

# Changing the Personal Narrative: A Pilot Study of a Resiliency Intervention for Military Spouses

Michelle Kees<sup>1</sup> · Laura S. Nerenberg<sup>1</sup> · Jodi Bachrach<sup>1</sup> · Leslie A. Sommer<sup>1</sup>

Published online: 5 May 2015

© Springer Science+Business Media New York 2015

**Abstract** The more than decade long tempo of war has taken a considerable toll on military families, with the rates of mental health concerns in non-deployed spouses on the rise. To date, few evidence-based programs exist to meet the unique needs of military spouses. The current study presents early findings from the development and implementation of HomeFront Strong (HFS), an 8 week group-based resiliency intervention designed to support military spouses through deployment transitions. In three group cohorts, 20 women completed the HFS intervention, and 14 of those participants provided evaluation data at the pre-group and 3 month follow up (3MFU) assessments, including a semi-structured interview designed to elicit a personal narrative about deployment experiences. Thematic analyses of the personal narratives demonstrated that negative cognitions (e.g., helplessness; feeling unsupported) about deployment were associated with higher rates of depression prior to group participation. At 3MFU, personal narratives included more positive cognitions and fewer negative cognitions, suggesting that HFS changed the way spouses thought about their deployment experiences. Moreover, participants reported fewer symptoms of depression, higher levels of social support, and greater life satisfaction at 3MFU. While this Phase I study is small and lacks a comparison group, the demonstration of positive results is promising and warrants further attention.

**Keywords** Military spouses · Resilience · Group intervention

## Introduction

More than 2.5 million American troops have deployed to combat zones in support of the Global War on Terror since 9–11; many completing multiple tours. Families are also cycling through these deployments, with nearly 3 million family members between the Active Duty (AD) and Reserve Component (RC) forces (Office of the Deputy Assistant Secretary of Defense 2014). Over half of AD service members are married (55 %), and within the RC component, just under half (46 %) are married. A growing body of research suggests that conditions surrounding deployments to Iraq or Afghanistan, including length and number of deployments, time between deployments, and the dangerousness and unpredictability of the warfare itself, may be associated with increased stress and negative impact for military families as compared to previous conflicts (Institute of Medicine 2013; Verdelli et al. 2011).

With growing recognition about the challenges faced by military families, many have begun to examine the impact of deployment and military involvement on military families, and specifically on non-deployed spouses/romantic partners.<sup>1</sup> Emerging research suggests that deployment can take a significant psychosocial toll on military spouses (de Burgh et al. 2011; Mansfield et al. 2010; Padden et al. 2011). Indeed, Blow et al. (2013) conducted paired couples analyses with over 600 National Guard

---

✉ Michelle Kees  
mkees@umich.edu

<sup>1</sup> Department of Psychiatry and Comprehensive Depression Center, University of Michigan, 4250 Plymouth Road, Ann Arbor, MI 48154, USA

<sup>1</sup> The use of the term “spouse” throughout this article also includes any intimate partner or significant other of a military service member or veteran.

(NG) couples post-deployment and found that spouses experienced levels of mental health symptoms at similar rates as service members. Specifically, 21 % of spouses reported symptoms consistent with depression (21 % of service members), 13 % reported post-traumatic stress symptoms (13 % of service members), and 11 % reported hazardous alcohol use (27 % of service members). In a post-deployment study with 212 National Guard spouses/partners, nearly one in three spouses reported clinically significant symptoms of post-traumatic stress, depression, or anxiety; one in ten reported suicidal thoughts (Gorman et al. 2011). There are evolving concerns that suicide in military spouses is a silent epidemic that has not been well monitored over time (Department of Defense, American Forces Press Service 2010; NBC News 2013). The past decade has also seen a rise in rates of divorce and domestic violence associated with deployment, further speaking to the jeopardy for military families (Karney and Crown 2007; Office of the Deputy Assistant Secretary of Defense 2014).

Spouse adjustment to deployment and military life can also impact functioning in children (Chandra et al. 2010; Flake et al. 2009), the couple relationship (de Burgh et al. 2011), and the service member (Blow et al. 2013). Findings from the paired analyses with National Guard couples conducted by Blow et al. (2013) also indicated clear connections between spouses' psychological health and the adjustment of service members at post-deployment. Specifically, depression in spouses was negatively linked to service member's marital satisfaction. Post-traumatic stress symptoms in spouses also predicted greater parenting stress in the service member and a more disorganized, chaotic family environment. Taken together, these results support the assertion that spousal psychological health and adjustment is vitally important for the psychological health and wellness of service members. These conclusions are consistent with those of Paley et al. (2013), suggesting that when one family member is impacted by stressors, it is likely that other family members will also be impacted. Therefore, addressing the psychological health of military spouses is beneficial for both the spouse's wellbeing, and also for the wellbeing of the whole family system (Lewis et al. 2012).

Though these data are strong indicators that military families are at psychological risk, the struggle of spouses has received markedly little attention, with limited psychological resources available. In hopes of addressing this need, we considered our clinical experiences in facilitating pre-and post-deployment support groups for military spouses at Yellow Ribbon National Guard events from 2009 to 2012. Military spouses and partners, all of whom were women, shared their experiences with deployment and military life during the course of these groups. A

variety of themes emerged within their personal narratives. Negative thoughts and perceptions about deployment, such as being hopeless or overwhelmed, seemed associated with depressed mood and greater difficulty adjusting to life post-deployment. Alternatively, narratives that referenced something positive about deployment including personal strength, hope, or feeling supported seemed to be shared by women who were coping more adaptively with deployment transitions.

The past four decades have established a robust literature on cognitive behavioral theory showing that thoughts, feelings, and behaviors are interconnected, and that the nature of one's cognitions can impact mental health and adjustment (Beck et al. 1979; Seligman 2006). Negatively biased cognitions, such as those that are self-blaming, pessimistic, hopeless, sad, and catastrophizing have been linked to depression and dysphoria (Gotlib and Joormann 2010; Mathews and MacLeod 2005; Seligman et al. 1988). Alternatively, positive cognitions that include elements of hope and optimism are associated with lower levels of depression, even in populations experiencing high stress life events, such as caregivers of Alzheimer's patients (Shifren and Hooker 1995), women with failed IVF procedures (Litt et al. 1992), and patients with ischemic heart disease (Shnek et al. 2001) or those undergoing cancer treatment (Allison et al. 2000). Overarchingly, these findings support the assertion that positive cognitions can be protective under stress, while negative cognitions are often inherent to depressed mood.

