AWARD NUMBER: W81XWH-14-2-0123

TITLE: Supporting Military Families with Young Children throughout the Deployment Lifecycle

PRINCIPAL INVESTIGATOR: Ellen R. DeVoe, PhD

CONTRACTING ORGANIZATION:
TRUSTEES OF BOSTON UNIVERSITY
BOSTON, MA 02215

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PREPARED FOR: U.S. Army Medical Research and Materiel Command
Fort Detrick, Maryland 21702-5012

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The views, opinions and/or findings contained in this report are those of the author(s) and should not be construed as an official Department of the Army position, policy or decision unless so designated by other documentation.
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5c. PROGRAM ELEMENT NUMBER
5d. PROJECT NUMBER
5e. TASK NUMBER
5f. WORK UNIT NUMBER

6. AUTHOR(S)           Ellen R. DeVoe, Ph.D.

                          email: edevoe@bu.edu

7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES)  Trustees of Boston University
                                                        1 Sherborn St.
                                                        Boston, MA 02215

8. PERFORMING ORGANIZATION REPORT NUMBER

9. SPONSORING / MONITORING AGENCY NAME(S) AND ADDRESS(ES)  U.S. Army Medical Research Materiel Command
                                                             Fort Detrick, MD 21702-5012

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13. SUPPLEMENTARY NOTES

14. ABSTRACT  U.S. military service since the September 11th, 2001 terrorist attacks has placed tremendous demands on families. Approximately 43% of the Total Forces are parents and two million children have experienced parental deployment. Of these children, 42% were younger than five years during the deployment-separation period(s). In order to build and maintain strong family relationships that support family resilience and child well-being, Soldier and non-deploying parents must successfully meet the challenges of caregiving throughout the deployment cycle. The primary aim of this research is to adapt and test the efficacy of a preventive intervention program that was originally developed as a reintegration program to reduce parenting stress and promote family resilience in Active Duty military families through all phases of the deployment cycle. The study will be conducted in three phases. In phase 1, qualitative interviews will be administered a sample of 40 with Soldiers (20) and Non-Deploying Parents (20) of young children, and 10 key informants to identify parenting needs in the context of deployment. In phases 2 and 3, we conduct a randomized clinical trial with a sample of 150 Active Duty families who are within 6 months of deployment. Families will be randomized to receive the Strong Families parenting program or the Strong Parents self-care program. Primary outcomes include parenting stress, family resilience, and dimensions of family resilience. Secondary goals of this research are to conduct a prospective examination of coparenting through deployment and cost-effective analysis.

15. SUBJECT TERMS  Military Families, Young Children, Resilience, Deployment Cycle, Coparenting, Parenting Intervention

16. SECURITY CLASSIFICATION OF:
    a. REPORT            U
    b. ABSTRACT          U
    c. THIS PAGE          U

17. LIMITATION OF ABSTRACT

18. NUMBER OF PAGES

19. NAME OF RESPONSIBLE PERSON
    19a. USAMRMC
    19b. TELEPHONE NUMBER (include area code)

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<td>8)</td>
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</tbody>
</table>
1. **INTRODUCTION: STRONG FAMILIES STRONG FORCES**

Very young children are disproportionately represented among US military families who have served in the post-September 11th wars. Children ages birth to 5 years have unique developmentally-related vulnerabilities in the wake of parental separation, including parental deployment. The length of these wars and reliance upon a voluntary force have required many families to serve in multiple and lengthy deployments. Prolonged separation can constitute a developmental crisis for babies, toddlers and preschool-aged children, although the homefront parent, through sensitive and consistent parenting, may buffer potentially adverse effects. We also know that the non-deployed parent can be overwhelmed with the additional responsibilities during deployment, and may experience chronic worry about the deployed parent’s safety. Formal supports that address the full ecology of the military family, specifically parental roles, parenting/coparenting and parent-child relationships, can build resilience in military families as they navigate the complex stresses inherent in the deployment cycle and unique to the parental role. The primary aim of this multi-year intervention study is to adapt and test the efficacy of a family-based parenting intervention to support Active Duty parents and their families with young children (birth to 5 years inclusive) through the full deployment cycle. Secondary goals include examination of coparenting processes across the deployment cycle, and cost-effective analysis.
2. KEY WORDS
Military families, coparenting, young children, family resilience, deployment cycle, parenting intervention, military spouses, cost effectiveness

