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Telephone Support During Overseas Deployment for Military Spouses
Formerly: Telephone Support During Deployment for OEF/OIF Spouses

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13. SUPPLEMENTARY NOTES

14. ABSTRACT

Deployment impacts both service member and family. The goal is to help spouses learn ways to manage stress and solve problems related to deployment and reintegration, communication, managing long distance relationships, and other common problems. The study compared telephone support groups to online education sessions for 161 spouses. In the Telephone Support groups, a group leader and participants 12 times over six months to focus on education, skills building and support. Education Only online sessions provided the same education content, without skills building or support. Content included strategies to reduce or eliminate communication difficulties, how to find help; practical concerns; fostering resilience and decreasing stress; fostering relationships while apart, negotiating roles and relationships; changes during deployment; strategies to support the spouse and the service member; and cues to alert spouses when to seek mental health services for the family or themselves. All participants significantly improved in resilience, depression, anxiety, and coping. There was no difference between arms in resilience or depression. Webinar participants significantly improved in anxiety and showed a trend toward improved coping. Both groups reported self-efficacy as a driver of benefit. For webinar participants, there was no effect for dosage. For support group participants, more sessions attended led to significantly improved anxiety, and trends toward improved resilience, depression, and coping. Dissemination materials including print Spouse Deployed Workbooks, interactive pdf Workbooks, and 14 e-learning modules were developed to serve as part of the Army's resilience training.

15. SUBJECT TERMS

Spouses, social support, stress disorders, communication, combat disorders

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Table of Contents

Page

INTRODUCTION:

Deployment impacts both service member and family, and the cost can be high. Spouses' reactions to deployment may include emotional distress, loneliness, anticipatory fear or grief, somatic complaints, and depression. Spouses may also be stressed by single-parenting, learning skills such as home repairs, making decisions alone, and lack of communication with the service member. Assistance during deployment can also help with reintegration post deployment. This randomized clinical trial examined two interventions designed to help spouses manage deployment and prepare for reintegration. The study enrolled 161 spouses/significant others. In the Telephone Support groups, a group leader and participants met 12 times over six months to focus on education, skills building and support. Education Only online sessions provided the same education content, without skills building or support. Content included strategies to reduce or eliminate communication difficulties, how to find help; practical concerns; fostering resilience and decreasing stress; fostering relationships while apart, negotiating roles and relationships; changes during deployment; strategies to support the spouse and the service member; and cues to alert spouses when to seek mental health services for the family or themselves.

All participants showed significant improvement in resilience, depression, anxiety, and coping. There was no difference between arms in resilience or depression. Webinar participants significantly improved in anxiety and showed a trend toward improved coping. Both groups reported self-efficacy as a driver of benefit. For webinar participants, there was no effect for dosage. For support group participants, more sessions attended led to significantly improved anxiety, and trends toward improved resilience, depression, and coping.

Making this information available to spouses of deployed Soldiers was an important objective of the study. The dissemination materials will serve as the Army's deployment training for families, complementing already available pre and post deployment training. Print and interactive pdf versions of the Spouse Deployed Workbook have been developed and sent to the Army; print versions will be managed by Army Community Service at Ft. Sam Houston. Fourteen interactive elearning modules have been developed. As of the date of this report, these will be initially placed on the Walter Reed Army Institute of Research website and then on the Army Resiliency Directorate website. These websites are developing open pages (not CAC-enabled) for the modules.

BODY:

Completed Tasks
Task 1: Develop Manual of Operations (MOP) – completed Year 1, April, 2011– March, 2012
Task 2: Obtain IRB and HRPO approval – Completed, Year 1, April, 2011– March, 2012, Q3, October-December, 2011
Task 3: Print approved materials– Completed, Year 1, April, 2011– March, 2012, Q3, October-December, 2011
Task 4: Hire and train personnel – Initially Completed Year 1, April, 2011 – March, 2012; Replacement staff hired and trained Year 2, April, 2012 – March, 2013, Q6, July – September, 2012

Task 5: Recruit and Randomize – 161 spouses recruited and randomized, half in each arm, 227 screened. Completed December, 2013
Task 6: Intervention 1 (Telephone Support Groups) –Telephone support groups provided. Completed May, 2014.
Task 7: Intervention 2 (Online Education/Webinar Sessions) – Webinar sessions provided. Completed June, 2014.
Task 8: : Data Collection/Data Entry/Cleaning - 161 baselines collected, 137 6 month follow-ups, 125 12 month follow-ups, and 98 project evaluations collected. Data collection completed December, 2014. All data entry and cleaning completed February, 2015.
Task 9: Data Analysis – all analyses completed and data archived, 2017.
Task 10: Prepare and Disseminate Results – 11 presentations, 2 manuscripts, print Spouse Deployed Workbook, interactive pdf Spouse Deployed Workbook, 14 interactive elearning modules

Participants:

The 161 spouses were predominantly wives (98%), in their mid-30s. On average, they had been married 9 years with 1.6 children. They were well educated (15 years education) and 55% were employed. The majority were Caucasian/White (80%) with 16% being Hispanic/Latina. Clinically, at baseline, their health was good and they had low depression and anxiety, good resilience, and coping skills. Their service members were also in their mid-30s, with 26% National Guard/Reserve and 65% non-commissioned officers. During their 3.4 total deployments (including the current one), of which 2 were in Iraq or Afghanistan, 20% had been injured.

Three items were reported most frequently by spouses as military family life stressors: increased time the service member spends away from the family, uncertainty about future deployments, and difficulty balancing family life and military duties (Table 1, Appendix).

Study Results – Support Group and Webinar Participants

During six months, participants in both arms improved significantly for all outcomes (Table 2, Appendix). Webinar participants showed significantly more improvement during six months than support participants for anxiety, and there was a trend toward a significant group by time interaction effect for personal coping.

Dosage had no significant effect on webinar participants. With more support group sessions, support participants had significantly improved anxiety ($b = -.39$, $r2 = .10$, $p = .006$), and trends toward improved resilience ($b = .50$, $r2 = .05$, $p = .073$), depression ($b = -.26$, $r2 = .04$, $p = .081$), and personal coping ($b = -.25$, $r2 = .05$, $p = .052$). Attending 10 support group sessions led to an almost 20% improvement in anxiety score.

Participant Self-Reported Benefit

Several kinds of benefit were reported. Support arm spouses reported support from others; spouses in both arms felt supported by the military because it was providing the study. Improved self-efficacy was also reported by participants in both interventions. As expected, support was

an important benefit for support group participants. Participants appreciated the normalizing of their reactions. As one participant said: "*Enjoyed connecting, knowing I am not crazy for some of the issues taking up real estate in my head.*" Other spouses reported that they had no support at home, so the support groups filled a need: "*I don't have a lot of support here, I'm by myself. I figured it out the whole time while he was gone, which his training was a year and a half, I actually interacted like four times on a human level with other people. … So not having any support at home, it was good to have something*."

Another benefit for participants in both groups was feeling connected to the military and glad that the military cared about the family. As one spouse said: "*It also felt good to know that someone cares about the family left behind. Most resources are for the soldiers, as it should be. It's nice to have resources for us too*."

Self-efficacy was the most important issue for spouses in both study arms, with spouses focusing on their improved ability in coping skills and managing their stress. Participants in both arms reported that resources and learning stress management and other coping techniques and skills were benefits. As one webinar spouse said: "*The study really kept me occupied and I learned new things about how to cope. The video sessions, especially what I did, were really helpful. It really did put things in perspective kind of like that book* <u>*What to Expect When You Are Expecting*</u>*, it was just kind of a walk through for the deployment*."

Although skills for themselves were important, spouses also used their newly found skills for others. As one webinar participant said: "*It made me feel good to be involved in something like this while my husband was deployed because it meant I could help other people …I taught everybody I know how to do that* [breathing relaxation exercise] *. I even taught my 7 year old the other day.*"

Webinar participants discussed the benefit for their husbands, either through their understanding of their husband's responses or their working with their husbands using what they had learned. Only two support group participants mentioned benefit to their family or husband, but ten webinar participants did so. Benefits could be indirect, as in the spouse coping better. *It taught me how to stay in touch with him even though we weren't together. It gave me great tools to use in order to communicate better with one another instead of just playing the blame game*." A direct benefit was involvement of the service member in doing homework. "*Also, it was nice because I could talk to my husband about it as well. So, we would do some of the homework things. We would do them together sometimes. It was helpful for not just me but my husband as well*."

Decision Making and Communication During Deployment

Spouses were asked about communication methods and decision making strategies reported by military spouses of service members who were deployed. Spouses were asked what communication methods were used while the service member was deployed and how satisfied they were with each method. For each of eight methods (e.g., letters, email, videoconferencing, blogging) spouses were asked how often each was used and satisfaction level for each method used.

Almost ¾ of spouses (70.2%) reported having problems communicating with their service member during deployment, and 79.5% reported that communication was moderately or very stressful. Common methods of communication were email and telephone (Table 3, Appendix) and spouses were satisfied with these methods. For those who used them, all but two communication methods averaged weekly use; letters and other methods were used approximately monthly. There were age differences in methods of communication. Spouses who used text messages were older (37.4 years $\pm$ 8.2 vs. 33.9 years $\pm$ 7.9, $p = .007$). The same was true for video conferencing (36.3 years $\pm$ 8.1 vs. 33.3 years $\pm$ 8.1, $p = .037$). Spouses who communicated through social networking sites were younger (34.3 years $\pm$ 8.0 vs. 37.7 years $\pm$ 8.2, $p = .010$).

For decision making, spouses were asked how decisions were made while the service member was home and during deployment. Decisions included minor household decisions (e.g., fixing the washing machine), major household decisions (e.g., replacing a car), financial decisions (e.g., budget, debt repayment), and decisions about children (e.g., medical, educational, discipline). For the four types of decisions studied, there were statistically significant differences between decision making responsibility while the service member was at home versus during deployment (Table 4, Appendix). Specifically, spouses reported taking more responsibility during deployment, with decisions made together decreasing. They further reported that, except for minor household decisions, service member primary responsibility in decision making was not significantly different between home and deployment.

