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ORIGINAL PAPER

Mindfulness-Based Cognitive-Behavioral Conjoint Therapy for Posttraumatic Stress Disorder: A Case Study

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Abstract With as many as 1.9 million men and women deployed as part of the wars in Iraq and Afghanistan, increased recognition is being placed on the effect of returning Veterans' combat experiences on their adjustment and mental health, particularly those with symptoms of posttraumatic stress disorder (PTSD) and associated effects on families and relationships. Cognitive-behavioral conjoint therapy (CBCT) for PTSD is a manualized intervention with demonstrated efficacy in clinical trials with Veterans who have experienced trauma and their intimate partners. This case study involves the successful application of Mindfulness-based CBCT for PTSD to treat an operation Iraqi freedom male Veteran and his wife referred for PTSD and relationship dissatisfaction. In the current study, mindfulness interventions were integrated into the existing CBCT for PTSD protocol and treatment duration was shortened by including a weekend group retreat for couples. Baseline and post-treatment data from self- and partner-report measures demonstrates symptom reduction in posttraumatic stress symptoms as well as an increase in relationship satisfaction. The advantages of incorporating mindfulness strategies into this treatment protocol and recommendations for future work are discussed.

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Introduction

As many as 10–20 % of U.S. Veterans return from deployments in Iraq and Afghanistan with symptoms of posttraumatic stress disorder (PTSD; Hoge 2011). PTSD symptoms have been shown to adversely impact many aspects of their lives post-deployment, including intimate relationships (Taft et al. 2011). Nonetheless, few interventions have been developed and tested to treat trauma and relationship dissatisfaction that include intimate partners. One exception is cognitive behavioral conjoint therapy (CBCT) for PTSD, which has accumulated evidence of acceptability and efficacy in addressing the interpersonal nature and effects of trauma (Monson et al. 2012). While CBCT for PTSD has shown promising results as originally designed, we believed some adaptions might appeal to recently returning Veterans while maintaining PTSD symptom reduction and improved relationship outcomes.

Research has found that compared to Veterans from previous conflicts, Veterans from Iraq and Afghanistan are more likely to miss treatment appointments, more than twice as likely to drop out of treatment, and have higher dropout rates in longer treatments (Imel et al. 2013). Davis et al. (2012) found that couples attending a post-deployment weekend re-unification retreat reported benefiting from the group retreat format and requested more couples oriented retreat programs. According to the National Center for PTSD (2011), group treatment is particularly useful for combat-related PTSD because military training and combat operations are group experiences and traumatic

experiences are typically managed in the context of the group. Therefore, we reduced the duration of the existing protocol from 15 to 10 weeks by offering the PTSD psychoeducation and relationship skills training (CBCT sessions 1–7) during a weekend couples retreat. We reasoned that this design might not only increase acceptability and reduce dropout in the returning Veteran population, but might also enhance learning and reduce stigma by (1) observing other couples facing similar challenges; (2) focusing on treatment away from demands of daily life; and (3) sharing within the safety, cohesion, and empathy provided by other Veteran couples.

In addition to interest in the group retreat format, Davis et al. (2012) found many couples were interested in mindfulness, which is defined as maintaining a moment-by-moment awareness of our thoughts, feelings, bodily sensations, and surrounding environment. Mindfulness has emerging evidence for improving both PTSD (Bernstein et al. 2011) and relationship functioning (Carson et al. 2006) in several ways: (1) promotes the relaxation response, translating to a calmer approach to difficulties and challenges (opposite of PTSD hyperarousal symptoms); (2) allows one's experience to be as it is while suspending judgment, resulting in increased compassion and empathy (opposite of PTSD avoidance and emotional numbing symptoms) and (3) supports a way of being with all life experiences rather than offering techniques for coping with specific difficulties, enabling individuals to access inner strengths that are already available to them (Kalill et al. 2013). For example, mindfulness may help individuals tolerate painful emotional reactions to their experiences, leading to enhanced awareness of associated feelings, thoughts and behaviors, ultimately leading to improved cognitive flexibility (openness to reappraising and/or adjusting unhealthy cognitions), and behavioral responding versus reacting (less avoidance of trauma-focused material). We designed mindfulness-based cognitive behavioral conjoint therapy (MB-CBCT) to deliver intact CBCT plus training in mindfulness drawn from mindfulness-based stress reduction (MBSR; Kabat-Zinn 1990). Although MB-CBCT is shorter in total duration (number of weeks), it is more intense than CBCT (i.e. 90- vs 75-min weekly sessions and additional mindfulness-related skills training and out of session assignments). We reasoned that mindfulness skills may help participants tolerate this increased intensity and work synergistically with cognitive behavioral strategies.