Of particular relevance for clinicians, cognitive patterns may be alterable through intervention. One of the foremost effective interventions for depression in adults is cognitive behavioral therapy (Butler et al. 2006; Tolin 2010), which focuses in part on identification and alteration of negative thoughts (Beck et al. 1979; Beck 2011). Positive Psychology has also contributed considerably to the literature base supporting the application of learned optimism interventions to reduce symptoms of depression and future risk of depression across populations (Gillham et al. 1995; Seligman et al. 2005, 2007).

### HomeFront Strong

Taken together, both our clinical experience with this population and the literature suggested that efforts to address cognitive patterns could be a promising intervention strategy to support military spouses through deployment transitions. We sought to develop and evaluate an intervention for military spouses that would enhance individual resilience and improve psychological functioning, in part by identifying and changing negative thoughts specific to military life and deployment experiences. Thus began the development of Home Front Strong (HFS), an 8 week

group grounded in evidence-based components of positive psychology (Seligman 2006; Seligman et al. 2005), cognitive behavioral therapy (Beck 2011; Ellis and Harper 1997; Hayes et al. 2011) and dialectical behavior therapy (Holmes et al. 2006; Linehan and Dimeff 2001), tailored for military spouses. See Table 1 for a description of the core HFS modules, which include: Foster Resilience, Manage Stress, Cultivate Optimism, Re-Think Thinking, Build Community, Allow Emotions, and Stay Strong.

During each of the eight sessions, didactic information is presented on the various modules, with interactive activities and opportunities to practice new skills in session. Each session starts with a “Word of the Day” which relates directly to the session topic. Participants are asked to respond to these words, and their responses are utilized and woven throughout the session material of the day. Examples include: “stressed,” “coping,” “flexibility,” “grateful,” and “feelings.” Participants are also introduced to the concept of a stress rating, and are subsequently asked to rate their

stress level at the beginning and end of each session. In addition to promoting participant self-awareness, the stress ratings aid group facilitators in moderating and regulating the affective state of the group members as they enter and leave the group. Self-care strategies, described as “Grounding Strategies” are taught in each session, with facilitated in session practice. Grounding Strategies introduced include daily gratitude practice; breathing exercises; affirmations, mantras, and mottos; progressive muscle relaxation; visualization; guided imagery; and mindfulness practice. Participants also receive a weekly workbook chapter that includes psychoeducational materials about the session topic, an overview of the session’s Grounding Strategy, and worksheets designed to draw out personal narratives about deployment and military-related stressors. About half-way through the group cycle, participants attend one individual session with a group facilitator to discuss the group process and to coordinate any additional community referrals or connections to resources.

**Table 1** HomeFront Strong curriculum

Session	Title	Main content
1	Foster Resilience	Resilience and gratitude Normalization of military experience through use of interview adjectives Introduce concept of personal narrative Introduce workbook
2	Manage Stress	Individual styles of stress management Psycho-education on stress physiology Stress Level Rating Scale Breathing techniques
3	Cultivate Optimism	Building positive coping skills Cognitive loop Optimism, pessimism, and realism Affirmations, mantras, and mottos
4	Re-Think Thinking	Thinking Strategies of dispute and discover Re-authoring one’s personal narrative Progressive muscle relaxation
5	Re-Think Thinking	Cognitive flexibility and perspective Distraction techniques Thought swapping Visualization
6	Build Community	Being a friend Types of social support “Job openings” and expectations Guided imagery
7	Allow Emotions	Observe, experience, and allow feelings Acceptance Mindfulness techniques
8	Stay Strong	Lessons learned Re-define resilience Wishes for the future

## Current Study

Programmatically, we aim to validate HomeFront Strong as an evidence-based intervention for military spouses that reduces symptoms of depression and enhances characteristics generally associated with resilience, such as life satisfaction (Diener et al. 1985), social support (Cohen and Hoberman 1983), and optimism (Seligman 2006). In the current study, we present data from the Phase I development and evaluation of HFS across three group cycles with a sample of military spouses who completed the group and provided pre-group and 3-month follow-up (3MFU) evaluation data ( $n = 14$ ). Through qualitative interviews, we explored spouses' personal narratives about deployment and, via thematic analysis (Joffe 2011), identified positive and negative cognitions hypothesized to be associated with spousal adjustment. We expected these cognitions to change as a result of group participation, with a hypothesized increase in positive cognitions about deployment and a decrease in negative cognitions. It was further hypothesized that participation in HFS would be associated with reduced symptoms of depression and higher rates of life satisfaction, social support, and optimism at 3MFU.

## Method

Research approvals were obtained from the Institutional Review Board at the University of Michigan.

### Participants

Advertising for the HFS program was shared through civilian and military partnerships in the local geographical area, including the National Guard State Family Programs Office, Family Readiness Groups, National Guard armories, community events for military and veterans, the VA Healthcare System, Veteran Service Organizations, social media, and word of mouth from key stakeholders. Interested participants were encouraged to contact HFS program staff by telephone and were screened for eligibility. As this was a Phase I feasibility trial, inclusion criteria were intentionally broad: (1) a spouse or intimate partner of a Post 9/11 service member or veteran; and (2) could commit to attend a minimum of 6 of 8 scheduled group sessions. No exclusion criteria were applied. Of note, no male spouses contacted the program so all participants were female spouses or romantic partners, including a same-sex partner.

Over the course of three group cycles, 22 female participants completed a pre-group assessment and enrolled in

HFS. Two participants withdrew from the group for reasons unrelated to the program (i.e., unexpected onset of a severe medical illness and transportation issues). Of the remaining 20 participants, 15 completed the 3-month follow-up assessment, for a 75 % retention rate. Multiple attempts were made to collect the follow-up assessments with the remaining five participants (one from the first group cycle, two each from the second and third group cycles). In comparing participants who completed the follow-up assessment to those who did not, there were no differences in demographic variables, deployment experiences, pre-group outcome measures, or number of group sessions attended ( $M = 7$  for both groups). Upon data review, it was further noted that one participant provided incomplete data on key variables in the follow-up assessment and was therefore excluded from analyses. Thus, data analyses for this pilot study are based on the 14 participants who fully completed both the pre and 3-month follow-up assessments.

