving, starting a new job, deciding (in collaboration with study therapist) that anger management was more pertinent, and one unknown (lost contact). Demographic and deployment statistics by completers and dropouts are presented in Table 1.

Participants completing the treatment attended an average of 5.7 sessions ($SD = 1.16$, range = 4 to 7). Modules 1a and 1b were delivered as separate sessions in all but one instance. Seven treatment completers participated in more than one Module 2. Among completers, satisfaction for the intervention measured at posttreatment was high with a mean score of 29.42 out of a possible 32 points (range = 23–32, $SD = 3.5$).

Pilot Study Results

All total and subscale scores of the TRGI, the CAPS, and the PHQ-9 showed reductions during the course of treatment with medium to large effect sizes (over .5) for guilt-related distress and severity, CAPS and PHQ-9 (Table 2). Changes in both CAPS scores and PHQ-9 scores over the course of treatment were significantly correlated with changes in trauma-related guilt severity and distress ($r = .65-.73$, $p < .05$).

Due to our small sample size, changes in CAPS and PHQ-9 from pre- to posttreatment were also examined on an individual basis (Table 4). All 9 participants (100%) decreased in CAPS score ($M = 19.33$; $SD = 21.98$). Four (44%) showed clinically noticeable change, which is considered a drop of at least 10 points (Schnurr et al., 2007; Schnurr et al., 2001; Weathers et al., 2001). Seven (78%) decreased in PHQ-9 total score ($M = 4.88$; $SD = 7.65$). Five (56%) participants showed decreases of at least 5 points on the PHQ-9, which is considered clinically significant change. Two participants had medication changes within a month prior or during TrIGR (Table 3). One of these participants showed clinically noticeable symptom reductions in PTSD, one did not (Table 4). Two participants showed increases on the PHQ-9 of 4 to 5 points. Per VA electronic medical records, 2 participants who did not have clinically noticeable reductions in PTSD or clinically significant reductions in depression had previously completed full courses at least two different trauma-focused psychotherapies while all of those who did have clinically noticeable decreases in PTSD and/or clinically significant decreases in depression symptoms had not had previous trauma-focused therapy (Table 3). There were no adverse events reported by participants or therapists.

Discussion

Participation in TrIGR was associated with reductions in trauma-related guilt severity and distress. Satisfaction with the intervention was extremely high and the fact that no one dropped out during or immediately following the guilt module (which is believed to be the active ingredient or crux of the treatment) suggests acceptability of the intervention. Eight qualifying patients (36%) chose not to participate in the study following screening. This is consistent with the engagement rate of OEF/OIF veterans in mental health services at a VA hospital following initial assessment and also consistent with rates reported nationally (Seal, Bertenthal, Miner, Sen, & Marmar, 2007; Seal et al., 2011). The dropout rate of 28.5% is consistent with other studies of psychotherapy in traumatized samples (Bradley et al., 2005; Schottenbauer, Glass, Arnkoff, & Gray, 2008). For almost half of the sample (44%), the intervention (4 to 7 sessions) led to clinically noticeable reductions in symptoms of PTSD and/or clinically significant reductions in depression even though symptoms of these disorders are not a direct target of TrIGR. Two of the nonresponders had completed previous

trials of evidence-based psychotherapy for PTSD (PE or CPT) and yet started treatment with CAPS scores over 95, suggesting they had not responded to (or retained gains from) well-established trauma treatment as well. Overall, this Stage 1 pilot study suggests that TrIGR, a 4-module intervention delivered in 4 to 7 weekly sessions, demonstrates sufficiently promising feasibility, tolerability, and potential efficacy to warrant further evaluation as an intervention by which to address trauma-related guilt in combat veterans (Rounsaville et al., 2001).

The high correlations between changes in posttraumatic symptoms and changes in trauma-related guilt over the course of treatment suggest a potential mechanistic connection. Prior studies (Andrews et al., 2000; Kim et al., 2011; Leskela et al., 2002; Marlatt & Gordon, 1985; Meehan et al., 1996) have identified guilt as a risk factor for the development of posttraumatic psychopathology and have linked ongoing guilt with poorer treatment outcomes. The results of this pilot study, as well as other studies examining trauma-related guilt (Kubany et al., 2004), suggest that addressing trauma-related guilt may help to alleviate some symptoms of posttraumatic psychopathology. Conclusions should be drawn with caution given the lack of a control group, the lack of follow-up data, and the small sample size. Future studies are needed to further evaluate the role of addressing guilt in reducing posttraumatic distress.