In this article, we present a single-case analysis of the struggles and successes of MB-CBCT that seeks to address both PTSD symptoms and relationship dissatisfaction. We first describe the intervention and assessment methods used to evaluate progress. Next, we describe the course of treatment with one couple that participated in MB-CBCT during the manual development phase of our clinical trial. We discuss how this integrated intervention led to improvements in PTSD symptoms and intimate relationship functioning in this returning Veteran couple. Finally, we discuss limitations and offer considerations for future treatment development and research.

Case Study

Overview of Mindfulness-Based-CBCT

Mindfulness-based cognitive behavioral conjoint therapy for PTSD is a manualized therapy designed to strengthen and improve the intimate relationship so that both partners feel supported and can join together to combat the PTSD as it exists within the relationship, rather than simply trying to "fix" the partner who has PTSD. It is an adaptation of CBCT that delivers intact content and dose of CBCT over 10 weeks, reducing the duration of the treatment by 5 weeks. This is accomplished through a 2.5 day weekend couples' group retreat (sessions 1–7 of CBCT) and weekly 90-min conjoint sessions attended by each couple individually following the retreat. The retreat delivers the PTSD psychoeducation and relationship skills training of CBCT phases 1 and 2 outlined in the treatment manual with the addition of mindfulness skills training. Time is scheduled for couples to complete out-of-session assignments related to the content presented, including mindfulness practice. The retreat for this couple was co-led by the first and second authors of this article, with the assistance of a doctoral level psychiatric nurse, and a doctoral level psychology practicum student. Subsequent conjoint sessions of phase 3 consist of capitalizing on the couples' improved communication and new tendency to approach rather than avoid by examining trauma-related beliefs that each hold in the domains of acceptance, blame, trust, control, emotional closeness, physical intimacy, and posttraumatic growth. These sessions were delivered by the first author.

Both CBCT and MB-CBCT for PTSD focus on traumatic material, however, specific aspects of the traumatic events are not discussed at the level of detail required by prolonged exposure therapy. Instead, the therapist asks the PTSD-identified partner to share enough detail about the index trauma to provide context for the therapist and partner to understand what occurred. Thus, during phase 3, trauma-related appraisals maintaining symptoms are explored as a team and the couple is facilitated toward developing more flexible, healthier thinking.

Background, Clinical Presentation and Diagnosis

"Tom" and "Lynn" participated in the first cohort in September of 2011, during the manual development phase

Table 1 Patient and partner pre- and post-treatment assessment results

Measure	Patient		Partner	
	Pretreatment	Posttreatment	Pretreatment	Posttreatment
Clinician administered PTSD Scale	68	21	–	–
PTSD checklist	72	23	52	20
Dyadic adjustment scale	92	130	90	121

Higher scores indicate better functioning on the dyadic adjustment scale (DAS).). A total score of 98 or higher was the criterion for relationship satisfaction. A 10 point change on the DAS indicates reliable and clinically significant changes (Jacobson and Truax, 1991). Higher scores on the clinician administered PTSD Scale (CAPS) and PTSD checklist indicate greater PTSD symptom severity. A 10 point change on the CAPS and PCL scales indicate reliable and clinically significant changes (Blake et al. 1990; Monson et al. 2012)