Participants ranged in age from 22 to 50, with >50 % of the sample under the age of 30 ( $n = 8$ ). The majority of participants were Caucasian ( $n = 12$ ), with one African American participant and one multi-ethnic participant. The majority of participants were married ( $n = 12$ ), and half had children ( $n = 7$ ). Participants were generally well educated, with all having at least some college, and more than half having a Bachelor's Degree or higher ( $n = 9$ ). With regards to military life experience, nine spouses participated in the group while their partner was deployed, and five were post-deployment. Military affiliation of the spouses/partners varied in the sample, and included a mixture of National Guard ( $n = 7$ ), Reserves ( $n = 2$ ), Active Duty ( $n = 1$ ), and Veteran ( $n = 4$ ) families.

### Study Procedures

Within 3 weeks prior to starting the group, participants met in-person with HFS program staff to complete the pre-group assessment. The pre-group assessment included a standard informed consent process, a semi-structured interview, and a series of paper/pencil self-report measures assessing military life experiences, psychological health, and characteristics of resilience. Approximately 3 months after completion of the 8-session group, participants were contacted by telephone to schedule a follow-up assessment with HFS program staff. The 3-month follow-up assessment (3MFU) mirrored the initial pre-group assessment, with a semi-structured qualitative interview and paper/pencil self-report measures. Participants received a \$40 gift card (\$30 remuneration + \$10 for fuel costs) for each of the assessments.

## HFS Intervention

To address possible barriers to attendance, HFS group sessions were held in the evening, with a meal provided, and a \$10 gift card was given to participants at each session to off-set fuel costs. At the time of the study, gas prices approached \$4.00 per gallon, and participants traveled up to 2 ½ h to attend group sessions. For participants with children ( $n = 7$ ), a concurrent children's program was also offered. Each of the group sessions started with a 30-min shared meal between participants, children, and staff members. Children then went to a child-focused program, while the adult participants attended the HFS group for 90 min. Each group session was led by a clinical psychologist (first author and developer of the program), a licensed clinical social worker, and/or a Masters-level social worker. Group facilitators were trained by the first author and closely followed the HFS curriculum manual, which describes each group topic in detail and includes specific instructions for group set-up, directions for the activities, and suggested word choice for material. Sessions were audio-recorded with participant consent.

## Measures

### *Deployment Narrative*

During the pre and 3MFU assessments, a semi-structured interview was conducted individually with participants and audio recorded for later transcription. The questions in the interview were based on the established Working Model Interview (WMI) (Rosenblum et al. 2008; Zeanah and Benoit 1995), modified to elicit a narrative that capture the participant's internal representation of their deployment experience. Through coding of the interview, we can categorize spouses' cognitions and subjective perceptions of the deployment. For the current study, the primary question of interest was: "I would like you to pick five words or phrases to describe your recent experiences with deployment and military life." After listing the 5 adjectives, the following question was asked for each adjective: "You said: (adjective). Can you tell me why you chose that word to describe your experiences with deployment and military life?"

Using a thematic analysis (TA; Joffe 2011), a macro-level coding scheme was developed to code the descriptive responses given for each of the five adjectives. An iterative process led by the first and fourth authors included a review of the literature on optimism and resilience, a review of the interview transcripts, and a focal discussion with HFS group leaders that led to the emergence and refinement of eight themes: (1) Positive aspects about the deployment experience, (2) Feeling supported, (3) Feeling hope, (4)

Learning something or growing from the experience, (5) Feeling strong or self-competent, (6) Feeling helpless, (7) Feeling overwhelmed, and (8) Feeling unsupported. See Table 2 for examples of each code based on interviews with participants.

A code book with operational definitions, key words, and illustrative examples was developed. Undergraduate research assistants were trained for reliability on example interviews from two participants who completed the interview but did not enroll in HFS. Two coders independently coded each interview, with an overall kappa of .88. For items of disagreement, coders met together with the first author to establish a final resolution code. For each of the five adjective descriptions, coders responded to the question: "Does this description include anything about (insert each of the eight themes)?" and then rated on a Likert scale from 1 to 3 (not true, somewhat true, very true). Descriptions could be coded on more than one theme to capture all relevant content. Ratings were then summed across the adjectives to develop total scores for each of the eight themes.

### *HFS Fidelity Checklist*

The HFS Fidelity Checklist was developed to independently assess the degree to which the group facilitators were consistent with the HFS curriculum manual. Fidelity Checklists exist for each of the sessions, and include a list of topics and activities to be covered in that session, with a Yes/No response. An undergraduate research assistant reviewed the audiotaped recordings of each session, and completed the Fidelity Checklists, indicating 100 % adherence across all sessions in the three group cycles.

### *Demographic Questionnaire*

Participants responded to a series of questions on general demographics and military life experiences.

### *Patient Health Questionnaire (PHQ-9; Kroenke et al. 2001)*

The PHQ-9 consists of nine items that correspond to the DSM-IV criteria for major depression. Originally developed and tested in primary care and obstetrics-gynecology clinics, the PHQ-9 has demonstrated good reliability and validity in general populations (Gilbody et al. 2007; Kroenke et al. 2001) and in military populations (Everson et al. 2013; Warner et al. 2009). In validation studies, PHQ-9 scores >10 had a sensitivity of 88 % and a specificity of 88 % for Major Depressive Disorder (Kroenke et al. 2001). In the current study, the total score was used to measure depressive symptoms, with higher scores indicating greater