Some spouses reported that their decision making was the same during deployment and at home. Accordingly, for minor household decisions 27.8% of couples made decisions the same way at home and deployment; for major household decisions 65.8%; for financial decisions 55.0%; and for decisions about children 38.4%.

Dissemination

Dissemination of materials began in the last project year with the development of elearning modules incorporating scripts, slides, and downloadable worksheets, and a revised and reformatted Spouse Deployed Workbook. The elearning modules and Workbook will provide the deployment training piece to complement the Army's pre and post deployment training for spouses. Print and interactive pdf versions of the Spouse Deployed Workbook have been developed and sent to the Army; print versions have been developed and sent to Army Community Service at Ft. Sam Houston, which will manage distribution. Fourteen interactive elearning modules have been developed. As of the date of this report, these will be initially placed on the Walter Reed Army Institute of Research website and then on the Army Resiliency Directorate website. These websites are developing open pages (not CAC-enabled) for the modules.

KEY RESEARCH ACCOMPLISHMENTS:

- During six months, participants in both arms improved significantly for all outcomes.

    - Webinar participants showed significantly more improvement during six months than support participants for anxiety, and there was a trend toward a significant group by time interaction effect for personal coping.
    - Dosage had no significant effect on webinar participants.
    - With more support group sessions, support participants had significantly improved anxiety, and trends toward improved resilience, depression, and personal coping.
    - Attending 10 support group sessions led to an almost 20% improvement in anxiety score.

- Several kinds of benefit were reported.
    - Support from others
    - Support from the military
    - Feeling connected to the military
    - Self-efficacy – improved ability in coping skills and managing stress.
    - Resources
    - Use of skills for others, including service member

- ¾ of spouses (70.2%) report having problems communicating with their service member during deployment
    - 79.5% report that communication is moderately or very stressful

- Common methods of communication are email and telephone

- There are age differences in methods of communication
    - Spouses who used text messages and video conferencing are older
    - Spouses who communicate through social networking sites are younger

- There are statistically significant differences between decision making responsibility while the service member is at home versus during deployment
    - Spouses take more responsibility during deployment, with decisions made together decreasing.
    - Except for minor household decisions, service member primary responsibility in decision making is not significantly different between home and deployment.

- Many couples make decisions the same way during deployment and at home
    - 27.8% of couples the same for minor household decisions
    - 65.8% of couples the same for major household decisions
    - 55.0%of couples the same for financial decisions
    - 38.4%of couples the same for decisions about children

REPORTABLE OUTCOMES - RESEARCH

- 11 presentations
- 2 manuscripts published

Presentations (available upon request)

- Telephone Support during Overseas Deployment for Military Spouses. MOMRP Meeting, August 2, 2012.
- Telephone Support during Overseas Deployment for Military Spouses. Research Service Conference, November 30, 2012.
- Telephone Support during Overseas Deployment for Military Spouses. Health Systems Research Conference. University of Tennessee/University of Memphis, February 6, 2013.
- Telephone Support during Overseas Deployment for Military Spouses. U.S. Army MOMRP Meeting, March 24, 2015.
- Telephone Support during Overseas Deployment for Military Spouses. Research Service, January 8, 2016
- Support for Military Spouses: Deployment and Post Deployment. Care Support Coordinators national call. September 8, 2016.
- Decision Making Responsibility for Service Members and Spouses During and Post Deployment. Poster, Military Health System Research Symposium (MHSRS), Orlando/Kissimmee, FL, August 15-18, 2016.
- Distance Strategies for Supporting Spouses of Deployed Service Members. Presentation, Military Health System Research Symposium (MHSRS), Orlando/Kissimmee, FL, August 15-18, 2016.
- Caregiving for Adults in the U.S. University of Memphis School of Public Health, April 13, 2016.
- Maintaining Intimacy. VA Care Support Coordinators national call. July 14, 2016.
- Caregiving for Adults in the U.S. University of Memphis School of Public Health, February 13, 2017.

Manuscripts (available upon request, attached in Appendix)

- Martindale-Adams J, Nichols LO, Zuber J, Graney MJ, & Burns R. Decision Making During the Deployment Cycle. The Family Journal, 2016, 34(3):216-221. DOI: 10.1177/1066480716648686.
- Nichols LO, Martindale-Adams J, Zuber J, Graney MJ, Burns R, & Clark C. Supporting Spouses of Service Members during Deployment. Military Behavioral Health, 2017, 5(2):137-146. DOI.org/10.1080/21635781.2016.1272018.

REPORTABLE OUTCOMES – DISSEMINATION

- Elearning Modules – topics below, topics and downloadable, interactive worksheets shown in Appendices

- Spouse Workbook – topics below, available in both print and interactive pdf - interactive pdf available upon request

Problem Solving	Communication	Resilient and Capable You	Relationships	Workbook Red Flags
•Basic Problem Solving •Practical Issues	•Communication Skills •Assertive Communication •How to Find and Receive Help •Conflict Resolution •Social Media	•Emotional Adjustment to Deployment •Recognizing Resilience •Managing Excess Stress •Taking Care of You First	•Family Relationship and Roles Changes •Enhancing Your Commitment •Parenting •Preparing for Post Deployment	• Child Abuse •Depression •Domestic Violence •Grief •Substance Abuse •Suicide Prevention •Understanding & Dealing with Anger •Safety Plan

CONCLUSION:

Deployment can have negative consequences for military spouses/partners and military organizations may struggle to find ways to help them. This study tested two means of providing assistance to spouses/significant others: telephone support groups and on-demand education webinars. During six months, participants in both arms improved significantly for all outcomes of resilience, depression, anxiety, and coping behaviors. Benefit was attributed to support, self-efficacy, improved coping and stress management skills, and resources.

Why are these findings important? Findings suggest multiple avenues can be used to provide support, coping strategies, and resources to help military spouses/partners cope with disruption and change during deployment. Strategies can be dependent on spouse/partner desires, time constraints, learning styles, and agency resources of time, staff, technological acumen, and funding.

For military couples, deployment may influence decision making. With deployment, spouses report that decision making changed significantly for minor household, major household, and financial decisions, and decisions about children. Decision making at home was predominantly

as a couple; during deployment more decisions were by the spouse. However, decision making stayed the same at home and during deployment for 1/3 to 2/3 of families, dependent on the type of decision, and these couples tended to make decisions together. Although spouses/partners are not always satisfied with methods of communication, availability of communication methods that allow rapid exchange of information may contribute to couples managing decisions together.

Why are these findings important? These study results provide guidance to both military and community mental health practitioners in supporting the well-being of military families. Post deployment role negotiation and reintegration into the family can be difficult. Before deployment, practitioners should discuss current family decision making and communication patterns and expectations during deployment. During deployment, partners can be encouraged to take on responsibilities that will help build their independence and facilitate smooth functioning of family life. At the same time, encouragement to continue, as much as possible and appropriate, familiar decision making during deployment and at home may help ease the service member's transition from deployment to home.

Why is dissemination important? Making this information available to spouses of deployed Soldiers was an important objective of the study. The elearning modules and Spouse Workbooks will serve as the Army's deployment training for families, complementing already available pre and post deployment training. Elearning modules will be easily accessible to spouses and have online, interactive worksheets that can also be downloaded. Spouses will also have access to either an interactive pdf or print Spouse Deployed Workbook.

REFERENCES and SUPPORTING DATA:

See manuscripts in Appendices

APPENDICES:

- Tables
    - Table 1. Baseline Stress of Military Family Life
    - Table 2. Mixed Model Analysis of Outcome Variables
    - Table 3. Baseline Communication Methods While Service Member Deployed
    - Table 4. Decision Making When Service Member (SM) Home and Deployed
- Elearning modules and workbook chapters and downloadable worksheets
- Quad chart
- Manuscripts
    - Martindale-Adams J, Nichols LO, Zuber J, Graney MJ, & Burns R. Decision Making During the Deployment Cycle. The Family Journal, 2016. DOI: 10.1177/1066480716648686.
    - Nichols LO, Martindale-Adams J, Zuber J, Graney MJ, Burns R, & Clark C. Supporting Spouses of Service Members during Deployment. Military Behavioral Health, 2017. DOI.org/10.1080/21635781.2016.1272018.

Table 1. Baseline Stress of Military Family Life Questions

Variable	n[a]	Moderately or Very Stressful %
All Military		
Increased time SM spent away from fam/friends to perform duties	158	75.3
Uncertainty about future deployments/assignments	155	60.6
Difficulty balancing family life and SM's military duties	146	52.7
Intensified training schedule for SM	143	66.4
Non-combat deployment/assignment with SM away from home	143	65.0
Combat deployment/assignment for SM	142	87.3
Family conflict over whether SM should remain in military	104	42.3
Permanent change of station (PCS)	87	64.4
Non-combat injury to SM from carrying out duties	49	59.2
Caring for your ill, injured, disabled SM	33	57.6
Combat-related injury to SM	22	72.7
Guard and Reserve Only		
Change in family financial situation due to SM's active duty	79	36.7
Concern over SM's employment when deactivated	72	52.8
Unpredictability of when SM will be activated for duty	71	64.8
Concern over continuity of access to healthcare for family	71	46.5

Note: Stress of Military Family Life questions are from the Navy and Marine Stress of Life Index; SM = Service Member.

[a]n = number of spouses reported to have experienced situation

Table 2. Mixed Model Analysis of Outcome Variables, Support Groups and Webinars

Variable	Baseline n = 161 M ± SD	6 Months n = 137 M ± SD	Group *p*-value	Time *p*-value	Group by Time *p*-value
Anxiety (0-21)			.494	<.001	.032
Support	6.0 ± 4.4	5.4 ± 5.1			
Webinar	7.3 ± 5.2	5.0 ± 4.8			
Depression (0-27)			.376	<.001	.198
Support	5.5 ± 4.3	3.8 ± 4.4			
Webinar	6.6 ± 5.5	3.9 ± 4.2			
Resilience (0-100)			.342	<.001	.180
Support	75.4 ± 11.5	78.3 ± 9.4			
Webinar	75.9 ± 11.8	81.0 ± 10.2			
Personal Coping (8-40)			.773	<.001	.075
Support	33.0 ± 3.8	34.5 ± 4.0			
Webinar	32.5 ± 4.6	35.4 ± 4.2			
Family Coping[a] (6-30)			.180	<.001	.128
Support	26.2 ± 3.2	26.8 ± 3.3			
Webinar	26.1 ± 3.9	27.9 ± 2.4			

Note: Anxiety = GAD-7, Depression = PHQ-9, Resilience = CD-RISC, Personal and Family Coping questions from the 1991-1992 Survey of Army Families II in USAR-EUR.

