



TriService Nursing Research Program Final Report Cover Page

Sponsoring Institution	TriService Nursing Research Program
Address of Sponsoring Institution	4301 Jones Bridge Road Bethesda MD 20814
USU Grant Number:	HU0001-09-1-TS05
USU Project Number:	N09-P02
Title of Research Study or Evidence-Based Practice (EBP) Project:	Deployment of Military Mothers during Wartime
Period of Award :	1 July 2009-30 June 2012
Applicant Organization	The Catholic University of America
Address of Applicant Organization	620 Michigan Ave NE, Washington DC 20064

PI Civilian Work Contact Information

Duty Title	Associate Professor
Employer	The Catholic University of America
Address	School of Nursing, 620 Michigan Ave NE, Washington DC 20064
Telephone	202-319-5719
Mobile Telephone	301-257-2461
E-mail Address	agazio@cua.edu

PI Home Contact Information

Address	
Telephone	
Mobile Telephone	301-257-2461
E-mail Address	agazio@cua.edu

Signatures

PI Signature	_____	Date	11 November 2012
	_____		_____

Report Documentation Page

Form Approved
OMB No. 0704-0188

Public reporting burden for the collection of information is estimated to average 1 hour per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Washington Headquarters Services, Directorate for Information Operations and Reports, 1215 Jefferson Davis Highway, Suite 1204, Arlington VA 22202-4302. Respondents should be aware that notwithstanding any other provision of law, no person shall be subject to a penalty for failing to comply with a collection of information if it does not display a currently valid OMB control number.

1. REPORT DATE
12 NOV 2012

2. REPORT TYPE
Final

3. DATES COVERED
01 JUL 2009 - 30 JUN 2012

4. TITLE AND SUBTITLE
Deployment of Military Mothers during Wartime

5a. CONTRACT NUMBER
N/A

5b. GRANT NUMBER
HU0001-09-1-TS05

5c. PROGRAM ELEMENT NUMBER
N/A

6. AUTHOR(S)
Agazio, Janice G., PhD CRNP. RN. LTC(ret), AN, USA

5d. PROJECT NUMBER
N09-P02

5e. TASK NUMBER
N/A

5f. WORK UNIT NUMBER
N/A

7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES)
Catholic Univ. of America, 620 Michigan Ave NE, Washington DC 20064

8. PERFORMING ORGANIZATION REPORT NUMBER
N/A

9. SPONSORING/MONITORING AGENCY NAME(S) AND ADDRESS(ES)
TriService Nursing Research Program, 4301 Jones Bridge Rd, Bethesda, MD 20814

10. SPONSOR/MONITOR'S ACRONYM(S)
TSNRP

11. SPONSOR/MONITOR'S REPORT NUMBER(S)
N09-P02

12. DISTRIBUTION/AVAILABILITY STATEMENT
Approved for public release, distribution unlimited

13. SUPPLEMENTARY NOTES
N/A

14. ABSTRACT

Purpose: The primary aim was to describe the perceptions of military mothers regarding separation from their children over the trajectory of the wartime deployment experience. **Design:** Grounded theory **Methods:** Interview lasting 1-1.5 hours structured around the stages of deployment. **Sample:** Thirty-seven military women representing primarily Army (81%) and Air Force (19%) active duty (91%) women deployed to Iraq (84%). Many had multiple deployments (30%) to both theaters lasting 6-15 months at a time. At the time of separation, children ranged in age from 3 months- 12 years. Many were single mothers (32%) or married to another service member (57%). **Analysis:** Interviews were transcribed verbatim and the constant comparative method was used to identify core processes through a combination of open, axial, and selective coding in order to construct a theoretical model of the deployment separation. **Findings:** **Primary themes included:** missing milestones, commitment, communication, child reactions, mother guilt, and it takes a village. An emerging theory of mother deployment separation was developed around the core construct preserving the sacred bond. Participants identified normalizing strategies to help mothers maintain a relationship and foster connectedness with their children during the separation. Emotional reactions such as distancing and relinquishing control helped mothers focus upon the mission. **Reintegration** involved ongoing adjustment for mother and child(ren). **Implications for Military Nursing:** This study increases understanding of mother separation in wartime deployments. The findings identified strategies useful before and during wartime deployments; provided evidence based indications for policy development; and will guide support networks working with families and children.