3. RESEARCH ACCOMPLISHMENTS ASSOCIATED WITH STATEMENT OF WORK: YEAR 1

3.1. What were the major goals of the project?
During Year 1, the primary tasks and accomplishments to be completed including establishing research teams and collaborative processes between all study sites, develop protocols for phase 1 needs assessment, obtain regulatory approval for phase 1 protocols (qualitative interview study), develop and initiate recruitment, conduct qualitative interviews with service members, spouses and key informants, provide training in the Strong Families program, begin adaptation of Strong Families Strong Forces, and obtain training in coparenting protocols in preparation for the randomized clinical trial.

3.2. What was accomplished under these goals?

Research Collaboration
The Boston University, UTHSCA-Ft Hood, and RAND researchers have developed effective and efficient strategies for communication. BU/UTHSCSA-Ft Hood utilize regular (at least weekly) team meetings via teleconference to discuss and address ongoing research needs, and to invite relevant community members or experts to the call as needed. Through our first year, we have met with other investigators to learn explore measurement domains and instruments (e.g., family resilience, sleep, coparenting, acculturation), IRB (Dr. Stacey Young-McCaughan) and assessment/analysis. The leadership team, including Drs. DeVoe, Dondanville, Blankenship, and Acker, meet regularly for planning purposes and to facilitate manual adaptation. In addition, Dr. Acker schedules regular supervision meetings related to intervention adaptation. As we prepare for the upcoming trial, Dr. Dondanville has hired and trained relevant research and assessment staff. Dr. Blankenship has taken the lead on finalizing the program to be utilized for the comparison arm, Strong Parents, which is based upon an existing self-care protocol under study currently at the STRONG STAR Consortium.

Briefing Military Leadership
The UTHSCA Team has met extensively with military leadership at Ft Hood to discuss the project. Specifically, the team has met with the Chief of Behavioral Health, COL Sharette Gray, at the Carl R. Darnall Army Medical Center (CRDAMC). COL Gray enthusiastically supports the project, and as provided guidance on recruitment efforts. The UTHSCSA Team has also briefed the Hospital Commander, COL Mark Thompson, and Deputy Commander, COL Jeffrey Yarvis, about the project. UTHSCSA has met with the III Corps Surgeon and staff and the 1st Calvary Division Surgeon and staff to discuss the project. Both groups have identified direct points of contact for UTHCSA staff to coordinate recruitment once the study is approved by the IRB.

Community Outreach
The UTHSCSA-Ft. Hood team has conducted extensive outreach on base both to provide information about the study and to obtain information about potential resources and partnerships to facilitate recruitment. UTHSCSA-Ft. Hood staff have met with multiple organizations, services and agencies concerned with military families, including Family Readiness, New Parent Support, New Parent Support Program, Local Play Group, Family Advocacy, Child and Family Behavioral Health, Soldier Readiness Program (SRP), Family Life Chaplain Training Center. The UTHSCSA-Ft. Hood team has also attended the Safe and Healthy Kids Fair and the National Employment Disability Awareness event.

Recruitment Strategies for Phase 1
Recruitment Strategies for Phase I have included meeting with Family Advocacy and New Parent Support Program providers to discuss the project and to provide information about how to refer their clients to participate. UTHSCSA-Ft Hood Team has attended local play group activities to talk with parents of young
children about the project. The UTHSCSA-Ft Hood Team is also attending PDHRA (Post-Deployment Health Re-Assessment) Briefings for soldiers who are returning from a deployment in the last 90 days. At these briefings, UTHSCSA-Ft Hood Team is briefing recently returned soldiers about the project and obtaining consent to contact for those interested in participating.

Phase 1 Data Collection
Research Team received HRPO approval on June 6, 2015. At the end of Year 1, we have completed interviews with 90% of Key Informants, 50% (10) of spouses, and 25% (5) Soldiers.