[a] Family Coping is only assessed with participants who have children living in the home. n = 102 and 93 at baseline and 6 months respectively.

Table 3. Baseline Communication Methods While Service Member Deployed (N = 161)

Communication Methods	Total Using %	Usage M ± SD	Moderately or Very Satisfied Using Method %
Email	91.9	3.3 ± 0.8	87.2
Phone calls	90.7	2.8 ± 0.9	84.2
Video conferencing	74.5	2.7 ± 1.0	77.5
Social networking site	62.7	2.8 ± 0.9	78.2
Letters	60.9	1.9 ± 0.8	66.3
Instant messaging	49.1	3.0 ± 0.9	86.1
Text messages	48.4	3.1 ± 1.0	82.1
Other method	6.2	2.0 ± 1.1	90.0
Blogging	1.9	2.7 ± 1.2	0.0

Note: For Usage scale, 1 = at least once every few months, 2 = at least once per month, 3 = at least once per week, 4 = at least once per day. Other methods of communication included sending packages and flowers.

Table 4. Decision Making When Service Member (SM) Home and Deployed

Decisions	**Spouse Decides n (%)**	**Decide Together n (%)**	**SM Decides n (%)**	***p*-value[a]**
Minor household, n=158				$\leq$ .001
Home	40 (25.3)*	92 (58.2)*	26 (16.5)*	
Deployed	123 (77.8)	30 (19.0)	5 (3.2)	
Major household, n=149				$\leq$ .001
Home	9 (6.0)*	123 (82.6)*	17 (11.4)	
Deployed	53 (35.6)	86 (57.7)	10 (6.7)	
Financial, n=160				$\leq$ .001
Home	51 (31.9)*	83 (51.9)*	26 (16.3)	
Deployed	95 (59.4)	48 (30.0)	17 (10.6)	
Children, n=125				$\leq$ .001
Home	35 (28.0)*	89 (71.2)*	1 (0.8)	
Deployed	98 (78.4)	27 (21.6)	0	

[a] *p*-values estimated by McNemar's chi-square test * Bonferroni-adjusted difference of proportions (home vs. deployed) test significant at .05 level.

Spouse Deployed Contents – Elearning modules, Chapters, and associated interactive downloadable Worksheets

Section	Chapter/Module and Worksheets
Problem Solving	**Basic Problem Solving: Application to Everyday Life**
	Put it into Practice
	Problem Solving Worksheet
	Problem Solving Take Action Form
	Practical Issues
	Put it into Practice
	Problem Solving Worksheet
	Substance Abuse Inventory
	Tracking Your Expenses Worksheet
	Practical Issues Take Action Form
Communication	**Communication Skills: How to Be Effective**
	Put it into Practice
	Active Listening Checklist
	Hunt the Good Stuff Worksheet
	Online Communication Resource List
	Communication Skills Take Action Form
	Assertive Communication
	Put it into Practice
	Assertive Communication Checklist
	Assertive Communication Take Action
	Assertive Communication/ How to Find and Receive Help
	Put it into Practice
	Helpful Resources for Military and Community
	How to Find and Receive Help Checklist
	How to Find and Receive Help Take Action Form
	Conflict Resolution
	Put it into Practice
	Conflict Behaviors Chart
	Steps to Negotiation
	Conflict Resolution Take Action Form
	Social Media
	Put it into Practice
	Social Media Take Action Form
Resilient and Capable You	**Emotional Adjustment to Deployment**
	Managing New Emotions Worksheet
	Thought Record
	Hunt the Good Stuff Worksheet
	Emotional Adjustment to Deployment Take Action Form
	Recognizing Resilience
	Put it into Practice
	Brief Resilience Scale
	Resilience Characteristics Worksheet
	Recognizing Resilience Take Action Form

Resilient and Capable You (continued)	**Understanding & Managing Excess Stress**
	Put it into Practice
	Perceived Stress Scale
	Guided Imagery
	Mandalas
	Stretching
	Power of Music
	Pleasant Events
	Stress Diary
	Hunt the Good Stuff Worksheet
	Managing Excess Stress Take Action Form
	Taking Care of You First
	Put it into Practice
	Self Esteem Quiz
	Goal Setting Worksheet
	Goal Setting Template
	Taking Care of You First Take Action Form
Relationships	**Family Relationship and Role Changes**
	Family Relationship and Role Changes Worksheet
	Chore Chart Examples
	Family Relationship and Role Changes Take Action Form
	Enhancing Your Commitment
	Put it into Practice
	Strengths in Your Relationship
	Relationship Goal Setting Worksheet
	Relationship Goal Setting Template
	Enhancing Your Commitment Take Action Form
	Parenting
	Put it into Practice
	Hunt the Good Stuff Worksheet
	Goal Setting Worksheet
	Goal Setting Template
	Parenting Resources
	Parenting Take Action Form
	Preparing for Post Deployment
	Put it into Practice
	Domestic Violence Resource List
	PTSD Resource List
	Deployment Changes Take Action Form
Red Flags Workbook only	**Child Abuse**
	Depression
	Domestic Violence
	Grief
	Substance Abuse
	Suicide Prevention
	Understanding and Dealing with Anger
	Safety Plan

List of Personnel Working on the Study

Name	Paid	Not Paid
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Jennifer Martindale-Adams	X	
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Marshall Graney	X	
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Telephone Support During Overseas Deployment for Military Spouses
W81XWH-11-2-0087, 10020008, DHP CSI

PI: Nichols **Org:** VA Medical Center, Memphis TN **Award Amount:** $1,016,828

Study/Product Aim(s)

- Determine satisfaction
- Determine commitment and adherence to therapeutic recommendations
- Determine whether telephone support groups significantly improve outcomes, compared to educational webinars
- Develop a manual for clinical translation

Approach

Randomized clinical trial of 160 spouses, half in each study arm. Compare webinar sessions (the usual standard of care) to more intensive telephone support groups. For the telephone support arm, each group of spouses have 12 one-hour telephone support groups focusing on education, skills building and support over six months. For the education group, spouses viewed online webinars. Data were collected at baseline, 6 and 12 months. Fourteen interactive elearning modules ready for use, print Spouse Deployed Workbooks shipped to Army Community Services, interactive pdf Spouse Deployed Workbook available.

Accomplishments: 2 manuscripts published, 11 presentations, 14 Elearning modules ready for use, print and interactive pdf Spouse Workbook shipped to Army

Timeline and Cost

Study Activities	1 4/11-3/12	2 4/12-3/13	3 4/13-3/14	4 4/14-3/15	5 4/15-3/16	6 4/16-3/17	7 4/17-9/17
Finalize manual, obtain approvals, print materials							
Recruit subjects							
Administer interventions							
Collect, analyze, process and publish data							
Develop materials and disseminate							
Estimated Budget ($K)		**$90**	**$332**	**$340**	**$254**		

Updated: 15 December 2017

Goals/Milestones

- ☑ Finalized Manual of Operations (MOP) including telephone support group topics and scripts and online education/webinar sessions topics and scripts, screening forms and scripts, data collection forms, scripts and documentation
- ☑ Obtained IRB and HRPO approval
- ☑ Printed approved materials
  - 2500 brochures 190 Workbooks
- ☑ Hired/Trained personnel
- ☑ Recruited, enrolled and randomized subjects (Total: 161 spouses)
- ☑ Administer intervention 1 (telephone support groups)
- ☑ Administer intervention 2 (online education/webinar)
- ☑ Collect, analyze and process data
- ☑ Publish data (2 manuscripts published, 11 presentations)
- ☑ Dissemination materials developed and publicized

Comments/Challenges/Issues/Concerns

None

Budget Expenditure to date

Projected expenditure: $1,016,828.00 Actual Expenditure: $1,016,467.64 (as of 09/30/17)

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Decision-Making During the Deployment Cycle

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Abstract

Decision-making at home and during deployment was examined for 161 spouses of service members (SMs) who were deployed overseas, using baseline spouse reports. Four types of decisions were included: minor household, major household, financial, and decisions about children. Communication methods used during deployment were also examined. With deployment, spouses reported that decision-making changed significantly for all four types of decisions. Decision-making at home was predominantly as a couple; during deployment, more decisions were by the spouse. However, decision-making stayed the same at home and during deployment for 1/3 to 2/3 of families, dependent on the type of decision, and these couples tended to make decisions together. Availability of communication methods that allow rapid exchange of information may contribute to couples managing decisions together. Before deployment, practitioners should discuss current family decision-making and communication patterns and expectations during deployment. During deployment, spouses can be encouraged to take on responsibilities that will help build their independence and facilitate smooth functioning of family life. At the same time, encouragement to continue, as much as possible and appropriate, familiar decision-making during deployment and at home may help ease the SM's transition from deployment to home.

Keywords

spouses, military, communication, roles

Many factors affect how individuals and couples make decisions and who has primary responsibility for decisions. For military spouses and service members (SMs), the additional factor of deployment and/or deployment to a combat destination may also affect decision-making. For spouses and SMs, the locus of responsibility may shift during periods of separation when the SM is deployed and periods of togetherness when the SM is at home.

Individual demographic factors and dyad relationship factors can influence decision-making. For example, individuals with lower socioeconomic status may have less education, income, and resources; this lack of resources may lead to negative life events and subsequent poorer decisions (Bruine de Bruin, Parker, & Fischhoff, 2007).

Past decision-making experiences influence subsequent decision-making (Juliusson, Karlsson, & Gärling, 2005). For dual-career commuter couples, research has shown that household duties can be assigned based on typical gender roles or based on commuting status (Rhodes, 2002). Traditional sex-role norms have defined certain areas as the prerogative of one gender (e.g., groceries–wife, automobile–husband; Buss & Schaninger, 1983). However, in the United States today, women have assumed a more prominent role in family decision-making (Belch & Willis, 2002). Military wives are likely to play a similar prominent role in military families with frequent deployments.