15. SUBJECT TERMS

war, womens health, mother child interaction

16. SECURITY CLASSIFICATION OF:

a. REPORT unclassified	b. ABSTRACT unclassified	c. THIS PAGE unclassified
----------------------------------	------------------------------------	-------------------------------------

17. LIMITATION
OF ABSTRACT
SAR

18. NUMBER
OF PAGES
35

19a. NAME OF
RESPONSIBLE PERSON

Table of Contents

Abstract	3
TSNRP Research Priorities that Study or Project Addresses	4
Progress Towards Achievement of Specific Aims of the Study or Project	5
Relationship of current findings to previous findings	19
Effect of problems or obstacles on the results	24
Limitations	24
Conclusions	24
Significance of Study or Project Results to Military Nursing	25
Changes in Clinical Practice, Leadership, Management, Education, Policy, and/or Military Doctrine that Resulted from Study or Project	26
References cited	27
Summary of Dissemination	30
Reportable Outcomes	32
Recruitment and Retention Table	33
Final Budget Report	35

Abstract

Purpose: The primary aim was to describe the perceptions of military mothers regarding separation from their children over the trajectory of the wartime deployment experience.

Design: Grounded theory

Methods: Interview lasting 1-1.5 hours structured around the stages of deployment.

Sample: Thirty-seven military women representing primarily Army (81%) and Air Force (19%) active duty (91%) women deployed to Iraq (84%). Many had multiple deployments (30%) to both theaters lasting 6-15 months at a time. At the time of separation, children ranged in age from 3 months- 12 years. Many were single mothers (32%) or married to another service member (57%).

Analysis: Interviews were transcribed verbatim and the constant comparative method was used to identify core processes through a combination of open, axial, and selective coding in order to construct a theoretical model of the deployment separation.

Findings: Primary themes included: missing milestones, commitment, communication, child reactions, mother guilt, and “it takes a village”. An emerging theory of mother deployment separation was developed around the core construct “preserving the sacred bond”. Participants identified normalizing strategies to help mothers maintain a relationship and foster connectedness with their children during the separation. Emotional reactions such as distancing and relinquishing control helped mothers focus upon the mission. Reintegration involved ongoing adjustment for mother and child(ren).

Implications for Military Nursing:

This study increases understanding of mother separation in wartime deployments. The findings identified strategies useful before and during wartime deployments; provided evidence based indications for policy development; and will guide support networks working with families and children.

TSNRP Research Priorities that Study or Project Addresses**Primary Priority**

Force Health Protection:	<input type="checkbox"/> Fit and ready force <input checked="" type="checkbox"/> Deploy with and care for the warrior <input type="checkbox"/> Care for all entrusted to our care
Nursing Competencies and Practice:	<input type="checkbox"/> Patient outcomes <input type="checkbox"/> Quality and safety <input type="checkbox"/> Translate research into practice/evidence-based practice <input type="checkbox"/> Clinical excellence <input type="checkbox"/> Knowledge management <input type="checkbox"/> Education and training
Leadership, Ethics, and Mentoring:	<input type="checkbox"/> Health policy <input type="checkbox"/> Recruitment and retention <input type="checkbox"/> Preparing tomorrow's leaders <input type="checkbox"/> Care of the caregiver
Other:	<input type="checkbox"/>

Secondary Priority

Force Health Protection:	<input type="checkbox"/> Fit and ready force <input type="checkbox"/> Deploy with and care for the warrior <input checked="" type="checkbox"/> Care for all entrusted to our care
Nursing Competencies and Practice:	<input type="checkbox"/> Patient outcomes <input type="checkbox"/> Quality and safety <input type="checkbox"/> Translate research into practice/evidence-based practice <input type="checkbox"/> Clinical excellence <input type="checkbox"/> Knowledge management <input type="checkbox"/> Education and training
Leadership, Ethics, and Mentoring:	<input type="checkbox"/> Health policy <input type="checkbox"/> Recruitment and retention <input type="checkbox"/> Preparing tomorrow's leaders <input type="checkbox"/> Care of the caregiver
Other:	<input type="checkbox"/>

Progress Towards Achievement of Specific Aims of the Study or Project

Findings related to each specific aim, research or study questions, and/or hypothesis:

Employing grounded theory methods, this study focused on answering the following research questions:

1. What is the process of managing a deployment for military mothers and their children?

The core variable or process identified in managing a deployment separation for military mothers and their young children emerged as “preserving the sacred maternal bond” (see Figure 1). In the course of the interviews and analysis, again and again

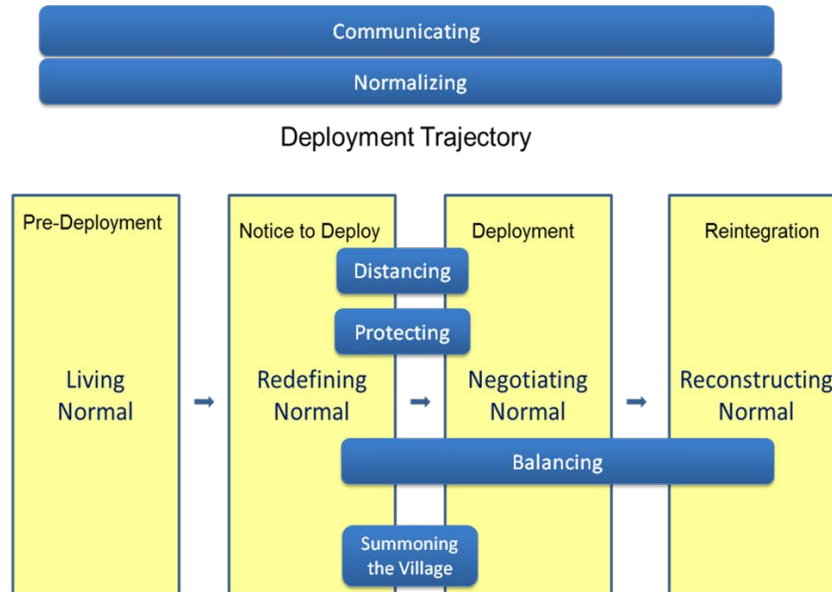
Figure 1: Core process model: Preserving the sacred maternal bond