PTSD posttraumatic stress disorder

of a research study we conducted to develop and evaluate MB-CBCT and best represent both a high level of PTSD symptoms and treatment engagement among the four initial couples. Following informed consent, the couple completed screening and baseline assessments, which included obtaining a history and conducting a battery of diagnostic and self-report measures prior to beginning the intervention. Tom, a Caucasian male Veteran in his early-1960, was married to Lynn for 40 years and they had two grown children. Tom served almost 30 years in the military, which included a non combat deployment to Kuwait in 2000. Tom reported that his symptoms first appeared while deployed to Iraq in 2005 where he served as a chief warrant officer technician and worsened since his retirement as a full time federal technician in 2007. He was diagnosed with PTSD in 2005 and denied any psychiatric hospitalizations and alcohol or substance abuse problems. Tom was engaged in individual and group supportive counseling at another VA for approximately 11 months at the time of intake. He was prescribed a selective serotonin reuptake inhibitor in 2005 and was followed regularly for medication management with no dosage change within 6 months of starting the study. He denied any legal difficulties and reported good overall physical health.

Lynn revealed a history of childhood sexual abuse by her father's friend but did not endorse having any current symptoms of PTSD of her own. She reported experiencing intermittent depression and anxiety throughout adolescence and early adulthood and received group and individual therapy for an eating disorder in her 30s. Lynn took an antidepressant and was engaged in individual therapy for mild depression. She reported good physical health overall and denied any legal or substance abuse history. Lynn was employed full-time as a technical trainer in a school district at intake and throughout treatment. Neither partners had any prior experience with mindfulness or cognitive behavioral therapy.

Initial assessment using the clinician-administered PTSD scale (CAPS; Blake et al. 1990) revealed that during his deployment to Iraq, Tom reported witnessing severe human suffering and being shot at daily. Despite witnessing life-threatening events, he identified hearing about a close female friend being killed by incoming mortar rounds on her way to the battalion headquarters as the traumatic event that was most significantly contributing to his current symptoms. He described feeling shocked, helpless and horrified. He felt he or the others "should have protected her" and felt more vulnerable himself following the event. He reported frequent distressing dreams of them taking fire and being hit by mortars, disturbed sleep, intrusive thoughts about his friend's death, feeling emotionally numb and detached from his wife and others, feeling constantly alert and on edge and endorsed a severe level of depressive symptoms. As noted in Table 1, Tom's pretreatment score on the CAPS was in the severe range and his total score on the PTSD Checklist (PCL; Weathers et al. 1993), a 17-item, self-report measure PTSD symptoms, was consistent and also suggestive of severe symptoms.

Lynn described Tom as extremely distracted and forgetful, often leaving kitchen cabinets open and tasks partially completed. Her ratings of Tom's symptoms on the partner version of the PCL indicated she had noticed symptoms of PTSD but was suggestive of more mild symptoms than Tom's rating and the clinician assessor's ratings on the CAPS. According to the dyadic adjustment scale (DAS; Spanier 1976), both partners indicated the presence of a clinical level of relationship distress and reported there had been little to no physical intimacy in the relationship for almost a year.

Course of Treatment

Weekend Retreat

Following intake assessments, the couple attended a weekend retreat with four other couples held at a rural conference center where the cost of meals and lodging were paid by research study funds. Each 90–120 min group

session included a check-in regarding out-of-session assignments, a brief overview of what was to be covered in the session, didactic presentations, and skills training. At the end of each session, between session practice was assigned to help develop and reinforce newly acquired skills and a check-out was conducted to inquire about lingering questions and what was learned.

Session 1 overviewed the retreat schedule and introduced the treatment goals and content. Couples were asked to share one or two treatment goals specific to their relationship and PTSD. Tom and Lynn shared that they would like to communicate more honestly, have more positives spoken to one another, make more time as a couple together, and stay more in the present. Treatment goals related to Tom's PTSD symptoms included improved sleep, less anxiety, better memory, and more interaction with friends and family. Upon reading their list to the group, Lynn commented the couple was "shooting for the moon," and she was uncertain if their goals were realistic. Therapists provided feedback on the importance of setting realistic goals while instilling hopefulness. Session concluded with orienting couples to the out-of-session assignment forms and asking them to "catch", acknowledge, and record their partners doing something nice before the next session and throughout the weekend. They were asked to read handouts about the cycle of PTSD symptoms and recovery from trauma and write down any additional goals before the next session.