Through a process known as outsourcing, one spouse may come to rely on his or her partner to perform more household tasks and handle more day-to-day household chores, such as paying bills, buying groceries, and raising children (Solomon & Jackson, 2014). This role in nonmilitary families is likely to be handled by the partner who is more conscientious. However, for military families, both during deployment and between deployments, the nonmilitary spouse is likely to fill this role. This primary decision-making role can be stressful (Tollefson, 2008); for example, for Operation Desert Storm spouses, a common stressor during the SM's deployment was children's discipline (Rosen, Durand, & Martin, 2000).

Although lack of communication is stressful for military spouses (Tollefson, 2008), communication with home can have both positive and negative effects for the SM (Carter & Renshaw, 2015). Communication can improve mental health

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and morale, although difficult, stressful, or overwhelming communication can decrease occupational effectiveness (Greene, Buckman, Dandeker, & Greenberg, 2010). Some wives of deployed SMs prefer to keep open communication (Cafferky, 2014; Gottman, Gottman, & Atkins, 2011; Merolla, 2010), others censor anything that might be disturbing to the SM (Cafferky, 2014), and others attempt to keep a balance and only disclose important information (Cafferky, 2014; Faber, Willerton, Clymer, MacDermid, & Weiss, 2008). For disclosure of difficult, potentially stressful, or emotionally disturbing information, wives triage whether they should share information, how much information to share, and how to share (Cafferky, 2014; Rossetto, 2013). Wives who perceive that their husbands are in dangerous situations share less stressful information (Cafferky, 2014; Greene et al., 2010; Joseph & Afifi, 2010) and wives who perceive that their husbands are supportive share more (Joseph & Afifi, 2010).

Based on these findings, the goal of the current study was to determine whether military spouses perceived a difference in the couple's decision-making when the SM was at home and deployed. We hypothesized that who made decisions would change from home to deployment, especially for decisions related to general household functioning, such as minor repairs, or those that were more time-sensitive, such as children's concerns. Spouses were also asked what communication methods were used while the SM was deployed.

Method

Participants were 161 spouses or significant others living as married of an SM deployed overseas. Spouses were participants in a national randomized controlled trial conducted from 2011 to 2015 to examine strategies to provide support during deployment. This study was funded by Department of Defense (DoD), Defense Health Program, and managed by the U.S. Army Medical Research and Materiel Command, Military Operational Medicine Research Program. This study was overseen by the Memphis Veterans Affairs Medical Center Institutional Review Board.

Data and Data Analysis

Spouse self-report data were collected via telephone by trained and certified research specialists. For this analysis, only baseline data were used. There were no currently established instruments available on couple decision-making during deployment, so a Household Decisions questionnaire was developed using the U.S. Agency for International Development Demographic and Health Surveys (DHS) Program household decision-making survey (Kishor & Subaiya, 2008). The questionnaire focused on the types of decisions being made and who makes the decision.

The Household Decisions questionnaire comprises eight items asking about minor household decisions (e.g., fixing the washing machine), major household decisions (e.g., replacing a car), financial decisions (e.g., budget and debt repayment), and decisions about children (e.g., medical, educational, and discipline). Each item is asked about both during deployment and while the SM was at home. Following DHS guidelines, items are scored as *spouse decides without SM input*, *spouse decides with SM input*, *decide together*, *SM decides with spouse input*, or *SM decides without spouse input*. For analysis, the two "*spouse decides ...*" categories were combined as were the two "*SM decides ...*" categories resulting in three final categories: *spouse decides, decide together,* and *SM decides*.

Spouses were asked what communication methods were used while the SM was deployed and how satisfied they were with each method. For each of the eight methods (e.g., letters, e-mail, videoconferencing, blogging), spouses were asked how often each was used, ranging from 0 (*not at all*) to 4 (*at least once per day*). Spouses were asked satisfaction level for each method used, with responses ranging from 0 (*not at all*) to 3 (*very*).

To characterize the sample, demographic data included age, gender, race/ethnicity, years married, employment, number of children, income, and SM's age, military branch, rank, and previous deployments. Descriptive statistics were compiled using either percentages or means with standard deviations, as appropriate. McNemar's χ^2 tests were used to compare decisions made while the SM was at home to those made while deployed. To find which proportions were significantly different, home versus deployed, the Bonferroni-adjusted difference of proportions test was used. Those using or not using communication methods were compared using independent sample *t*-tests.

Table 1. Baseline Characteristics of Spouses of Deployed Service Members.

Variables	Total ($N = 161$), $M \pm SD$ or %
Female	97.5
Age, years	35.6 ± 8.2
Years married	8.6 ± 7.3
Years cohabitated	9.3 ± 7.3
Children, number	1.6 ± 1.2
Race	
Caucasian	79.5
African American	8.1
Native American	1.9
Asian/Pacific Islander	3.7
Other	6.8
Ethnicity, Latino/Latina	15.5
Education, years	15.2 ± 2.2
Employed, full-time or part-time	55.3
Household income, monthly	6,505 ± 7,717
Military service	14.9

Results

Participants

On average, spouse participants were women in their mid-30s, married about 9 years, and with about two children at baseline (Table 1). About 80% were Caucasian, 8% were African American, and 16% were Latina. Spouses had about 3 years of

Table 2. Baseline Characteristics of Deployed Service Members.

Variables	Total ($N = 161$), $M \pm SD$ or %
Age, years	36.0 ± 8.1
Branch of service	
Army	23.0
Army Guard/Reserve	22.4
Navy	34.8
Naval Reserve	2.5
Air Force	7.5
Air Guard/Reserve	1.2
Marines	8.7
Marine Reserve	0.0
Class	
Noncommissioned officer	45.3
Commissioned officer	26.1
Senior NCO	20.5
Junior enlisted	6.8
Warrant officer	1.2
Years in military	12.6 ± 7.5
Deployment	
Months into deployment	3.3 ± 2.7
Deployments ever, number	3.4 ± 2.6
OEF/OIF/OND deployments, number	2.0 ± 1.7
Previous deployments, number	1.4 ± 2.1
Injured	19.9

Note. OEF/OIF/OND = Operation Enduring Freedom (Afghanistan)/Operation Iraqi Freedom/Operation New Dawn (Iraq).

college and more than half were employed. SMs, on average, were in their late 30s (Table 2). SMs had served in the military for 13 years and 45% were from Army. Consistent with their military years, they had 3.4 total deployments. In general, they were about 3 months into their current deployment.

Communication Methods

Almost 3/4 of spouses (70.2%) reported having problems communicating with their SM during deployment and 79.5% reported that communication was moderately or very stressful. Common methods of communication were e-mail and telephone (Table 3), and spouses were satisfied with these methods. For those who used them, all but two communication methods averaged weekly use; letters and other methods were used approximately monthly. There were age differences in methods of communication. Spouses who used text messages were older (37.4 years ± 8.2 vs. 33.9 years ± 7.9, $p = .007$). The same was true for videoconferencing (36.3 years ± 8.1 vs. 33.3 years ± 8.1, $p = .037$). Spouses who communicated through social networking sites were younger (34.3 years ± 8.0 vs. 37.7 years ± 8.2, $p = .010$).

Decisions

For the four types of decisions studied, there were statistically significant differences between decision-making responsibility while the SM was at home versus during deployment (Table 4). Specifically, spouses reported taking more responsibility during deployment, with decisions made together decreasing. They further reported that, except for minor household decisions, SM primary responsibility in decision-making was not significantly different between home and deployment.

Some spouses reported that their decision-making was the same during deployment and at home. Accordingly, for minor household decisions, 27.8% of couples made decisions the same way at home and deployment; for major household decisions, 65.8%; for financial decisions, 55.0%; and for decisions about children, 38.4%.

Table 3. Baseline Communication Methods While Service Member Deployed.

Communication Methods	Total Using, %	Usage, $M \pm SD$	Moderately or Very Satisfied Using Method, %
E-mail	91.9	3.3 ± 0.8	87.2
Phone calls	90.7	2.8 ± 0.9	84.2
Videoconferencing	74.5	2.7 ± 1.0	77.5
Social networking site	62.7	2.8 ± 0.9	78.2
Letters	60.9	1.9 ± 0.8	66.3
Instant messaging	49.1	3.0 ± 0.9	86.1
Text messages	48.4	3.1 ± 1.0	82.1
Other method	6.2	2.0 ± 1.1	90.0
Blogging	1.9	2.7 ± 1.2	0.0

Note. $N = 161$. For Usage Scale: 1 = *at least once every few months*, 2 = *at least once per month*, 3 = *at least once per week*, and 4 = *at least once per day*. Other methods of communication included sending packages and flowers.

Table 4. Decision-Making When Service Member (SM) is at Home and Deployed.

Decisions	Spouse Decides, *n* (%)	Decide Together, *n* (%)	SM Decides, *n* (%)	*p* value
Minor household, $n = 158$				<.001
Home	40 (25.3)*	92 (58.2)*	26 (16.5)*	
Deployed	123 (77.8)	30 (19.0)	5 (3.2)	
Major household, $n = 149$				<.001
Home	9 (6.0)*	123 (82.6)*	17 (11.4)	
Deployed	53 (35.6)	86 (57.7)	10 (6.7)	
Financial, $n = 160$				<.001
Home	51 (31.9)*	83 (51.9)*	26 (16.3)	
Deployed	95 (59.4)	48 (30.0)	17 (10.6)	
Children, $n = 125$				<.001
Home	35 (28.0)*	89 (71.2)*	1 (0.8)	
Deployed	98 (78.4)	27 (21.6)	0	

Note. *p* values are estimated by McNemar's χ^2 test.
*Bonferroni-adjusted difference of proportions (home vs. deployed) test significant at .05 level.