**Table 2** Thematic coding of the deployment narrative

Narrative themes	Participant examples
1. Positive aspects about the deployment experience	I don't have to worry about what he wants for dinner. I don't have to figure out if we're going to do something together or separate or work around our schedule. I can just do whatever I want, whenever I want With him not in the house it gave me a chance to experiment with myself and actually figure some things with myself. Through doing different things like yoga, and now I read like crazy
2. Feeling supported	The support of these people is new. Instead of feeling lost and alone, I just know there is love and comfort I feel like people are cheering for me to make it, not just "oh here's this website or call this number or hotline." It's like really people genuinely want to see you be good or be okay
3. Feeling hope	I have it in me to heal and walk forward from this. We're starting to have a normal life again. It's exciting to be coming back together but then also to think about where we could possibly go It's like another big mountain I guess that I had to climb. I think, well if he can do it and all these other spouses and families can do it, then I can do it too
4. Learning something or growing from the experience	I feel like I have grown so much and it's given me so much opportunity in every way for myself to grow, to see myself apart from him, and see areas I need to work on This whole year I discovered new things about me and about the military and the rest of life, and what I'm capable of
5. Feeling strong or self-competent	I can do this by myself. I can manage the house all by myself and all the bills and manage the outdoor things that have to be done and all the things that he does I feel so much stronger than I was before. I've done things I didn't think I could do. And I just feel like I'm probably going to be a better parent and a better wife
6. Feeling helpless	I mean it's not what you plan for your life. You don't marry someone expecting that they're going to be somebody different. You have an idea of your life, you have children and you want them to have a good life, a better life than you do and then this is out of your control I sold my car before he left and had to drive his, turns out I can't drive his, it's too big, I can't park it. Can't go anywhere, can't go grocery shopping because I can't park the truck. Can't go to the mall and shop, because I can't park the truck. Can't do anything
7. Feeling overwhelmed	My house is a mess, my kids are not keeping up with their homework and not following through. I tell them they have to do something and I'm just so exhausted and tired that I don't follow through Who gets to shovel the yard and the driveway? That would be me on top of all the other things I have to do. I have to do the garbage now, I have to take care of the cars, I have to do everything. I have like no time. It's go go go from the minute you wake up till you go to bed
8. Feeling unsupported	You constantly deal with stress and then your civilian- normal- life-friends just don't want to hear it anymore at some point. They might not say it, but after a while it's too much and you just know I didn't feel like I was supported by my friends or my family or my partner's friends or family, when I thought that I would be. So I ended up really going through the hard parts completely alone

severity of depression. Internal consistency of the PHQ-9 is consistently high, with the Cronbach's alpha for this study at .83.

#### *Satisfaction With Life Scale (SWLS; Diener et al. 1985)*

Participants' satisfaction with life was assessed via the SWLS, a five-item measure with questions such as "I am satisfied with my life" and "In most ways my life is close to ideal." Questions are ranked on a Likert scale from 1 to 7, with higher numbers indicating higher levels of personal satisfaction with life. The scale has been used in large community and clinical samples with excellent internal consistency, convergent validity, test-retest reliability, and sensitivity to life events (Barile et al. 2013; Diener et al.

1985; Kobau et al. 2010; Pavot et al. 1991). Cronbach's alpha for the current study was .64.

#### *Life Orientation Test-Revised (LOT-R; Scheier et al. 1994)*

The LOT-R is a ten item measure that assesses pessimistic versus optimistic expectations of future occurrences. Participants are asked to indicate to what extent they agree with statements such as, "In uncertain times, I usually expect the best" and "I am always optimistic about my future," on a scale from 0 (strongly disagree) to 4 (strongly agree). A continuous score of optimism is calculated by excluding the 4-filler items and reverse coding 3 items. Internal consistency and validity have been well-established and the measure has been used in diverse study

populations (Carver 2014; Scheier et al. 1994). Cronbach's alpha for the current study was .85.

*Interpersonal Support Evaluation List-12 (ISEL-12; Cohen and Hoberman 1983)*

The ISEL-12 is a 12 item measure designed to assess levels of perceived social support available to an individual. It includes statements about perceived availability of potential sources of support in three areas: Appraisal, Belonging, and Tangible. For the current study, a total score of was used. The ISEL is widely used and has a published Cronbach's Alpha co-efficient of .77 (Cohen and Hoberman 1983), with .86 in the current study.

## Results

### Deployment Narrative, Depression, and Resilience

As seen in Table 3, narrative themes of helplessness and feeling unsupported during deployment were significantly correlated with higher rates of depressive symptoms in the pre-group assessment. No other significant correlations emerged between the narrative coding and the characteristics of resilience (life satisfaction, optimism, or social support) during pre-assessment. However, at the 3MFU, the pattern changed such that narrative themes of hope and a sense of growth or learning from past deployment experiences were significantly correlated with life

satisfaction. In contrast to the pre-group results, correlations between the narrative themes and depressive symptoms were no longer significant.

### Changes in the Deployment Narrative

To assess whether there were changes in narrative themes after completion of the HFS group, t-tests were conducted for each of the eight narrative codes gleaned from the pre- and 3MFU interviews. In comparison to the pre-group interviews, participants' narratives about deployment and military life experiences at the 3MFU included more positive themes [ $t(13) = -2.56, p = .024$ ], and fewer negative themes [ $t(13) = 3.11, p = .008$ ]. As seen in Table 4, results indicate significant change in the predicted direction on several of the individual narrative themes. At 3MFU, participants shared more comments about learning and growing from their deployment experiences [ $t(13) = -3.49, p = .004$ ], and identified more positive aspects about their experiences [ $t(13) = -2.44, p = .030$ ]. They also shared fewer thoughts of being overwhelmed [ $t(13) = 3.00, p = .010$ ] or feeling unsupported [ $t(13) = 2.91, p = .012$ ] during deployment.