After a 1 hour break, couples reconvened for session 2, which began by checking in on completion of out-of-session assignments and asking each to share with the group the nice things their partners did during the break. Tom shared he noticed his wife made him coffee and Lynn noticed Tom had gone to the car to get a book she had forgotten to bring to their room. Following the check in, couples were introduced to a brief body awareness mindfulness exercise. Tom indicated he found it very helpful to notice how his body feels and to notice when tension arises. Therapists discussed how using mindfulness to stay present when there is tension and emotional discomfort between partners or from PTSD symptoms is an antidote to avoidance. Tom shared he often gets overwhelmed with emotion and tries to distract himself or isolate to avoid feeling "out of control." He believed mindfulness might help him feel less overwhelmed. At the end of session 2, couples were assigned to continue to notice positive behaviors in one another and to complete a worksheet entitled, "trauma impact questions (TIQ)." The TIQ asks participants to write about how PTSD has impacted their relationship, why they think the trauma happened to the PTSD-identified partner, and what each partner believes about themselves, others, and the world in the areas of control, trust, emotional closeness, and physical intimacy.

Next, couples had a 3 hour break to complete the out-of-session assignments, enjoy free time as a couple, and have dinner, which included a mindful eating exercise. Couples were given the option of eating their meal mindfully in silence in the dining room, intentionally observing the many characteristics of the food and noticing any urges, thoughts, or judgments that came up while eating. Tom and Lynn chose to participate in the silent meal. In session 3, couples were asked to share their experience of mindful eating. Tom stated he enjoyed his meal much more than he would have typically. Lynn disclosed she felt more satisfied by slowing down and paying attention to what she was eating. They agreed it was very different from how they normally have meals together and wanted to continue to use the practice to help stay more present with each other.

During session 3, couples were also asked to pair up to discuss potential concerns about and benefits of trauma disclosure. Tom shared he was concerned about how Lynn would view him if he were to share about his trauma and was also fearful that his symptoms would get worse. The therapist normalized these fears and gently pointed out the degree to which a traumatized person discloses the event to a trusted other is shown to improve recovery. Tom was also worried he would become overwhelmed with emotion if he were to share. Therapists discussed how mindfulness can help keep him from getting lost in rumination and reactivity while still being present to trauma-related thoughts and feelings. Couples were guided in a 15-min mindfulness exercise focused on awareness of breathing and encouraged to practice so they would be able to use this technique in their daily lives to stay present when distressing experiences draw them into habitual reaction patterns.

Day two consisted of four sessions centered on developing improved communication, in particular, sharing thoughts and feelings as a strategy to combat avoidance. Couples practiced paraphrasing and participated in a brief "S.T.O.P. and Check In" mindfulness practice. S.T.O.P. is an acronym: *S*topping out of autopilot and into the present moment, *T*aking a breath or two, *O*bserving the physical sensations of the breath and body and *O*bserving the state of the mind and emotions, and *P*roceeding, opening one's awareness to the sounds and sights of the room and proceeding wisely with the conversation, session, or one's day. Couples were encouraged to use the S.T.O.P. practice to help them pause and step back when difficult emotions arise individually or while engaging with their partners. Couples were then asked to generate a list of avoided people, places, things, and feelings, which would be systematically approached over the course of treatment. Tom and Lynn identified that they avoid socializing with family members, attending military events, feelings of sadness and anger, and physical intimacy. Since couples were not exposed to many of the avoided items on their lists at the retreat facility (i.e. crowds, fireworks), their

approach assignment was to use their problem solving skills to choose a mildly distressing topic they typically avoid and talk about it. They were encouraged to use S.T.O.P. when the first signs of tension appeared. Tom and Lynn decided to discuss visiting his mother, which was a difficult topic for them.