Discussion

This study examined communication methods and decision-making strategies reported by military spouses of SMs who

were deployed. Before discussing results, study limitations and areas of future research should be acknowledged. First, data were only collected from spouses and not from SMs. Comparison of couples' perceptions of how decision-making changed during deployment would provide a more rounded picture. Second, in this sample, the Navy was slightly overrepresented and the Air Force underrepresented, compared to their proportions of all military branches. If one branch has better communication availability, this could affect results. For future studies, expanding this research to couples who are no longer in the military could determine if and when couples' decision-making strategies change. The benefits of using one decision-making strategy or another would also be a fruitful area for research into couples' perspectives. Finally, qualitative data could deepen insight into decision-making, particularly focusing on why and how some couples are able to be more consistent in their decision-making strategies.

In general, spouses reported that the couples made decisions together for all four decision types when the SM was at home. With deployment, decision-making was significantly different for all four types of decisions. Spouses reported that they were often the decision-maker during deployment, with or without input from the SM and SMs did not have the level of primary responsibility for any category of decision that spouses had. This finding echoes what is seen in American life today as women assume larger roles in decision-making (Belch & Willis, 2002). However, in addition to this national trend, military spouses may choose or accept larger roles in decision-making if the SM is deployed or likely to be redeployed, as has been the case with the increased operational tempo of the Iraq and Afghanistan conflicts. For example, 38% of Army soldiers deployed to Iraq from 2003 to 2008 had been deployed more than once and 10% had been deployed 3 times or more (Shanker, 2008).

Depending on the type of decision, 1/3 to 2/3 of spouses reported that their families' decision-making stayed the same for home and deployment. These couples most frequently reported that decision-making responsibility was together. Availability of synchronous communication methods (e.g., telephone and videoconferencing) or those that allow rapid exchange of information (e.g., e-mail, text, and instant messaging) no doubt contributes to the ability to manage decisions together. In fact, e-mail and telephone calls were common methods of communication. Although fewer than 50% of spouses used text and instant messaging, those who did reported high satisfaction with these methods. The high cost of private cell phone service overseas and/or the military need to control access to communication during crises may explain the low utilization of these two methods of communication.

There are positives and negatives in sharing responsibility. Attempting to involve the SM in every decision may be overwhelming and inefficient, especially for those decisions that need rapid response such as minor repairs and children's discipline. Too much communication with home may make the SM feel distracted and helpless (MacDermid et al., 2005) and decrease occupational effectiveness (Greene et al., 2010). However, keeping the SM involved could maintain the relationship during deployment (Carter & Renshaw, 2015; Merolla, 2012; Rossetto, 2013). Negative consequences for the SM could be minimized if spouses shade their interactions toward the positive due to their hesitancy to share difficult or stressful information when the SM is in danger (Cafferky, 2014; Joseph & Afifi, 2010; Rossetto, 2013).

Further, continuing to involve the SM in decision-making may reduce major role negotiation postdeployment because the SM has remained part of the family decision-making process. A return to former roles and decision-making is one of the most difficult tasks couples face postdeployment and between deployments, especially for military couples where the SM experiences a long deployment or multiple closely spaced deployments (Gambardella, 2008). Reintegration can be particularly problematic if the at-home spouse has developed new skills and independence. Although skills and independence are critical for the spouse's self-esteem and ability to manage the deployment, they increase the difficulty of successful role negotiation and transition postdeployment (Gambardella, 2008).

Implications for Practice

During and after deployment, many military family members do not participate in formal military programs (Di Nola, 2008). In particular, Guard and Reserve families, because they generally do not live near military bases, and veteran families, who no longer have access to military care, receive their care from community health and mental health providers (Tanielian et al., 2014). Despite this, many community psychologists have not seen the treatment of military families as part of their mission, perhaps partly due to the assumption that military families will be cared for by the military and a lack of knowledge about military culture (Hoshmand & Hoshmand, 2007).

In a study of community mental health practitioners, including psychiatrists, psychologists, social workers, and licensed counselors, only half (50.1%) screen patients to determine military affiliation and only 47.3% screen about stressors related to military life (Tanielian et al., 2014). However, community practitioners can support the well-being of military families (Hoshmand & Hoshmand, 2007), particularly, military spouses facing deployment of the SM. Before deployment, practitioners should discuss current family decision-making and communication patterns and expectations during deployment. Discussing methods of communication can help develop a communication plan during deployment, allowing the couple to express expectations before the deployment. Before and during deployment, practitioners can build upon the dual inclinations of families to both shift responsibility to the spouse and to maintain

decision-making patterns. At-home spouses can be encouraged to take on responsibilities that will help build their independence and facilitate smooth functioning of family life. At the same time, encouragement to continue, as much as possible and appropriate, familiar decision-making during deployment and at home may help ease the SM's transition from deployment to home.

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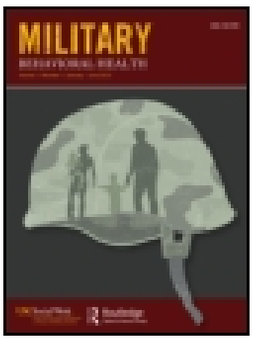

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Comparing Strategies to Help Spouses of Service Members Cope with Deployment

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SPECIAL SECTION

Comparing Strategies to Help Spouses of Service Members Cope with Deployment

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ABSTRACT

This study compared 2 interventions to help military spouses adapt to change during deployment. Participants were randomized into telephone support groups and education webinars. Both interventions provided information on deployment, coping strategies, and resources. Webinar participants showed significantly more improvement than support participants for anxiety; participants in both arms improved significantly in resilience, depression, anxiety, and coping. Participants attributed benefit to support from others and the military; improved self-efficacy including learning coping skills, decreasing stress, and accessing resources; and sharing learning by helping others and the service member. Findings suggest that multiple avenues can help military spouses cope with deployment.

KEYWORDS

Telephone support; deployment; online education; military; families; spouses; learning and skills acquisition-cognition

Deployment is an accepted part of military life that affects both service member and family (Orthner & Rose, 2003). Determining how to best help military spouses to cope with deployment can be guided by stress and coping theory (Lazarus & Launier, 1978). Internal responses (cognitive and emotional) to environmental demands, such those experienced during a loved one's deployment, are an important component of stress (Lazarus & Launier, 1978). Although effects of deployment vary among individuals and families (Burton, Farley, & Rhea, 2009), spouses' reactions to deployment have included emotional distress, loneliness, dysphoria, anticipatory fear or grief, somatic complaints, and depression (Palmer, 2008). For example, wives of active-duty service members deployed to Iraq or Afghanistan had higher levels of stress and somatic symptoms than did wives of nondeployed service members (Burton et al., 2009) and reported significant distress, a sense of having no control over the outcome, anxiety, trouble sleeping and eating, and continual states of nervousness (Demers, 2009). For Operation Desert Storm spouses, loneliness, financial insecurity, and children's discipline were identified as stressors (Rosen, Durand, & Martin, 2000).

Coping with stress also includes action-oriented management of environmental demands (Lazarus & Launier, 1978). Individuals evaluate whether environmental stressors/demands pose a potential threat and whether they have coping capabilities. If they perceive demands as threatening and coping resources as inadequate, they will experience stress. Difficulties before or during deployment, including being in a first deployment, being a younger family or not being married, having few financial assets, and experiencing a major life transition during deployment such as pregnancy, can lead to difficulty after deployment (Booth et al., 2007; Faber, Willerton, Clymer, MacDermid, & Weiss, 2008; Spera, 2009). In addition, spouses may be stressed by pragmatic concerns during deployment including assuming the role of single parenthood, learning new skills such as home and car repairs, making decisions alone, and lack of communication with the absent service member (Tollefson, 2008).

Resources and options available to a stressed person can be drawn from the environment (Folkman, Schaeffer, & Lazarus, 1979), and these resources shape coping activity. Coping strategies for military spouses include how to deal with deployments and reunions, identify and deal with psychological symptoms, and identify available support resources (Booth et al., 2007). To increase relationship satisfaction, skills in developing positive communication such as assurances, openness, and

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constructive conflict management behaviors, are important (Knobloch & Theiss, 2012). In addition, problem-focused coping strategies are more effective than emotion-focused coping strategies on distress for military wives during deployment (Dimiceli, Steinhardt, & Smith, 2010).

In addition to coping strategies, perceptions of spouses' ability to cope with deployment stressors are also correlated to tangible social support from community and military (Rosen et al., 2000; Spera, 2009), specifically the unit and unit leadership (Pittman, Kerpelman, & McFadyen, 2004). Support from other unit wives is the major type of social support that has been shown to buffer the stress of a husband's absence (Rosen & Moghadam, 1990) and spouses who have few personal or social supports (Orthner & Rose, 2003) typically have difficulty during deployment. Services available on base to active-duty families are an important resource in coping with deployment (Faber et al., 2008; Segal & Segal, 2003). However, families frequently do not participate in formal programs (Di Nola, 2008). Reserve and Guard families and those of military personnel assigned as individual augmentees to fill out a unit other than their own are less likely to have access to military resources or to have support from other military spouses (Burrell, Durand, & Fortado, 2003).

To improve military spouses' psychological health, family-centered interventions and prevention programs focusing on family stressors, strain, and resources are important (Green, Nurius, & Lester, 2013). One such program is the Army's Comprehensive Soldier and Family Fitness Program, a curriculum that includes family functioning skills, which is generally facilitated by a master trainer but can also be delivered online. The program is designed for both partners to receive relationship skills training, such as creating and maintaining trust, cognitive behavioral management, and managing stress (Gottman, Gottman, & Atkins, 2011). Previous work has examined similar interventions delivered via telephone and online for military spouses after deployment. Both modalities have been associated with improved psychosocial outcomes for military spouses (Nichols, Martindale-Adams, Graney, Zuber, & Burns, 2013; Nichols et al., 2015).

This study compared two strategies to help spouses of deployed service members cope with disruption and adapt to change during deployment. Both interventions provided information on deployment, coping strategies, and resources. The online webinars were similar to online resources currently available to military spouses, analogous to usual care. The telephone support groups additionally provided interaction with other spouses and practice of coping strategies. Although online psychological interventions have been found on average to be as effective as face-to-face interventions (Barak, Hen, Boniel-Nissim, & Shapira, 2008), we hypothesized that spouses in the telephone support groups with the addition of peer support and practice and modeling of strategies would have greater improvement in depression, anxiety, resilience, and coping.