### Changes in Depression and Resilience

Table 5 presents the means, standard deviations, and t-statistics for the outcome measures. Results of t-tests indicated significant reductions in symptoms of depression

**Table 3** Correlations among key study variables at pre-group and 3MFU (N = 14)

Measure	1	2	3	4	5	6	7	8	9	10	11	12
1. Positive	–	.61*	.20	.02	.28	–.64*	–.40	–.50	.34	.40	.30	–.45
2. Supported	.76**	–	–.11	–.27	–.18	.02	.00	–.24	.27	.07	–.18	–.06
3. Hope	.74**	.83**	–	–.18	.19	–.39	–.30	–.28	.09	.19	.06	–.23
4. Growing	.73**	.61*	.85**	–	.25	.07	.00	.20	–.48	.23	.13	.17
5. Strong	.68**	.76**	.65*	.70**	–	–.26	–.40	.27	.14	.27	.13	.14
6. Helpless	–.52	–.30	–.27	–.30	–.14	–	.61*	.58*	–.14	–.40	–.36	.63*
7. Overwhelmed	–.49	–.13	–.09	–.10	–.26	.53	–	.19	–.07	.05	–.13	.30
8. Unsupported	–.53	–.14	–.20	–.37	–.35	.56*	.76**	–	–.35	–.36	–.23	.61*
9. ISEL-12	.29	.24	.27	.14	.01	–.08	–.11	.04	–	.41	.37	.01
10. SWLS	.46	.48	.60*	.55*	.36	.13	.03	.02	.46	–	.42	–.08
11. LOT-R	.31	.28	.40	.45	.15	–.18	–.01	–.01	.66**	.52	–	–.26
12. PHQ-9	–.20	–.16	–.34	–.11	–.06	.05	.17	–.04	–.55*	–.11	–.16	–

Intercorrelations for pre-group measures are presented above the diagonal and intercorrelations for 3MFU are presented below the diagonal  
Narrative themes: positive, positive aspects about the deployment experience; supported, feeling supported; hope, feeling hope; growing, learning something or growing from the experience; strong, feeling strong or self-competent; helpless, feeling helpless; overwhelmed, feeling overwhelmed; unsupported, feeling unsupported; ISEL-12, interpersonal support evaluation list-12; SWLS, Satisfaction With Life Scale; LOT-R, Life Orientation Test-Revised; PHQ-9, Patient Health Questionnaire

\*  $p < .05$ ; \*\*  $p < .01$

**Table 4** Change in narrative themes about deployment (N = 14)

Does the deployment narrative include:	Pre-group <i>M (SD)</i>	3MFU	<i>t</i>	<i>p</i>
Positive themes				
Positive aspects about the deployment experience	7.36 (1.95)	9.86 (3.21)	−2.44	.030
Feeling supported	5.43 (1.16)	6.29 (1.82)	−1.55	.145
Feeling hope	6.07 (1.49)	7.00 (2.15)	−1.53	.150
Learning something or growing from the experience	5.71 (1.07)	8.79 (3.12)	−3.49	.004
Feeling strong or self-competent	6.14 (1.03)	7.64 (2.37)	−1.81	.094
Negative themes				
Feeling helpless	7.86 (2.51)	6.57 (1.60)	1.86	.085
Feeling overwhelmed	8.00 (2.08)	6.14 (1.17)	3.00	.010
Feeling unsupported	7.86 (1.99)	6.07 (2.16)	2.91	.012
Sum of all positive themes	30.71 (3.71)	39.57 (11.21)	−2.56	.024
Sum of all negative themes	23.71 (5.31)	18.79 (4.28)	3.11	.008

from pre-group to the 3MFU assessment [ $t(13) = 2.44$ ,  $p = .030$ ]. Using categorical cut-offs on the PHQ-9, participants reported pre-group depression symptoms across the range of minimal ( $n = 4$ ), mild ( $n = 8$ ), and moderately severe ( $n = 2$ ). At the 3MFU, categorical improvement was noted with minimal ( $n = 6$ ), mild ( $n = 7$ ), moderate ( $n = 1$ ), and none in the moderately severe category.

Changes in characteristics of resilience were also observed at the 3-month follow-up assessment. Specifically,  $t$  test results indicated significant growth in life satisfaction from pre-group to the 3MFU [ $t(13) = -3.53$ ,  $p = .004$ ]. Similarly, gains in social support were also demonstrated at 3MFU [ $t(13) = -3.56$ ,  $p = .003$ ]. Significant changes in optimism were not observed.

## Discussion

The current study shows promising findings for HomeFront Strong as a therapeutic intervention for military spouses coping with the transitions of deployment. Participation in HFS was associated with a reduction in symptoms of depression and improvements in key characteristics of resilience, including life satisfaction and social support. Importantly, these findings were evidenced 3 months after completion of the group, suggesting sustained gains for participants. While the sample size for this study is small

and lacks a comparison group, the presence of positive results in the context of a population with high risk and very few existing evidence-based programs warrants further consideration and attention.

A unique aspect of the current study is the use of qualitative interviews to access personal narratives as a mechanism for highlighting thoughts and perceptions about deployment and giving insight into the process of “meaning making,” which is linked to deployment-related adjustment (Larner and Blow 2011). Cognitive patterns are a predictor of mental health and adjustment across a myriad of populations (Mathews and MacLeod 2005; Seligman et al. 1988). To our knowledge, this is the first study that has applied thematic analyses to deployment narratives in military spouses both at a single time point as a predictor of adjustment and also as an outcome variable that may be influenced by an intervention. Results indicate that negative thoughts about deployment were associated with higher rates of depressive symptoms prior to the group; while positive thoughts about deployment were associated with higher rates of life satisfaction at the 3MFU. This is consistent with the established literature showing links between negative thoughts and depression (Gotlib and Joormann 2010), and positive thoughts and resilience (Seligman 2006).

Moreover, we found support for our hypotheses that the personal narrative spouses held about their deployment experiences changed following the HFS group. After HFS,

**Table 5** Change in outcome measures (n = 14)

Construct (measure)	Pre-group <i>M (SD)</i>	3MFU	<i>t</i>	<i>p</i>
Depression (PHQ-9)	7.36 (4.96)	4.64 (3.03)	2.44	.030
Life satisfaction (SWLS)	23.14 (4.85)	27.64 (5.29)	−3.53	.004
Social support (ISEL)	34.50 (7.26)	39.14 (5.57)	−3.56	.003
Optimism (LOT-R)	16.57 (4.97)	18.29 (3.79)	−1.61	.132

the deployment narratives were more positive and strength-based with fewer examples of feeling overwhelmed or unsupported during deployment. In essence, military spouses changed the way they told their story about deployment after HFS. This has very important implications because this opens a portal for accessing and changing spouses' perceptions and subjective experience of the deployment, with the hopes of impacting psychological health and ongoing resilience. While improvements in depression and other resilience characteristics were indeed found, the small sample size prevented fully examining whether the thematic changes in the narrative were the mechanism of these effects.