Where does TrIGR fit with existing posttraumatic treatment options? While neither PTSD nor depression diagnoses were necessary for inclusion in this pilot, all but one participant met PTSD criteria according to the CAPS and 72.7% screened positive for depression (scoring 10 or above on the PHQ-9; Kroenke, Spitzer, & Williams, 2001). Given the early stage of evaluation of TrIGR, the authors do not recommend that TrIGR be offered in lieu of evidence-based treatment for these disorders. However, prior studies suggest that treatments of these disorders may not alleviate trauma-related guilt and that guilt may impede treatment outcomes (Arntz et al., 2007; Foa & Meadows, 1997; Hendin & Haas, 1991; Hyer, Davis, Boudewyns, & Woods, 1991; Kubany et al., 1995; Monson et al., 2006). TrIGR may be a good adjunct or alternative for individuals at risk for dropping out of other treatments, or who were non- or partial responders to other treatments. For individuals who refuse an evidence-based psychotherapy for PTSD, TrIGR may be useful as an alternative or as part of a stepped-care approach to help reduce initial symptoms of guilt and help position individuals to engage in and benefit further from evidence-based PTSD or depression treatment. TrIGR may be attractive as an alternative treatment option that is brief and focused on one very specific area that is a primary source of distress. TrIGR may be appropriate for patients who have multiple or subthreshold diagnoses as it is designed to be transdiagnostic and address a specific source of distress rather than a specific disorder. The protocol may also be suitable for residential or intensive PTSD treatment settings where brief protocols and adjunctive treatments fit well into the milieu and longer treatments have proven challenging to implement to fidelity due at least in part to the intensive nature of treatment and short length of stays (Cook et al., 2013). Finally, TrIGR may be helpful to therapists treating PTSD or depression in that many of the strategies suggested in the TrIGR manual fit into existing models of treatment. For example, issues related to hindsight-bias and responsibility are often discussed in the processing portion of PE or through challenging beliefs worksheets in CPT. Although these strategies are consistent with the respective

treatment modules and arise frequently (Monson et al.), the TrIGR manual is much more detailed in how to target trauma-related guilt cognitions and may be helpful, particularly to clinicians or clinical trainees who are new to dealing with these issues. Future research, including randomized trials, is needed to better understand the potential contribution of TrIGR and the most appropriate methods of delivery.

Maguen and colleagues (2010) have shown that in samples of both Vietnam and OEF/OIF era veterans, killing is associated with PTSD as well as multiple concurrent problems such as alcohol abuse, anger, relationship problems, dissociation, and functional impairment (Maguen et al., 2010; Maguen et al., 2009). Future research should evaluate whether guilt may partially mediate the relationship between killing in combat and these negative outcomes. Such research will further inform whether an intervention such as TrIGR may help to reduce the negative consequences of combat experiences.

Kubany and colleagues (2004) showed in a randomized controlled trial that cognitive intervention aimed to reduce guilt cognitions was effective in reducing guilt and PTSD symptoms in a sample of female survivors of intimate partner violence. Given that guilt is a highly prevalent feature of posttraumatic psychopathology across trauma types (Miller et al., 2012), future research should evaluate whether the concepts behind TrIGR may be applicable regardless of the type of trauma experienced.

Limitations of this study include the small sample, the lack of a control condition, and lack of follow-up data on study dropouts. Information about prior psychotherapy was drawn from VA medical records and thus information about psychotherapy experiences outside of the VA may be missing. Given our small sample size, replication studies will be essential to further elucidate the potential efficacy of this intervention. In addition to comparison to a control condition and inclusion of follow-up evaluation points, these efforts should include examination of the possible impact of varying delivery formats (e.g., more than one session of Module 2, delivery in a group format).

Conclusion

Trauma-related guilt has been identified as having a role in the development and maintenance of multiple forms of posttraumatic psychopathology. Cognitive interventions to reduce trauma-related guilt may be a pathway by which to reduce symptoms of PTSD and other posttraumatic psychopathology (Held et al., 2011; Kubany et al., 1995). TrIGR therapy, a 4-module cognitive-behavioral psychotherapy designed to reduce nonadaptive posttraumatic guilt related to combat, showed promising results in this Stage 1 small pilot study. Results suggest strong acceptability and feasibility and that TrIGR has potential to reduce posttraumatic guilt severity and associated distress, including PTSD and depression symptoms. These findings suggest that further investigation of TrIGR is warranted. Replication and extension involving comparison groups and follow-up assessments are needed.

Acknowledgments

This research was supported by a UCSD School of Medicine Academic Senate Award to Drs. Carolyn Allard and Sonya Norman, a NIAAA T-32 fellowship to Ursula Myers, an F-31 fellowship to Kendall Wilkins, and by the VASDHS Center of Excellence in Stress and Mental Health. We would like to thank Candice Colon for her help with data collection and entry.

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Highlights

- Trauma-related guilt is highly prevalent among combat veterans.
- Trauma Informed Guilt Reduction (TrIGR) therapy is designed to reduce guilt.
- TrIGR may help to reduce trauma-related guilt severity and associated distress.
- Changes in trauma-related guilt were correlated with reductions in PTSD symptoms.