Methods

This study was a randomized clinical trial, April of 2011 to March of 2015, funded by the Department of Defense's Defense Health Program and managed by the U.S. Army Medical Research and Materiel Command, Military Operational Medicine Research Program. The study was conducted under the oversight of the VA Medical Center (VAMC) Memphis institutional review board and the U.S. Army Medical Research and Materiel Command Human Research Protection Office. Participants were recruited nationally through multiple avenues (brochures sent to yellow ribbon events, mentions on military family websites and social media, and contact with military family support specialists, family assistance centers, chaplains, United Service Organizations (USOs), and family readiness groups who forwarded study information to units that were soon to be deployed). The majority of participants contacted the study through telephone or e-mail. Because participants self-referred to the study they could enter into the study at any part of the deployment process. After screening, a consent form was mailed to the potential participant for an informed consent call, followed later by baseline data collection. Randomization occurred after baseline data collection.

Participants were 161 spouses/significant others of overseas deployed service members who had at least 6 months left of deployment; therefore, they were at various places along the deployment continuum. The participants were predominantly wives (98%) in their mid-30s. On average, they had been married 9 years with 1.6 children. They were well educated (15 years education), and 55% were employed. Most were White (80%), and 16% were Hispanic/Latina. At baseline, participants' health was good, and they had low depression and anxiety, good resilience, and coping skills. Their service member spouses were also in their mid-30s, with 26% National Guard/Reserve and 65% noncommissioned officers. During their 3.4 total deployments (including the current one), of which 2 were in Iraq or Afghanistan, 20% had been injured.

Interventions

Two interventions were tested—telephone support groups and online education webinars, which were

analogous to the usual standard of care. The topics and content of the two interventions were the same. Both were based on an individual stress and coping model (Lazarus & Launier, 1978). This model provides multiple pathways to intervene to mitigate or circumvent negative consequences.

For both telephone support groups and education webinars, there were 12 sessions over 6 months focusing on information about deployment, its effects, and coping strategies to combat negative effects. Common features of both interventions included a welcome, a Signal Breath stress reduction exercise, and an educational topic. Each participant had a Spouse Workbook that provided materials for the 12 sessions that focused on the spouse's well-being (emotional adjustment, resilience, stress management techniques, taking care of self), relationships (relationship dynamics, role negotiation, changes with deployment and preparing for post-deployment), problem solving (problem solving in everyday life, communication styles, assertive communication), and practical concerns (finding help, financial and legal issues, practical issues). Each of the chapters had worksheets for spouses to practice skills and a commitment form.

Telephone support groups

Hour-long telephone support groups with a trained group leader met twice per month for 6 months, for a total of 12 sessions. Group membership was open so that group members could start at any point in the cycle, with an average of 6 members in a group at any one time. The groups were structured with suggested scripted talking points but participant centered to incorporate participant input and direction of discussion. Coping strategies including communication strategies, problem solving, cognitive reframing, and stress management were taught and practiced during each session. At the end of each group session, participants made a commitment to try at least one strategy before the next session. The success of these commitments was evaluated at the beginning of the next session, with modification if needed. During each activity, participants provided support, encouragement, and practical advice to each other.

Education webinars

The 12 online education webinars during 6 months had the same topics as the support groups, although they were shorter (30 min) and did not include group participation. Each was online for participants to view for 2 weeks, to correspond to the time between support group sessions and for maximum flexibility for the participants. Information and skills were highlighted in each recorded didactic presentation that included slides with a voiceover.

Quantitative data collection

Quantitative data were collected by trained interviewers by telephone at baseline and 6 months. Data collection was from January of 2012 through January of 2015.

Outcomes

Outcomes were change in scores for resilience, depression, anxiety, and coping. The Connor-Davidson Resilience Scale's 25 items (Connor & Davidson, 2003) examine how respondents felt during the past month, with item responses ranging from 0 (*not true at all*) to 4 (*true nearly all of the time*). Higher scores reflect greater resilience.

We used the Patient Health Questionnaire (PHQ-9) (Kroenke, Spitzer, & Williams, 2001) to assess depression. The PHQ-9 has 9 items based on the the *Diagnostic and Statistical Manual of Mental Disorders*, 4th edition, depression diagnostic criteria that are scored from 0 (*not at all*) to 3 (*nearly every day*). Depression is characterized by summed scores of 0 to 4 (minimal), 5 to 9 (mild), 10 to 14 (moderate), 15 to 19 (moderately severe), or 20 to 27 (high/severe). Major depressive disorder is suggested if 5 or more items, one of which must be from the first two items (little interest and feeling depressed, the PHQ-2) are scored positive (*at least more than half the days*). Item 9 is counted if present at all (*at least several days*). We used the General Anxiety Disorder (GAD-7) scale to assess anxiety. This 7-item symptoms checklist demonstrates good performance in detecting generalized anxiety disorder, panic disorder, social anxiety disorder, and posttraumatic stress disorder (Kroenke, Spitzer, Williams, Monahan, & Lowe, 2007; Spitzer, Kroenke, Williams, & Lowe, 2006). Scoring for each item ranges from 0 (*not at all*) to 3 (*more than half the days*) for a summed score of 0 to 21; higher scores indicate more anxiety.

Fourteen coping behaviors measured how participants managed day-to-day activities, from household tasks to coping with loneliness (Durand, Larison, & Rosenberg, 1995; Pittman et al., 2004). Eight items address personal coping. Six of the items relate to family coping around child care and are only assessed for participants with children in the home. Each item uses a scale from 1 (*very poorly*) to 5 (*very well*); lower scores indicate worse coping. Summed personal coping scores range from 8 to 40, and family coping scores range from 6 to 30. Higher scores indicate better coping.

Independent measures

We selected these measures to characterize the study sample and to assess factors that have potential to affect the outcome measures. Demographic measures included sex, age, race/ethnicity, education, employment status, income, and whether the spouse had military service.

Participants' family information included number of children, years married, and quality of marriage. Clinical variables included general health, social support, personal life events stress, and military family life stress. Service member information included service member's age, branch of service, rank, time in military, number of deployments, and if injured.

We assessed quality of marriage with the Quality of Marriage Index (QMI) (Norton, 1983), a short measure of global relationship satisfaction. A scale is used for rating five of the six QMI items ranging from 1 (*very strongly disagree*) to 7 (*very strongly agree*), with the last item rated on a 10-point scale. Total scores range from 6 to 45, with higher scores indicating more relationship satisfaction.

We used a scale ranging from 0 (*poor*) to 4 (*excellent*) to assess general health (Ware et al., 1995). We examined social support using the Multidimensional Scale of Perceived Social Support (MSPSS) (Zimet, Dahlem, Zimet, & Farley, 1988), which has 12 questions focusing on family, friend, and significant other support. Items are scored 1 (*very strongly disagree*) to 7 (*very strongly agree*) and summed to 12 to 84. Higher scores indicate more support.

Personal life events stress was assessed with items from the Social Readjustment Rating Scale (SRRS), a list of 43 stressful life events that can contribute to illness (Holmes & Rahe, 1967). Thirteen of these events that were apt for this age cohort (e.g., pregnancy or change in financial state) were measured. Occurrence in the past 6 months is scored as 0 (*no*) or 1 (*yes*). Each event has points assigned according to how stressful it is. Points for all events present are summed for a score from 0 to 474; higher scores indicate greater stress.

Military family life stress was measured by 15 items from the Navy and Marine Stress of Life Index from the Millennium Cohort Study. Participants who had experienced each situation rated how stressful it was on a scale of 0 (*not at all stressful*) to 3 (*very stressful*). Each item is analyzed independently from the others.

Analysis

The chief quantitative data analysis strategy was intention to treat, with participants analyzed according to initial arm assignments. Baseline characteristics were compared between participants in each arm using chi-squared test or independent t test, as appropriate. For outcomes, randomization arms were compared using repeated measures mixed linear models to estimate group by time interaction. P values $\leq .05$ were considered statistically significant. The study was designed to provide statistical power of 0.80 to document as statistically significant a true population difference in intervention effect equal to at least 0.25 standard deviation of a primary outcome variable.

Qualitative data collection

Qualitative data about benefit were collected at study end. For each component of the interventions, and for the interventions overall, participants were asked their satisfaction, what they liked and did not like, benefits, use of strategies/techniques, and usefulness of the intervention (e.g., in helping family communication or in understanding deployment).

Analysis

Comments were tape recorded and transcribed. Transcribed narratives were examined individually by two anthropologist staff members, including the senior author, both with prior experience in coding of qualitative data. The goal was to understand participants' descriptions of benefit, without prior conceptualizations of what these benefits might be (Glesne, 1999). Each reviewer sorted the descriptions, concepts and central ideas into potential themes (Bernard, 2006; Maxwell, 1996) using the scrutiny techniques of repetitions and similarities and differences (Glaser & Strauss, 1967; Ryan & Bernard, 2003). Topics that occurred repeatedly were linked to verbatim quotes (Bernard, 2006). From these individual findings, kappa reliability statistics were computed of .84 for the telephone support group arm and .89 for the education webinar arm (Cohen, 1968).

Results

Quantitative results

Participants

The 161 participants were evenly randomized between education webinar arm ($n = 81$) and telephone support arm ($n = 80$). Twelve education webinar arm participants were discontinued or lost to follow-up, compared with 7 telephone support arm participants (see Figure 1). This difference was not significant.

In baseline comparisons between participants in the study arms (see Table 1), there were no significant differences. Although there was no significant difference in overall depression score between the two arms, more webinar participants met the criteria for major depression ($p = .008$). Webinar participants also had significantly higher scores on personal life events stress ($p = .044$). There were no significant differences between service members of participants in the two arms (see Table 2).