The last retreat day discussed expectations for the next phase of treatment and introduced the dyadic cognitive intervention called the *U.N.S.T.U.C.K.* process, used in Phase 3 to challenge beliefs maintaining PTSD symptoms and relationship discord. The acronym stands for being *U*nited as a team in the collaborative process, *N*oticing thoughts, (Brain) *S*torming alternative thoughts, *T*esting them out by considering the evidence for or against identified thoughts, *U*sing the most balanced, healthy thought(s), *C*hanges in feelings and behaviors with the new thought(s), and identifying ways to *K*eep practicing the new thought rather than falling into old thinking patterns. Out of session practices were assigned to reinforce newly learned skills and couples were given pre-loaded CDs with guided "formal" mindfulness practices to complete each day between the retreat and first conjoint session. They were also asked to bring awareness to a daily activity, such as showering or brushing one's teeth, each day as an "informal" mindfulness practice. The retreat concluded with a loving-kindness meditation guiding couples to attend to the sensations noticed when holding each other's hands and when looking into each other's eyes, while bringing to mind something they appreciated about their partner and silently repeating a phrase of well-wishing for their partner. Lastly, participants were invited to share one or two words about what the retreat meant to him or her.

Post-retreat Weekly Sessions

Despite Lynn's work schedule and the couple's 200-mile drive to attend sessions, the couple consistently attended weekly sessions and completed all out of session assignments. The initial conjoint session was scheduled 1 week after the retreat and served as a transition session to review assignments and make sure the couple understood the *U.N.S.T.U.C.K* process before beginning the trauma-focused treatment of Phase 3. PTSD symptoms and relationship satisfaction were assessed weekly using the PCL and a question taken from the DAS to assess current, general relationship happiness.

Post-retreat Sessions 1–3

The couple came to post retreat session 1 and reported the weekend was beneficial yet difficult due to Tom struggling with emotional and physical fatigue. Tom's PCL score revealed a 31-point decrease in PTSD symptoms between the beginning of the retreat and the first conjoint session. When asked to what they attributed this significant change, Tom stated that learning how avoidance maintains PTSD symptoms and other retreat couples reporting benefits of disclosure prompted him to "let Lynn ask me anything." He disclosed details of his trauma to her and shared his thoughts and feelings about his deployment experiences, which was a helpful relief. Both partners reported an increase in relationship satisfaction, which they attributed to being able to communicate more open and honestly with one another and feeling appreciated by each other.

Post-retreat session 2 involved identifying and discussing barriers to accepting the traumatic event. Tom resonated with the cognitive distortions of hindsight bias and undoing, or the tendency to look back on situations such as his friend's death and believe that he could have prevented it. The couple continued to report being happy in their relationship. They found mindfulness helped reduce stress and practiced the formal mindfulness track on their CDs daily. Tom indicated he used the formal S.T.O.P. mindfulness practice a couple times a day and a briefer S.T.O.P. several times daily, whenever he noticed tension arising.

Prior to session 2, Tom visited a friend out of state and they talked about the war, which he thought contributed to increasing his frequency of re-experiencing and hyperarousal symptoms, which was reflected in his PCL score. Socratic dialogue in session revealed Tom experienced significant guilt about his friend's death when he had returned home safely. The couple had included the friend's grave on their list of avoided things and decided to approach this as a couple in the upcoming week. Their therapist agreed they had worked their way up to the assignment by successfully approaching less anxiety-provoking situations during the past 2 weeks and believed the assignment was closely related to the topic of acceptance discussed in session 2. After further discussion around Tom's anxiety about approaching his friend's grave, the therapist encouraged the couple to complete a worksheet using the *U.N.S.T.U.C.K.* process outside of session on Tom's noticed thought, "I can't emotionally handle going to the grave," prior to engaging in the approach assignment. They returned for session 3 reporting an increase in relationship happiness and a 15-point decrease in Tom's PCL score from the previous week, stating they had used the *U.N.S.T.U.C.K.* process prior to going to the cemetery and were able to pair this work with the in vivo approach assignment. They reported feeling closer to one another having approached such a difficult situation together.