Changes in optimism following HFS were not realized. Cautiously, with the non-significant trend towards higher optimism scores at 3MFU, perhaps a significant finding will emerge with a larger sample. Alternatively, perhaps HFS has an impact on optimistic cognitions, but does not fully tap into dispositional optimism as measured by the LOT-R. Future studies with a larger sample size can more closely examine this outcome, and consider intervention modifications to boost the impact on learned optimism (e.g., access to web-based workbook material, text-reminders to complete gratitude homework, mobile applications to support use of new skills and strategies).

## Limitations

The current study has several limitations, most notably the small sample size and the lack of a control or comparison group. The sample population was also restricted, with exclusively female spouses, most of whom were highly educated and Caucasian. Additionally, given the isolation that some military spouses may experience, it is possible that the availability of a safe group environment was the main driver of intervention effects. These factors limit the generalizability of findings; however, given the near absence of evidence-based interventions for this population, these early outcomes are important and represent a promising potential intervention for military spouses. This study is drawn from the Phase I implementation of HFS, where the primary goal was development of the intervention and evaluation protocol, with consideration of feasibility and palatability for participants (Kees and Rosenblum, in press). These limitations will be addressed in a Phase II larger scale ( $n = 360$ ) quasi-experimental study with a home-based, information only control condition for comparison.

Another limitation of the current study centers on the timing of and rates of attrition at the 3MFU (25 %). For several participants, the follow-up assessment occurred close in proximity to the time of their partner's return from Afghanistan, placing them in the midst of post-deployment

reintegration. Reintegration can be a time of high stress for some families as partners re-connect and re-negotiate their family roles and responsibilities (Bowling and Sherman 2008; Marek and D'Aniello 2014). With future studies and a larger sample size, stage of the deployment cycle for the intervention and assessment waves can be considered and statistically controlled. Additionally, the Phase II study includes more opportunities for contact with participants between the end of group and the assessment waves, changes in the remuneration schedule, and the addition of a 6-month follow-up assessment, thus also making the program eligible for consideration as a "Promising Program" with the Clearinghouse for Military Family Readiness.

## Clinical Implications

There is a pressing need for clinicians to consider the impact of military involvement and the deployment cycle on families, in particular, the romantic partners of service members and veterans. With greater than 70 % of military families living off-installation (National Military Family Association 2011) and steady increases in the number of separated veterans and their families moving into civilian communities (Feickert 2014), it is a priority to develop intervention programs that can be embedded in the community with local providers. Military-sensitive community-based clinicians will be vital to meeting the current and future needs of military families. Using a structured curriculum, HFS applies evidence-based strategies commonly known to most clinicians, thus increasing the ease of training providers in this model and moving towards large-scale dissemination. Indeed, pilot projects are underway to train community clinicians in local implementation of HFS.

In our experience, working with military spouses is a rewarding and meaningful opportunity that we would encourage other clinicians to consider. For those who are thinking of starting to work with military-connected spouses, we offer the following practical considerations for working with this population. Recognize that deployment or military involvement more generally may impact individuals differently. As this study has demonstrated, an individual's personal reaction to military stressors may influence their personal wellbeing and will be important to note for intervention. Likewise, it is important to consider the spouse's specific experiences with the military (i.e. what stage of deployment are they in? Have they been through previous deployments with their spouse? How might length, number, and type of missions be impacting this individual and their reactions to their current stressors? What are other stressors they may be experiencing?). Demonstrate interest and curiosity regarding the spouse's

unique story and involvement with the military, as well as their own connectedness to current supports, including military specific supports. In addition to general training in evidence based practice and cultural sensitivity to different populations, consider availing yourself of training opportunities and experiences with military involved individuals and military culture. For example, Star Behavioral Health Providers is available in numerous states and offers free training for clinicians interested in working with military populations. The Center for Deployment Psychology also offers a variety of high quality web-based training and resources. The need for culturally-informed clinical care providers with this population is immense, and the opportunities for making a meaningful contribution abound.

Deployment and military life can be a tremendous struggle for many spouses. “I’ve never felt so emotionally drained in my life. My emotions are with everybody involved and sometimes I don’t have any to spare at the end of the day.” But we also know that with the appropriate supports and intervention, the military spouse population is resilient and more than capable of overcoming and thriving. “It’s the hardest thing I’ve done in my life so far, but it is rewarding when you see the inches and I am telling you they’re inches, but they do at some point make a foot. And if I can handle this I can probably handle anything.”

**Acknowledgments** This study was supported by funding from the Ethel and James Flinn Foundation and through Welcome Back Veterans with support from the Robert R. McCormick Foundation and Major League Baseball Charities. We gratefully acknowledge the women who participated in HomeFront Strong, and the service members, veterans, and families who serve our country.