Three items were reported most frequently by spouses as military family life stressors: increased time the service member spends away from the family, uncertainty about future deployments, and difficulty balancing family life and military duties (see Table 3). When spouses reported which military family life stressors were the most stressful,

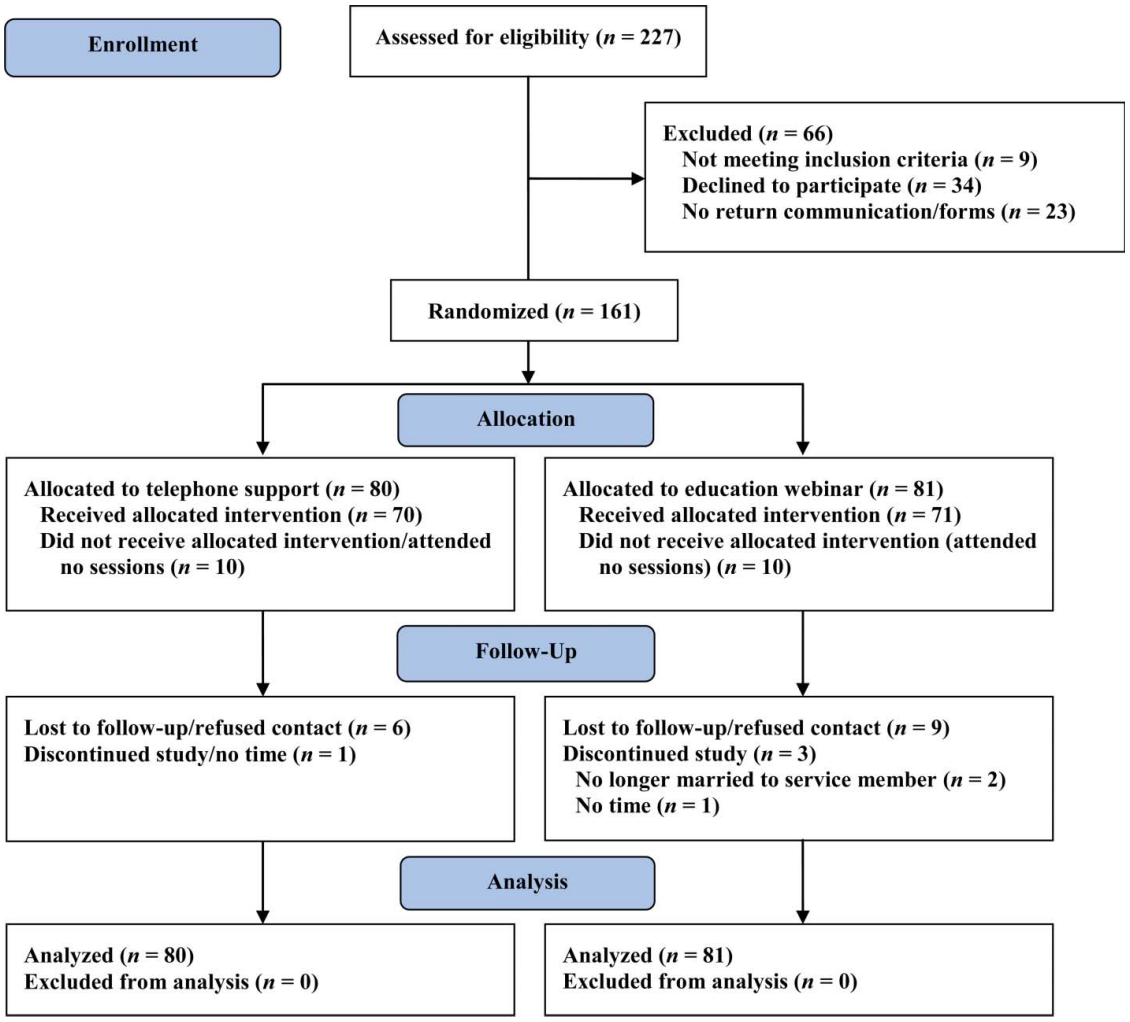

Figure 1. Sampling and flow of participants through study.

they reported combat deployments, then increased time service member spends away from family, and then combat related injuries. Only increased time the service member spends away from the family was ranked as one of the top three most frequent and top three most stressful.

Outcomes and dosage

During the 6 months, participants in both arms improved significantly for all outcomes (see Table 4). Controlling for baseline differences had no effect on findings.

With more sessions, support group participants had significantly improved anxiety ($b = -0.39$, $r^2 = 0.10$, $p = .006$). Dosage had no significant effect on webinar participants (data not shown). However, controlling dosage across arms had no effect on findings.

Qualitative results: Participant benefit

Several kinds of benefit were reported by participants including support, specifically support from others and from the military; improved self-efficacy involving learning coping skills, decreasing stress, and accessing resources; and the ability to share learning by helping others and the service member (see Table 5).

Support

As expected, support was an important benefit for telephone support group participants. Participants appreciated the normalizing of their reactions and the importance of talking with others who understood what they were going through. Some spouses reported that they had no support at home, so the support groups filled a need. Another benefit for participants in both arms was feeling connected to the military and glad that the military cared about the family.

Self-efficacy

In discussing benefit other than support for themselves, participants in both arms had similar reactions. Self-efficacy was the most important issue for spouses in both study arms, with spouses focusing on their improved

Table 1. Baseline characteristics of spouses of deployed service members.

Variable	Total ($N = 161$), *M* (*SD*)	Telephone support ($n = 80$), *M* (*SD*)	Education webinar ($n = 81$), *M* (*SD*)
Demographic			
Female, *n* (%)	157 (97.5)	78 (97.5)	79 (97.5)
Age, years	35.6 (8.2)	35.6 (8.4)	35.5 (8.1)
Race, *n* (%)			
Caucasian	128 (79.5)	63 (78.8)	65 (80.2)
African American	13 (8.1)	8 (10.0)	5 (6.2)
Native American	3 (1.9)	2 (2.5)	1 (1.2)
Asian/Pacific Islander	6 (3.7)	2 (2.5)	4 (4.9)
Other	11 (6.8)	5 (6.3)	6 (7.4)
Ethnicity, Hispanic/Latina, *n* (%)	25 (15.5)	15 (18.8)	10 (12.3)
Education, years	15.2 (2.2)	15.1 (2.2)	15.3 (2.3)
Employed, full time or part time, *n* (%)	89 (55.3)	45 (56.3)	44 (54.3)
Household income, monthly	6505 (7717)	7327 (10525)	5709 (3092)
Military service, *n* (%)	24 (14.9)	12 (15.0)	12 (14.8)
Family			
No. of children	1.6 (1.2)	1.5 (1.2)	1.7 (1.2)
Years married	8.6 (7.3)	8.8 (7.1)	8.4 (7.5)
Quality of marriage (6–45)	38.0 (7.7)	38.1 (8.4)	38.0 (7.0)
Clinical			
General health (0–4)	2.5 (0.8)	2.6 (0.9)	2.5 (0.8)
Social support (12–84)	59.6 (16.7)	60.9 (17.4)	58.3 (16.1)
Personal life events stress (0–474)	149.2 (86.0)	162.9 (85.6)	135.7 (84.7)
Outcomes			
Resilience (0–100)	75.7 (11.6)	75.4 (11.5)	75.9 (11.8)
Depression (0–27)	6.1 (5.0)	5.5 (4.3)	6.6 (5.5)
Major depression, *n* (%)[a]	19 (11.8)	4 (5.0)	15 (18.5)
Anxiety (0–21)	6.6 (4.8)	6.0 (4.4)	7.3 (5.2)
Personal coping (8–40)	32.8 (4.3)	33.0 (3.8)	32.5 (4.6)
Family coping (6–30)[b]	26.1 (3.6)	26.2 (3.2)	26.1 (3.9)

Note. Quality of marriage was assessed using the Quality of Marriage Index, social support was assessed using the Multidimensional Scale of Perceived Social Support, personal life events stress was assessed using the Social Readjustment Rating Scale, resilience was assessed using the Connor-Davidson Resilience Scale, depression was assessed using the Patient Health Questionnaire, and anxiety was assessed using the General Anxiety Disorder scale, Personal and Family Coping questions from the 1991–1992 Survey of Army Families II in U.S. Army Europe.

[a]Meets criteria for major depression diagnosis based on scoring of the Patient Health Questionnaire.

[b]$N = 102$; $n = 49$ for support and $n = 53$ for webinar. This scale is assessed only with participants who have children living in the home.

Table 2. Baseline characteristics of deployed service members.

Variable	Total ($N = 161$), *M* (*SD*)	Telephone support ($n = 80$), *M* (*SD*)	Education webinar ($n = 81$), *M* (*SD*)
Demographic			
Age, years	36.0 (8.1)	36.0 (8.3)	36.0 (8.0)
Branch of service, *n* (%)			
Army	37 (23.0)	24 (30.0)	13 (16.0)
Army Guard/Reserve	36 (22.4)	16 (20.0)	20 (24.7)
Navy	56 (34.8)	26 (32.5)	30 (37.0)
Naval Reserve	4 (2.5)	4 (5.0)	—
Air Force	12 (7.5)	4 (5.0)	8 (9.9)
Air Guard/Reserve	2 (1.2)	—	2 (2.5)
Marines	14 (8.7)	6 (7.5)	8 (9.9)
Marine Reserve	—	—	—
Rank (class), *n* (%)			
Noncommissioned officer	73 (45.3)	37 (46.3)	36 (44.4)
Commissioned officer	42 (26.1)	19 (23.8)	23 (28.4)
Senior noncommissioned officer	33 (20.5)	17 (21.3)	16 (19.8)
Junior enlisted	11 (6.8)	7 (8.8)	4 (4.9)
Warrant officer	2 (1.2)	—	2 (2.5)
Years in military	12.6 (7.5)	12.2 (8.0)	13.1 (7.1)
Deployment			
Months into deployment	3.3 (2.7)	3.1 (2.1)	3.4 (3.2)
Deployments total, number[a]	3.4 (2.6)	3.5 (2.3)	3.4 (2.9)
Number of Operation Enduring Freedom/Operation Iraqi Freedom deployments	2.0 (1.7)	2.0 (1.5)	2.1 (1.8)
Number of previous deployments	1.4 (2.1)	1.5 (2.0)	1.3 (2.2)
Number injured (%)	31 (19.9)	17 (22.1)	14 (17.7)

[a]Includes current deployment.

Table 3. Baseline stress of military family life questions.