Post-retreat Sessions 4–9

Sessions 4 and 5 focused on using the *U.N.S.T.U.C.K.* process to help Tom and Lynn challenge their unbalanced

beliefs about trust and control. Due to the distance the couple traveled to sessions, Sessions 6 and 7 regarding emotional closeness and physical intimacy were combined. At this point in therapy, Tom's PCL score was 25 and his degree of happiness in the relationship was a 3 ("happy") out of 6 ("perfect") and Lynn reported she was feeling "very happy" in the relationship. They were continuing to use mindfulness to stay more present-moment focused and noted it helped them let go of their reaction habits as they continued to approach typically avoided situations and people. Tom shared that he still experienced significant anxiety over being physically intimate with Lynn and her expectations of him. They concluded that the only way to move through the fear and build confidence was to approach physical intimacy like they approached other things on their avoidance list throughout therapy. They agreed to plan a date night that involved being physically intimate with one another as their weekly approach assignment.

Session 8 focused on posttraumatic growth. The couple disclosed several balanced thoughts such as, "This trauma and therapy have served to bring us closer to one another;" however, Tom still held the unhelpful belief, "If I can overcome PTSD why did I suffer for so long?" The couple used the *U.N.S.T.U.C.K* process in session to shift to the more balanced thoughts of "I didn't know I could handle approaching and talking about bad/hard things" and "I needed to be ready to work hard and to trust enough again to take the steps." They were assigned to answer the TIQ again for their final session. Tom revealed in his second TIQ that he was able to trust himself and partner more, had more control over his life than before treatment, and avoided less now knowing that avoiding emotion and physical intimacy were detrimental to his relationship. The following is an excerpt from Tom's TIQ:

> "A lot of good has come about from the work as a couple. When I started I was angry and felt there was no future for me as a person or husband. But with this therapy I now, even though I'm still angry, am able to share the traumatic event with my wife. This single benefit has changed our lives and our relationship. I now believe that I will recover from PTSD and I now will have a future as a person and as a husband."

Lynn revealed in her TIQ that communication had improved and they were better able to handle conflict and problem solve. She indicated their physical intimacy was improving and they felt more emotionally close to one another. The therapist referred the couple to their goal sheet to further discuss the gains made and identify ways to continue their work after treatment ended. Lynn asked the therapist if she was able to remember back to the retreat and stated, "When we first made this (goals) list I thought it was unattainable. I'm looking at this list in awe because we accomplished every single goal." They agreed to continue to use their communication and mindfulness skills and the *U.N.S.T.U.C.K.* process to continue to grow as individuals and as a couple and to remain more focused on the present than the past or future. After completing the program, Tom stated, "this program was instrumental in saving my marriage."

Summary of Treatment Outcomes

At the end of treatment, Tom's PTSD symptoms of re-experiencing, avoidance, emotional numbness, and hyperarousal improved and he no longer met diagnostic criteria for PTSD based on the post-treatment CAPS conducted by a rater that was not part of the treatment. Additionally, Tom and Lynn's assessment of his PTSD symptoms on the PCL converged within 3-points of one another at treatment end, suggesting an increase in awareness and communication regarding symptoms. Post-treatment assessments demonstrated there was considerable improvement in overall relationship functioning for both Tom and Lynn. A program evaluation interview conducted post-treatment by a member of the research team not directly involved in the intervention revealed both partners were extremely satisfied with the program and found it to be very helpful. Tom stated, "The best part would be my communication with my wife. That's most beneficial to me." He reported using mindfulness a number of times when he had problems arise stating, "Rather than just taking a time-out, I use mindfulness and it helps me deal with what's going on." When asked what it was like to talk about the trauma with his wife during the course of treatment, Tom revealed, "Well, it was interesting. All I've ever heard from the military was that people aren't interested in your war stories. I told her and it really wasn't that bad. There was really no reason to shield her, or protect her, or keep it inside. Now I can talk about what happened without getting all emotional."

Lynn agreed with Tom, reporting significant benefit from participating in the program, particularly how their communication improved. She found the program to be well structured and "overall it was a life-saver. I stopped feeling like a caretaker and started feeling like a partner again." She reported one of the best parts of the program was the out-of-session assignments because they were very helpful in reinforcing what they learned in sessions. Lynn noted the mindfulness helped lower Tom's anxiety and she used the non-judgmental quality of mindfulness to help ease the pressure she puts on herself. She concluded by saying, "when we first started this, I wasn't sure why they would put couples together and then work with the PTSD, but once we started it made perfect sense. I think the fact we did it together helped him; it helped me know better how to support him because I understand what's going on

better, and I think the fact that we're a team really helped the relationship."