## References

- Allison, P. J., Guichard, C., & Gilain, L. (2000). A prospective investigation of dispositional optimism as a predictor of health-related quality of life in head and neck cancer patients. *Quality of Life Research*, 9(8), 951–960. doi:10.1023/A:1008931906253.
- Barile, J. P., Reeve, B. B., Smith, A. W., Zack, M. M., Mitchell, S. A., Kobau, R., & Thompson, W. W. (2013). Monitoring population health for Healthy People 2020: Evaluation of the NIH PROMIS® Global Health, CDC Healthy Days, and satisfaction with life instruments. *Quality of Life Research*, 22(6), 1201–1211. doi:10.1007/s11136-012-0246-z.
- Beck, J. S. (2011). *Cognitive behavior therapy: Basics and beyond* (2nd ed.). New York: Guilford Press.
- Beck, A. T., Rush, A. J., Shaw, B. F., & Emery, G. (1979). *Cognitive therapy of depression*. New York: Guilford Press.
- Blow, A. J., Gorman, L., Ganoczy, D., Kees, M., Kashy, D. A., Valenstein, M., et al. (2013). Hazardous drinking and family functioning in National Guard veterans and spouses postdeployment. *Journal of Family Psychology*, 27(2), 303–313. doi:10.1037/a0031881.
- Blowing, U. B., & Sherman, M. D. (2008). Welcoming them home: Supporting service members and their families in navigating the tasks of reintegration. *Professional Psychology: Research and Practice*, 39(4), 451–458. doi:10.1037/0735-7028.39.4.451.
- Butler, A., Chapman, J., Forman, E., & Beck, A. (2006). The empirical status of cognitive-behavioral therapy: A review of meta-analyses. *Clinical Psychology Review*, 26(1), 17–31. doi:10.1016/j.cpr.2005.07.003.
- Carver, C. S. (2014). Self-control and optimism are distinct and complementary strengths. *Personality and Individual Differences*, 66, 24–26. doi:10.1016/j.paid.2014.02.041.
- Chandra, A., Lara-Cinisomo, S., Jaycox, L. H., Tanielian, T., Burns, R. M., Ruder, T., & Han, B. (2010). Children on the homefront: The experience of children from military families. *Pediatrics*, 125(1), 16–25. doi:10.1542/peds.2009-1180.
- Cohen, S., & Hoberman, H. M. (1983). Positive events and social supports as buffers of life change stress. *Journal of Applied Social Psychology*, 13(2), 99–125. doi:10.1111/j.1559-1816.1983.tb02325.x.
- de Burgh, H. T., White, C. J., Fear, N. T., & Iversen, A. C. (2011). The impact of deployment to Iraq or Afghanistan on partners and wives of military personnel. *International Review of Psychiatry*, 23(2), 192–200. doi:10.3109/09540261.2011.560144.
- Department of Defense, American Forces Press Service. (2010). Mullen voices concern about military suicide rate. Retrieved from <http://www.defense.gov/News/NewsArticle.aspx?ID=57490>
- Diener, E., Emmons, R. A., Larsen, R. J., & Griffin, S. (1985). The Satisfaction With Life Scale. *Journal of Personality Assessment*, 49(1), 71–75. doi:10.1207/s15327752jpa4901\_13.
- Ellis, A., & Harper, R. A. (1997). *A guide to rational living*. Hollywood, CA: Melvin Powers Wilshire Book Co.
- Everson, R. B., Darling, C. A., & Herzog, J. R. (2013). Parenting stress among US Army spouses during combat-related deployments: The role of sense of coherence. *Child & Family Social Work*, 18(2), 168–178. doi:10.1111/j.1365-2206.2011.00818.x.
- Feickert, A. (2014). Army drawdown and restructuring: Background and issues for Congress. *Congressional Research Service*. Retrieved from <http://www.fas.org/sgp/crs/natsec/R42493.pdf>
- Flake, E. M., Davis, B. E., Johnson, P. L., & Middleton, L. S. (2009). The psychosocial effects of deployment on military children. *Journal of Developmental and Behavioral Pediatrics*, 30(4), 271–278. doi:10.1097/DBP.0b013e3181aac6e4.
- Gilbody, S., Richards, D., Brealey, S., & Hewitt, C. (2007). Screening for depression in medical settings with the Patient Health Questionnaire (PHQ): A diagnostic meta-analysis. *Journal of General Internal Medicine*, 22(11), 1596–1602. doi:10.1007/s11606-007-0333-y.
- Gillham, J. E., Reivich, K. J., Jaycox, L. H., & Seligman, M. E. P. (1995). Prevention of depressive symptoms in schoolchildren: Two-year follow-up. *Psychological Science*, 6(6), 343–351. doi:10.1111/j.1467-9280.1995.tb00524.x.
- Gorman, L. A., Blow, A. J., Ames, B. D., & Reed, P. L. (2011). National Guard families after combat: Mental health, use of mental health services, and perceived treatment barriers. *Psychiatric Services*, 62(1), 28–34. doi:10.1176/appi.ps.62.1.28.
- Gotlib, I. H., & Joormann, J. (2010). Cognition and depression: Current status and future directions. *Annual Review of Clinical Psychology*, 6(1), 285–312. doi:10.1146/annurev.clinpsy.121208.131305.
- Hayes, S. C., Villatte, M., Levin, M., & Hildebrandt, M. (2011). Open, aware, and active: Contextual approaches as an emerging trend in the behavioral and cognitive therapies. *Annual Review of Clinical Psychology*, 7(1), 141–168. doi:10.1146/annurev-clinpsy-032210-104449.
- Holmes, P., Georgescu, S., & Liles, W. (2006). Further delineating the applicability of acceptance and change to private responses: The example of dialectical behavior therapy. *Behavior Analyst Today*, 7(3), 311–324. Retrieved from <http://www.baojournal.com/BAT%20Journal/BAT-Journals-2009.html>