### Phase 1. Needs Assessment

<table>
<thead>
<tr>
<th>Task</th>
<th>Timeline (months)</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Task 1: Adapt SF program for Active Duty Army families</td>
<td>1-12</td>
<td>80% completion</td>
</tr>
<tr>
<td>Task 2: Develop clinician fidelity protocols for Strong Families and Self-Care</td>
<td>1-9</td>
<td>In progress</td>
</tr>
<tr>
<td>Task 3: Adapt research and clinical protocols for implementation at Ft. Hood site</td>
<td>1-6</td>
<td>Completed</td>
</tr>
<tr>
<td>Task 4: Hire and train SFSF2 staff at BU and UTHSCSA (for Ft. Hood site)</td>
<td>3-8</td>
<td>Phase 1 training completed</td>
</tr>
<tr>
<td>Task 5: Commence recruitment for Phase 1 qualitative interviews with key informants (10), service members (20), spouses (20)</td>
<td>7-8</td>
<td>Ongoing</td>
</tr>
<tr>
<td>Task 6: Conduct qualitative interviews (N=20 Soldiers, N=20 at-home parents; key informants)</td>
<td>8</td>
<td>Completed: 90% Key Informants 25% Soldiers 50% Spouses</td>
</tr>
<tr>
<td>Task 7: Submit Phase 3 protocols for HRPO pre-review. Submit protocol to UTHSCSA IRB. Seek Institutional Agreements for IRB Review (IAIRs) from BU &amp; BAMC where they will defer their reviews to UTHSCSA IRB.</td>
<td>9-10</td>
<td>Completed UTHSCSA IRB Submitted 7/27/15</td>
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</table>

### Phases 2-3: Randomized clinical trial of Strong Families vs. Self-Care

<table>
<thead>
<tr>
<th>Task</th>
<th>Timeline (months)</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Phase 2 Tasks 1-3: Open pilot of pre-deployment sessions</td>
<td>8-12</td>
<td>To be implemented during RCT</td>
</tr>
<tr>
<td>First 10 SF families for RCT will be pilot cases</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Task 4: Refine research protocol for RCT based on qualitative interviews; finalize assessment instruments for RCT</td>
<td>10-13</td>
<td>In progress</td>
</tr>
<tr>
<td>Task 5: Obtain approvals for amendments to research protocol for RCT</td>
<td>11-12</td>
<td>Target: Month 15</td>
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</table>

### Utilization, Cost and Sustainability Aim

<table>
<thead>
<tr>
<th>Task</th>
<th>Timeline (months)</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Task 1: Identify cost data to capture on SF and Self-Care Programs to be used to estimate program costs</td>
<td>6-18</td>
<td>In progress</td>
</tr>
<tr>
<td>Task 2: Begin to identify additional outcomes to include in analysis or cost impacts related to healthcare and social services utilization, health promotion behaviors, post-partum issues, missed work activities, etc.</td>
<td>6-18</td>
<td>In progress</td>
</tr>
</tbody>
</table>
3.3. What opportunities for training and professional development has the project provided?
Several types of opportunities for training and professional development are relevant to this project at this time. First, BU necessarily provided training on the Strong Families program through in-person workshops, reading assignments, and discussion. BU/UTHSCSA-Ft. Hood teams will conduct an updated “in-house” training in February, 2016, in which we will incorporate the new version of the Strong Families program. Drs. Dondanville and DeVoe also conducted a workshop on working with military families with young children at the Third Annual Social Work Conference on Military Families held at the University of Texas (Austin).

Professional development is strongly supported through this project. Specifically, because the STRONG STAR Consortium research studies typically focus on adult PTSD treatment and related interests, all Strong Families staff will be exposed to new models of intervention (home-based; prevention) with a new population (families with young children). Necessarily, staff and clinicians will acquire new expertise in child development, cycle of deployment, family-level analysis, and community-based approaches to research. All researchers on the team are encouraged to consider additional professional growth activities, including preparation of manuscripts for publication, submission and presentation of research at professional conferences, and when appropriate, participation at professional conferences.