Variable	Experienced situation *n* (%)	Moderately or very stressful *n* (%)
All military		
Increased time SM spent away from family/friends to perform duties	158 (98.1)	119 (75.3)
Uncertainty about future deployments/assignments	155 (96.2)	94 (60.6)
Difficulty balancing family life and SM's military duties	146 (90.7)	77 (52.7)
Intensified training schedule for SM	143 (88.8)	95 (66.4)
Noncombat deployment/assignment with SM away from home	143 (88.8)	93 (65.0)
Combat deployment/assignment for SM	142 (88.2)	124 (87.3)
Family conflict over whether SM should remain in military	104 (64.6)	44 (42.3)
Permanent change of station	87 (54.0)	56 (64.4)
Noncombat injury to SM from carrying out duties	49 (30.4)	29 (59.2)
Caring for your ill, injured, disabled SM	33 (20.5)	19 (57.6)
Combat-related injury to SM	22 (13.7)	16 (72.7)
Guard and Reserve only		
Change in family financial situation as a result of SM's active duty	79 (49.1)	39 (49.4)
Concern over SM's employment when deactivated	72 (44.7)	38 (52.8)
Unpredictability of when SM will be activated for duty	71 (44.1)	46 (64.8)
Concern over continuity of access to healthcare for family	71 (44.1)	33 (46.5)

Note. SM = service member. Stress of Military Family Life questions are from the Navy and Marine Stress of Life Index.

ability in coping skills and in managing their stress and accessing resources.

Sharing learning

Although skills for themselves were important, spouses also used their newly found skills for others. Webinar participants more frequently discussed the benefit for their husbands, either through their understanding of their husband's responses or their working with their husbands using what they had learned. Only 2 support group participants mentioned benefit to their family or husband, but 10 webinar participants did so.

Benefits to the service member could be indirect: for some, the benefit to the service member was because the spouse was coping better. Other spouses reported that skills they were practicing benefited the service member; for example, in improving communication. However, spouses also reported a direct service member benefit. Spouses did not use the materials only for themselves to improve their relationships, they also involved their husbands in learning skills and in practicing strategies.

Discussion

Effects of deployment can be both positive (Huebner, Mancini, Bowen, & Orthner, 2009) and negative for military spouses. Benefits can include becoming more independent, having time and space to develop interests, and the satisfaction of accomplishing tasks and surviving the separation (Drummet, Coleman, & Cable, 2003). Negative effects can include a variety of emotional, deployment related, and general life event stressors. In this

Table 4. Mixed-model analysis of outcome variables.

Variable	Baseline *M* (*SE*) *n* = 161	6 Months *M* (*SE*) *n* = 137	Group[a] *M* [95% CI]	Time[b] *M* [95% CI]	Group × Time[c] *M* [95% CI]
Resilience (0–100)			−1.5 [−4.6, 1.6]	4.1 [2.6, 5.5]	−2.0 [−5.0, 0.9]
Telephone support	75.4 (1.3)	78.5 (1.1)			
Education webinar	75.9 (1.3)	81.0 (1.1)			
Depression (0–27)			−0.6 [−1.8, 0.7]	−2.3 [−3.1, −1.5]	1.1 [−0.6, 2.7]
Telephone support	5.5 (0.6)	3.8 (0.5)			
Education webinar	6.6 (0.6)	3.8 (0.5)			
Anxiety (0–21)			−0.5 [−1.8, 0.9]	−1.5 [−2.3, −0.8]	1.8 [0.2, 3.3]
Telephone support	6.0 (0.5)	5.3 (0.6)			
Education webinar	7.3 (0.5)	4.9 (0.6)			
Personal coping (8–40)			−0.2 [−1.3, 1.0]	2.2 [1.5, 2.9]	−1.3 [−2.7, 0.1]
Telephone support	33.0 (0.5)	34.6 (0.5)			
Education webinar	32.5 (0.5)	35.4 (0.5)			
Family coping[d] (6–30)			−0.7 [−1.8, 0.3]	1.3 [0.6, 2.0]	−1.1 [−2.5, 0.3]
Telephone support	26.1 (0.5)	26.8 (0.4)			
Education webinar	26.2 (0.5)	28.1 (0.4)			

Note. Resilience was assessed using the Connor-Davidson Resilience Scale; depression was assessed using the Patient Health Questionnaire; anxiety was assessed using the General Anxiety Disorder scale, Personal and Family Coping questions from the 1991–1992 Survey of Army Families II in U.S. Army Europe was used.
[a] $M = M_{support} - M_{webinar}$.
[b] $M = M_{6\ months} - M_{baseline}$.
[c] $M = (M_{support,\ 6months} - M_{support,\ baseline}) - (M_{webinar,\ 6\ months} - M_{webinar,\ baseline})$.
[d] $N = 102$; $n = 49$ for support and $n = 53$ for webinar. This scale is assessed only with participants who have children living in the home.

Table 5. Benefit themes reported by participants.

Theme	Examples
Support	
Support from others	"I felt like I wasn't alone in it, and I actually got to vent out as far as to people who knew what I was dealing with instead of just talking to a friend that either didn't care or they didn't understand."
	"Enjoyed connecting, knowing I am not crazy for some of the issues taking up real estate in my head."
	"I don't have a lot of support here, I'm by myself. I figured it out the whole time while he was gone, which his training was a year and a half, I actually interacted like four times on a human level with other people. … So not having any support at home, it was good to have something."
	"So the first two deployments to Iraq and Afghanistan, it was kind of like you're on your own… So this deployment, I really felt supported…"
Support from military	"It also felt good to know that someone cares about the family left behind. Most resources are for the soldiers, as it should be. It's nice to have resources for us too."
Self-efficacy	
Improved self-efficacy	"The study helped me grow in being a better wife for [husband] because since he's come home from deployment, our marriage is 10 times better than it ever has been, and I know there's been changes with him too, but I think getting my own help with figuring out life and everything too has helped."
	"Prior to me doing the webinars, I was really going through some emotional stuff with him being gone. A lot of times, I just wasn't sure how to handle those emotions or what to do, so I was kind of like, really, I had shut myself down as far as I was still able to function, go to work, clean up, but as far as interacting, going out, stuff like that, I basically stayed in the house…"
Learning coping skills	"I learned different coping mechanisms to use… It taught me how to stay in touch with him even though we weren't together. It gave me great tools to use in order to communicate better with one another instead of just playing the blame game."
Stress management	"And make sure, cause my method of coping is distraction, so making sure I was keeping myself happy versus just being so stressed that it builds up and comes out at weird moments."
Resources	"The study really kept me occupied and I learned new things about how to cope. The video sessions, especially what I did, were really helpful. It really did put things in perspective kind of like that book *What to Expect When You Are Expecting*, it was just kind of a walk through for the deployment."
Share learning	
Helping others	"It made me feel good to be involved in something like this while my husband was deployed because it meant I could help other people …I taught everybody I know how to do that [breathing relaxation exercise]. I even taught my 7 year old the other day." "And, practically I did learn that signal breath technique. I taught everybody I know how to do that. I even taught my 7 year old the other day. I love that."
Helping service members	"Also, it was nice because I could talk to my husband about it as well. So, we would do some of the homework things. We would do them together sometimes. It was helpful for not just me but my husband as well."
	"And, it also taught me what to expect when he came back. And, it helped me help him cope with his feelings when he came back."

study comparing two interventions for spouses of deployed service members, both interventions provided benefit. Content and topics for both interventions were the same and were designed with the goal of helping spouses cope with deployment. During the six month course of the study, participants in both arms, hour long telephone support groups and 30-min online education webinars, improved significantly in resilience, depression, anxiety, and coping. For anxiety, webinar arm participants had significantly greater improvement than those in the support arm. For support group participants, more sessions attended were associated with significantly improved anxiety.

Spouses in previous studies requested that the primary focus be more on their well-being than on that of the service member (Nichols et al., 2013). Accordingly, strategies for both interventions targeted activities that would benefit the spouse directly, such as stress management and taking care of self. Other strategies benefited the couple jointly, such as role negotiation and communication. In accordance with stress and coping theory (Lazarus & Launier, 1978), the goal was to help spouses develop skills to manage the environmental challenges and stresses associated with deployment and build internal and relational assets that have been shown to promote positive deployment adjustment (Orthner & Rose, 2003).

In qualitative data, participants in both arms highlighted these areas as benefits of improved self-efficacy in learning coping skills and stress management and accessing resources and feeling supported and cared for by the military, which was providing this resource to them. As to be expected, support group participants reported that connecting with others was a benefit. However, webinar participants more often reported an additional benefit—that their participation directly or indirectly benefited their husbands. It is possible that, in the webinars, without the interaction and discussion to emphasize spouse concerns, participants were more likely to view the material through a lens specific to their immediate concerns as part of a couple.

Before discussing implications of our findings, there are several study limitations that must be mentioned. Although education webinars were analogous to usual care, there was no control arm where participants received no services. Participants were at various stages

of the deployment process and, by 12 months, 72% of service members were postdeployment. A clearer picture of strategies to relieve deployment stress could be developed by enrolling participants at the start of the deployment process.

Lack of participation in the intervention was a study limitation that may have influenced results. Ten participants in each arm attended no sessions. For the support arm participants, time was a concern because the groups were at set times during the day and evening, and it was sometimes difficult to dial into sessions. The webinar participants, who could watch the presentation at will, had greater flexibility, but wanted more interaction and more information.

Spouse responses and comments suggest dissemination strategies that would meet the needs of busy spouses who want to connect. For many spouses, support is not available. Telephone or tele-health real-time support groups are a reasonable option, depending on staff availability. However, webinars for on-demand viewing to be paired with a Spouse Workbook and some interaction (e.g., monitored chat online) would be desirable to spouses and relatively simple for agencies to provide without excessive staff burden. Online sessions with interaction could provide components spouses reported were important to them, including information, skills building, support from and interaction with others, and flexibility to access information when needed and at will. These types of supported online sessions could fill a critical need for spouses during deployment and ease the transition between deployment and home.

Deployment can be challenging for military spouses. In this study, telephone support groups and education webinars focused on information and skills building around relationships, problem solving, communication, and spouse resilience, health, and adjustment. Both interventions were associated with improvements in spouse outcomes of resilience, depression, anxiety, and coping, suggesting that multiple strategies can be used to help support military spouses during deployment.

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