- Institute of Medicine (U.S.). (2013). *Returning home from Iraq and Afghanistan: assessment of readjustment needs of veterans, service members, and their families*. Washington, D.C: National Academies Press. Retrieved from <http://www.nap.edu/catalog/13499/returning-home-from-iraq-and-afghanistan-assessment-of-readjustment-needs>
- Joffe, H. (2011). Thematic analysis. In D. Harper & A. R. Thompson (Eds.), *Qualitative research methods in mental health and psychotherapy* (pp. 209–223). Chichester: Wiley. doi:10.1002/9781119973249.ch15.
- Karney, B. R., & Crown, J. S. (2007). *Families under stress: An assessment of data, theory, and research on marriage and divorce in the military*. Santa Monica, CA: RAND Corporation. Retrieved from [http://www.rand.org/content/dam/rand/pubs/monographs/2007/RAND\\_MG599.pdf](http://www.rand.org/content/dam/rand/pubs/monographs/2007/RAND_MG599.pdf)
- Kobau, R., Snizek, J., Zack, M. M., Lucas, R. E., & Burns, A. (2010). Well-being assessment: An evaluation of well-being scales for public health and population estimates of well-being among US adults. *Applied Psychology: Health and Well-Being*, 2(3), 272–297. doi:10.1111/j.1758-0854.2010.01035.x.
- Kroenke, K., Spitzer, R. L., & Williams, J. B. W. (2001). The PHQ-9: Validity of a brief depression severity measure. *Journal of General Internal Medicine*, 16(9), 606–613. doi:10.1046/j.1525-1497.2001.016009606.x.
- Larner, B., & Blow, A. (2011). A model of meaning-making coping and growth in combat veterans. *Review of General Psychology*, 15(3), 187–197. doi:10.1037/a0024810.
- Lewis, M., Lamson, A., & Leseuer, B. (2012). Health dynamics of military and veteran couples: A biopsychorelational overview. *Contemporary Family Therapy*, 34(2), 259–276. doi:10.1007/s10591-012-9193-7.
- Linehan, M. M., & Dimeff, L. (2001). Dialectical behavior therapy in a nutshell. *The California Psychologist*, 34, 10–13. Retrieved from <http://www.cpapsych.org/?418>
- Litt, M. D., Tennen, H., Affleck, G., & Klock, S. (1992). Coping and cognitive factors in adaptation to in vitro fertilization failure. *Journal of Behavioral Medicine*, 15(2), 171–187. doi:10.1007/BF00848324.
- Mansfield, A. J., Kaufman, J. S., Marshall, S. W., Gaynes, B. N., Morrissey, J. P., & Engel, C. C. (2010). Deployment and the use of mental health services among US Army wives. *New England Journal of Medicine*, 362(2), 101–109. doi:10.1056/NEJMoa0900177.
- Marek, L. I., & D'Aniello, C. (2014). Reintegration stress and family mental health: implications for therapists working with reintegrating military families. *Contemporary Family Therapy*, 36(4), 443–451. doi:10.1007/s10591-014-9316-4.
- Mathews, A., & MacLeod, C. (2005). Cognitive vulnerability to emotional disorders. *Annual Review of Clinical Psychology*, 1(1), 167–195. doi:10.1146/annurev.clinpsy.1.102803.143916.
- National Military Family Association. (2011). *Summary and recommendations from the national military family association summit*. Retrieved from <http://www.militaryfamily.org/assets/pdf/FINAL-Summary-2-color.pdf>
- NBC News. (2013). Like an airborne disease: Concern grows about military suicides spreading within families. Retrieved from <http://codeofsupport.org/cosfs-kristy-kaufmann-talks-about-military-suicides-with-nbc>
- Office of the Deputy Assistant Secretary of Defense. (2014). *2013 Demographics: Profile of the military community*. Retrieved from <http://www.militaryonesource.mil/12038/MOS/Reports/2013-Demographics-Report.pdf>
- Padden, D. L., Connors, R. A., & Agazio, J. G. (2011). Stress, coping, and well-being in military spouses during deployment separation. *Western Journal of Nursing Research*, 33(2), 247–267. doi:10.1177/0193945910371319.
- Paley, B., Lester, P., & Mogil, C. (2013). Family systems and ecological perspectives on the impact of deployment on military families. *Clinical Child and Family Psychology Review*, 16(3), 245–265. doi:10.1007/s10567-013-0138-y.
- Pavot, W., Diener, E., Colvin, C. R., & Sandvik, E. (1991). Further validation of the Satisfaction With Life Scale: Evidence for the cross-method convergence of well-being measures. *Journal of Personality Assessment*, 57(1), 149–161. doi:10.1207/s15327752jpa5701\_17.
- Rosenblum, K. L., McDonough, S. C., Sameroff, A. J., & Muzik, M. (2008). Reflection in thought and action: Maternal parenting reflectivity predicts mind-minded comments and interactive behavior. *Infant Mental Health Journal*, 29(4), 362–376. doi:10.1002/imhj.20184.
- Scheier, M. F., Carver, C. S., & Bridges, M. W. (1994). Distinguishing optimism from neuroticism (and trait anxiety, self-mastery, and self-esteem): A reevaluation of the Life Orientation Test. *Journal of Personality and Social Psychology*, 67(6), 1063–1078. doi:10.1037//0022-3514.67.6.1063.
- Seligman, M. E. P. (2006). *Learned optimism: How to change your mind and your life* (1st Vintage Books ed.). New York: Vintage Books.
- Seligman, M. E., Castellon, C., Cacciola, J., Schulman, P., Luborsky, L., Ollove, M., & Downing, R. (1988). Explanatory style change during cognitive therapy for unipolar depression. *Journal of Abnormal Psychology*, 97(1), 13. doi:10.1037//0021-843x.97.1.13.
- Seligman, M. E. P., Schulman, P., & Tryon, A. M. (2007). Group prevention of depression and anxiety symptoms. *Behaviour Research and Therapy*, 45(6), 1111–1126. doi:10.1016/j.brat.2006.09.010.
- Seligman, M. E. P., Steen, T. A., Park, N., & Peterson, C. (2005). Positive psychology progress: Empirical validation of interventions. *American Psychologist*, 60(5), 410–421. doi:10.1037/0003-066X.60.5.410.
- Shifren, K., & Hooker, K. (1995). Stability and change in optimism: A study among spouse caregivers. *Experimental Aging Research*, 21(1), 59–76. doi:10.1080/03610739508254268.
- Shnek, Z. M., Irvine, J., Stewart, D., & Abbey, S. (2001). Psychological factors and depressive symptoms in ischemic heart disease. *Health Psychology*, 20(2), 141–145. doi:10.1037/0278-6133.20.2.141.
- Tolin, D. F. (2010). Is cognitive-behavioral therapy more effective than other therapies? A meta-analytic review. *Clinical Psychology Review*, 30(6), 710–720. doi:10.1016/j.cpr.2010.05.003.
- Verdeli, H., Baily, C., Voursora, E., Belser, A., Singla, D., & Manos, G. (2011). The case for treating depression in military spouses. *Journal of Family Psychology*, 25(4), 488–496. doi:10.1037/a0024525.
- Warner, C. H., Appenzeller, G. N., Warner, C. M., & Grieger, T. (2009). Psychological effects of deployments on military families. *Psychiatric Annals*, 39(2), 56–63. doi:10.3928/00485713-20090201-11.
- Zeanah, C. H., & Benoit, D. (1995). Clinical applications of a parent perception interview in infant mental health. *Child and Adolescent Psychiatric Clinics of North America*, 4(3), 539–554. Retrieved from: <http://www.childpsych.theclinics.com/>