Table 1**Participant Demographics and Deployment Information at Baseline**

	Drop-Outs^a (N = 4)		Completers (N = 10)	
	<i>n</i>		<i>n</i>	
Gender (percent male)	100%		90%	
Race				
Caucasian	2		3	
African-American	1		0	
Hispanic	0		6	
Other	1		1	
Branch				
Marine	3		4	
Navy	0		1	
Army	1		3	
Deployments				
Average #	1.25 (range 1 – 2)		1.8 (range 1 – 5)	
Location				
OIF	2		8	
OEF	1		1	
OEF & OIF	1		1	
	M	SD	M	SD
#Modules Completed	1	0	4	0
#Visits Attended	1	0	5.7	1.16
Age	25.25	3.86	28.8	6.27
Total Symptom Scores				
CAPS	74.5	22.5	82.3	19.65
PHQ-9	11.75	2.5	13.8	6.25
Guilt Scores				
Global Guilt	2.94	.72	3.0	.73
Guilt-Related Distress	2.95	1.05	2.05	.69
Guilt Cognitions	3.63	.47	2.65	.94
Hindsight-bias/Resp	3.68	.99	2.10	1.20
Wrongdoing	3.55	1.03	2.72	1.49
Lack of Justification	2.87	1.36	3.35	1.16

Note.

^aDrop-outs did not complete post-treatment measures.

OIF = Operation Iraqi Freedom; OEF = Operation Enduring Freedom; CAPS = Clinician Administered PTSD Scale; PHQ-9 = Patient Health Questionnaire; Resp = Responsibility; TRGI = Trauma-Related Guilt Inventory.

Table 2

Mean Changes in PTSD, Depression, and Guilt Scores

	Pre	SD	Post	SD	Cohen's D
CAPS*	81.4	20.34	62.0	36.5	1.98
PHQ-9	14.2	6.4	9.3	8.04	1.44
Global Guilt	2.6	.61	1.9	.99	1.14
Guilt-Related Distress	3.0	.48	2.4	.89	1.37
Guilt Cognitions	2.1	.99	1.3	.75	1.53
Hindsight-bias/Resp	1.8	1.14	1.2	.79	1.14
Wrong-doing	2.0	1.24	1.1	.63	1.33
Justification*	2.6	1.14	1.7	1.14	1.72

Note.

*
p < .05.

CAPS = Clinician Administered PTSD Scale; PHQ-9 = Patient Health Questionnaire; Resp = Responsibility.

Table 3

Patient Characteristics

Participant	Psychotropic Medication	Prior PTSD Psychotherapy ³	Other DSM-IV Diagnoses
1	Stable	CPT, PE	MDD, Alcohol Abuse
2	Stable	None	Depression NOS, Alcohol Abuse
3	None	Residential PTSD, PE	Depression NOS, Alcohol Abuse
4	None	None	Depression NOS
5	Stable	None	--
6	None	None	--
7	Change ¹	None	Alcohol Dependence
8	None	None	MDD, single episode
9	Change ²	None	MDD

Note.

¹ Increased dosage of SSRI and Trazedone in week 2 of treatment.

² Added new SSRI in week 4 of 7.

³ Prior psychotherapy recorded from VA medical records. In all cases, participants completed full course of prior therapies.

CPT = Cognitive Processing Therapy; PE = Prolonged Exposure; MDD = Major Depressive Disorder. The above information was gathered via clinical record.

Table 4

Pre- and Posttreatment Measures of Change

Participant	CAPS	PTSD Dx	PHQ-9	Global Guilt	Guilt-Related Distress	Guilt Cognitions	Hindsight-bias/Resp	Wrong- doing	Justification
1	Pre 118	Y	17	2.75	3	3.14	1.86	3.8	3.5
	Post 117	Y	21	2.75	3.33	2.05	1.71	1.8	2
2	Pre 77	Y	6	1.75	2.33	.58	.44	0	1.03
	Post 72	Y	11	1.75	2.5	1.52	1.29	1.2	2
3	Pre 95	Y	9	2	3	1.57	.43	1.6	3
	Post 86	Y	7	2	2	1.14	1	.8	2
4	Pre 61	Y	11	3	3	3.67	3.14	3.8	4
	Post 28 [^]	N	2 [*]	1.75	2.33	1.33	1.14	1	2.25
5	Pre 62	N	17	2.75	2.33	2.52	3.43	1.2	4
	Post 54 [^]	N	11 [*]	1.25	1.5	2.24	1.86	2.2	3.25
6	Pre 62	Y	7	3.25	3.67	1	.71	1.8	1.25
	Post 32 [^]	N	1 [*]	1	1.33	.81	1.14	1	0
7	Pre 104	Y	25	2	3.33	2.1	2.71	1.6	2.75
	Post 97	Y	22	4	4	2.48	2.71	1.6	3
8	Pre 72	Y	21	3.5	3.67	2.1	1.43	1.8	2.75
	Post 2 [^]	N	0 [*]	.75	1.67	.38	0	1	0
9	Pre 78	Y	15	3	3	2.71	2.29	3	1.5
	Post 67 [^]	N	9 [*]	2.25	3	.57	.43	0	1.5

Note.

CAPS = Clinician Administered PTSD Scale; PHQ-9 = Patient Health Questionnaire; Resp =Responsibility.

[^] A clinically noticeable change on the CAPS of 10 points or more (Schnurr, et al., 2001; Schnurr, et al.).

^{*} A clinically significant drop on the PHQ-9 of 5 points or more (Kroenke & Spitzer, 2002).