Strong Families Training
a) Training on the Strong Families reintegration model was provided to Ft. Hood team clinicians and trainees. (2.5 days @ Ft. Hood site; trainers: Ellen DeVoe, PhD and Michelle Acker, PsyD {Boston team}); September 2015
b) Training and implementation of early phase qualitative analysis of needs assessment interviews (2.5 days @ Ft. Hood); September 2015 (Ellen DeVoe and Ft. Hood Team)

3.4. How were the results disseminated to communities of interest?
a) Multiple briefings about the research and Strong Families program by Ft. Hood staff throughout Year 1.
b) Consultation with Dr. Britney Hall-Clark at UTHSCSA to develop recruitment strategies for outreach to diverse communities, including faith communities (ongoing)
c) Professional Presentations/Trainings (see appendix 1)

3.5. What do you plan to do during the next reporting period?
a) Completion of all needs assessment interviews, finalize assessment protocols and manuals for both the Strong Families and Self-Care conditions, and submit amendments for the RCT for IRB approval.
b) Completion of training on primary outcome for exploratory aim (coparenting; Dr. Jamie McHale, University of South Florida)
c) We will continue training Ft. Hood team in child development, parenting and coparenting assessment, and family-based intervention with military communities.
d) Participation in the National Training Institute, Zero to Three, Inc. (Ellen DeVoe and Abby Blankenship; Dec 2015; Seattle, WA).

4. IMPACT
4.1. What was the impact on the development of the principal disciplines of the project?
4.2. What was the impact on other disciplines?

This project is the first study focused specifically on Active Duty families with children to be affiliated with the STRONG STAR Consortium. In addition, this is the first Social Work-led project at STRONG STAR and among few funded by the Department of Defense. STRONG STAR has been extremely supportive of this work and interested in the prevention and family orientation of the study.
4.3. What was the impact on technology transfer?

Nothing to Report

4.4. What was the impact on society beyond science and technology?

Nothing to Report

5. CHANGES/PROBLEMS

5.1. Changes in approach and reasons for change

The comparison condition was modified from a Case Management to a Self-Care program (Strong Parents) because Case Management on military installations has a specific, medical focus and meaning. The framework is distinct from civilian/community models of case management originally proposed and would not serve as an appropriate comparison arm. The self-care protocol, entitled Strong Parents, is being adapted from an existing program under study through a STRONG STAR investigation (PI: Stacey Young-McCaughan).

Recruitment for the needs assessment interviews has been intentionally delayed to further develop strategies for outreach to military families from underrepresented minority communities. We are actively expanding outreach strategies and contacts to ensure more representative sampling and to include families who may not live on base on nearby.

5.2. Actual or anticipated problems or delays and actions or plans to resolve them

The research team has been very proactive in anticipating potential delays in IRB approvals. The UTHSCSA Regulatory team headed by Drs. Young-McCaughan and Allison Hancock are working closely with all regulatory bodies to ensure expedient reviews and approvals.

There is also a potential that recruitment could be a problem. There is uncertainty in upcoming deployments both in the location and the number of soldiers potentially deploying. This greatly impacts the projects potential recruitment source. The research team has mitigated this potential problem by expanding the inclusion to include a military-related separation for 6 months of longer. This would allow participants to be eligible if they are experiencing a change in duty station that is unaccompanied. This change would also allow for the project to recruit from Brigade Command Teams that are rotating to Korea.

5.3. Changes that had a significant impact on expenditures

Nothing to report

5.4. Significant changes in use or care of human subjects

Nothing to report

6. PRODUCTS

6.1. Publications, conference papers, and presentations

PEER-REVIEWED PUBLICATIONS


BOOK CHAPTERS

OTHER PUBLICATIONS


MANUSCRIPTS UNDER REVIEW

PROFESSIONAL PRESENTATIONS


**WORKSHOPS**


**PROMOTIONS**

**Ft. Hood**

1. Katherine Dondanville PhD, ABPP promoted to Director of Research. Currently is Director of Research and Chief of Psychology at the STRONG STAR Fort Hood site (2015, August).
2. Abby Blankenship, PhD promoted to Assistant Professor (2015, August).
3. Vanessa Jacoby, PhD defended her dissertation (2014, November)
4. Vanessa Jacoby, PhD promoted to second year postdoc (2015, August)
5. Jessica Brennan, PhD promoted to second year postdoc (2015, August)