A 6 months chart review indicated Tom was engaged in individual supportive therapy and doing quite well, with a reported PCL score of 21, well below the suggested cutoff score of 45 for clinically significant symptoms. Furthermore, 3 years later, he and his wife participated in an 8-week mindfulness-based stress reduction class in order to renew and deepen their practice of mindfulness.

Discussion

This case study describes the use of modified CBCT for PTSD with an Iraq war Veteran and his wife to treat PTSD and relationship dissatisfaction. The couple experienced significant improvements in their relationship and the Veteran demonstrated clinically significant reductions in PTSD, including loss of his PTSD diagnosis according to both self-report and clinician-administered assessments. While this particular couple may not be representative of the averagere turning Veteran couple with regard to age and length of marriage/relationship, similar results have been found with subsequent couples in the randomized phase of this study, whose ages ranged 23–67 years and length of relationship, 3 months–43 years.

Although a 2.5-day retreat is an intensive way to begin treatment, we received favorable feedback on written program evaluations at the end of the retreat and treatment. No couples left early or dropped out immediately following the retreat and our dropout rate (23 %) was less than a recent meta-analysis indicating as high as 41 % drop out rate for those engaged in other trauma-focused therapies (Imel et al. 2013). Despite some reports indicating recently returned Veterans may be reluctant to participate in groups (Kracen et al. 2013); we found our groups of 4–6 couples per cohort were acceptable and believe that with the busy lives of returning Veterans, a more intense shorter duration of treatment may have contributed to our lower dropout rate. While providing a retreat at a secluded off-site facility may not be feasible for many clinicians, we have successfully conducted couples post deployment retreats for five years with funding from a local corporation and our chaplaincy service has utilized church facilities with meals and child care provided by members of the congregations for weekend couples communication retreats.

Based on the feedback from the case study couple and subsequent couples in the manual development phase, we made a number of changes to the treatment protocol. Retreat sessions have been condensed and reorganized to be no longer than 90 min and include brief breaks for guided mindful stretching. This helps couples to stay engaged during sessions, provides more time for assignments and quality time between sessions, as well as reduces feeling fatigued or overwhelmed. We discovered the term "awareness," unlike mindfulness, is familiar to combat Veterans, as their military training includes "situational awareness." Therefore, we adapted the manual to use the term "awareness" in lieu of "mindfulness" and incorporated other more military friendly terminology. Additionally, rather than assigning specific tracks for weekly mindfulness practice, couples now choose one guided "formal" and one "informal" practice to complete and log each day. We found couples practice more regularly when they choose which mindfulness exercises to engage in. Lastly, we now provide each participant with an MP3 player pre-loaded with the mindfulness tracks found on their CD's instead of just one per couple.

Although the findings of this case study are promising, the durability of these findings over time and their generalizability to Veterans of all ages and eras needs to be demonstrated in a larger clinical trial. We are currently conducting a randomized controlled trial with returning Veteran couples comparing MB-CBCT to CBCT communication skills only which is in the final phase of data analysis. Future studies are needed to compare outcomes and acceptability of the protocol in its original form and with the integration of mindfulness and retreat format.

In conclusion, there is increasing recognition of the need for couple interventions to address the negative impact of trauma on relationships and vice versa. This case study suggests the value of integrating mindfulness and a weekend couples retreat in CBCT. Mindfulness theoretically serves as an antidote for the PTSD symptoms of avoidance, numbing, and hyperarousal and may reduce reactivity to interpersonal and internal experiences (e.g. re-experiencing symptoms) and enhance empathy within the relationship. Providing the first two phases of treatment in a group retreat may also serve as a means of reducing the stigma associated with PTSD and mental illness as well as increasing the commitment and motivation to engage in treatment. Due to the encouraging results and limited research with this treatment, further investigation is warranted.

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