**Boston University School of Social Work**

Abigail Ross, MSW/MPH, defended her dissertation proposal (2015, July) – Boston University

6.2-6.4: Nothing to Report

7. **PARTICIPANTS & OTHER COLLABORATING ORGANIZATIONS**

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<thead>
<tr>
<th>Personnel</th>
<th>Role</th>
<th>Person-Months</th>
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<tr>
<td><strong>Boston University</strong></td>
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</tr>
<tr>
<td>Dr. Ellen DeVoe</td>
<td>PI</td>
<td>3.3</td>
</tr>
<tr>
<td>Dr. Michelle Acker</td>
<td>Training and Clinical Supervisor</td>
<td>1.0</td>
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<tr>
<td>Kong/Emmert-Aronson</td>
<td>Research Assistants</td>
<td>24</td>
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<tr>
<td><strong>Strong Star Consortium/Ft. Hood</strong></td>
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<tr>
<td>Dr. Katherine Dondanville</td>
<td>Co-Investigator</td>
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<tr>
<td>Dr. Abby Blankenship</td>
<td>Research Assistant Professor</td>
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<tr>
<td>Heidi Rathbun-McVeigh</td>
<td>Therapist 2 (MSW)</td>
<td>12</td>
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<tr>
<td>Kiera Mason</td>
<td>Research Assistant 1</td>
<td>12</td>
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8. **SPECIAL REPORTING REQUIREMENTS**
APPENDIX A: QUAD CHART (Separate Attachment)

9. APPENDICES N/A
Supporting Military Families with Young Children throughout the Deployment Lifecycle

PI: DeVoe, Ellen  
Org: Boston University School of Social Work

Problem, Hypothesis and Military Relevance

- **Problem**: Over 2 million children, 42% under 5, have been affected by parental deployment
- Parenting and coparenting stress, & adverse child outcomes associated with deployment separation and reintegration
- No evidence-based resilience-building programs available for military families with young children through deployment cycle
- **Hypothesis**: Expansion of an existing family reintegration program (Strong Families; SF) to begin pre-deployment will prevent adverse outcomes, improve parenting stress, reflective capacities and parent-child relationships compared to self-care (Strong Parents; SP) condition
- **Military Relevance**: Generation of critical knowledge about parenting and coparenting through all phases of deployment to inform programs and policy. If successful, SF will be among the first evidence-based programs targeting military families with very young children and can be disseminated widely in military and community settings.

Proposed Solution: To adapt and test Strong Families Strong Forces (SF) to Strengthen and Support Family Relationships throughout the deployment cycle

**Aim #1**: To extend our understanding of the psychological and psychosocial needs of OEF/OIF families with very young children throughout the deployment lifecycle during the pre-deployment and deployment phases.

**Aim #2**: To adapt SFSF to support National Guard and Reserve families with very young children throughout the deployment cycle

**Aim #3**: To conduct a randomized clinical trial testing the efficacy of SF compared to a Self-Care (SP) comparison condition in a sample of Active Duty Army families with young children

**Aim #4**: To conduct a cost-effectiveness analysis to compare the costs of achieving benefit from SF versus SP

Timeline and Total Cost (Direct and Indirect)

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<th>FY16</th>
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<td>DC(IDC)</td>
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<td>- Purchase Equipment</td>
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<tr>
<td>- Qualitative Interviews (N=50)</td>
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<tr>
<td>- Qualitative Analysis</td>
<td></td>
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<td>Phase 2: Months 9-12</td>
<td>175.18K</td>
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<tr>
<td>- Adapt SFSF</td>
<td>(57.51K)</td>
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<tr>
<td>- Conduct pilot test (N=10)</td>
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<tr>
<td>Phase 3: Months 13-48</td>
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<td>930.96K</td>
<td>931.77K</td>
<td>791.82K</td>
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<tr>
<td>- Conduct RCT  (n=150)</td>
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<td>(230K)</td>
<td>(230K)</td>
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<tr>
<td>- Analyze Data</td>
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<tr>
<td>- Disseminate research &amp; clinical findings</td>
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<td>Est. Total Budget ($K)</td>
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<td>1,161.80</td>
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