mothers referred to the “special bond” that exists between a mother and child. Quotes such as “we’re survivors together” and “we have a special bond” emerged frequently in the narratives mothers provided about the sequence of events leading to and during their deployments. Mothers were very cognizant of behaviors that they employed to protect and maintain this bond thus leading to the phrasing of “preservation” since there was an acknowledgement of the bond as pre-existing the deployment and that activities went beyond just maintenance or sustainment but needed the permanence denoted in “preserving.” The term “Sacred bond” emerged from analysis in acknowledging that the maternal-child bond is special, beyond understanding in the strength of the relationship that transcends time, distance and space. Sacred refers to “regarded with reverence” (<http://dictionary.reference.com/browse/sacred>) or “to something highly valued and important” (<http://www.merriam-webster.com/dictionary/sacred>). Strategies used by the mothers directly supported the preservation of the sacred bond with the children left at home. These strategies were employed in varying intensity at different phases of the deployment experience and these are projected against that backdrop (see Figure 2). These strategies will be discussed in the context of the deployment phase. In general, the strategies used throughout the deployment experience included communicating,

normalizing, protecting, distancing, balancing, and summoning the village. These will be indicated in detail for the phases in which they are most evident.

Figure 2: Strategies employed across the deployment trajectory



2. How do military mothers describe the effects of a deployment upon themselves and their children?

In considering the effects of the deployment upon themselves and their children, the mothers reflected upon the effects of the deployment when asked about the re-integration period and the family's current status. In anticipation of re-integration, both families and service members tracked the days until they headed back and, to make the date more tangible, used devices such as countdown calendars to track the days. Depending on planning for troop movements, the actual date could be fluid, changing frequently, until the final day for departure was set. This could be hard on families longing to welcome the mothers home again especially when the date changed. Mothers in the study indicated that most of the time they would not share a firm date with the family for the airport arrival until they were boarding the plane so that they would not stress the family, and children, with a rollercoaster ride of anticipation. For younger children who had not yet grasped time concepts, they employed "fun" calendars such as a jellybean or kisses jar where the child took one a day and could visualize the time getting shorter as the container emptied. In cases where dates changed, the caregiver occasionally surreptitiously added a few treats to the container so as not to disappoint if the container emptied and mom was not home yet.

[P23] *They knew that I was coming home soon but they did not tell them the day that I was actually coming home because we weren't sure...we didn't want them counting on a day and then it not happening. I'm told that what happened -- I came home at 9:30 at night so they ate dinner and got ready...and they said, "We've got to go get our kisses from Mommy." They had made sure that there was one each. My older daughter picked*

up right away. She took her kiss out, she's like, "Wait a minute, there's no more kisses left." My husband said, "Well, what does that mean?" She says, "That means Mommy's coming home." He said, "Yeah." She says, "When?" He said, "Oh, we're going to the airport right now to pick her up," and apparently it was just – I just wish they had videotaped it because I didn't actually get to witness that. I always was thinking about that...[and felt] a great feeling.

As going home neared, many deployed service members, as well as family members, started to fantasize about the reunion as a celebration with lots of fanfare, closeness, and joy. In actuality however, many needed to travel back through hub locations and after many flight transfers and legs to their journey, arrived tired, late in the evening, and perhaps the first steps back on U.S. soil were not greeted by friends and loved ones. Children could easily be overwhelmed and become shy and withdrawn with the expectation to recognize and greet their returning mother.

[P11] I picked both of them up from school because they didn't even know I was coming back. It was a surprise. I picked my son up from his preschool and he was shocked and I picked my daughter up and she was shocked ... when my daughter walked into the office she was just overjoyed and ran to me.

Mothers in the study related that coming home triggered fears that they would not be recognized by the younger children, or that the relationships with them would be altered. The mothers also needed to renegotiate their roles in the home since a new routine was usually in place during their absence. Most of the participants related feeling disassociated from their families, almost like a stranger, coming back in to the home where things may have been moved around in their absence and perhaps children looked to the other parent or caregiver for their needs out of habit.

[P14] Just coming back into the family, all the roles that my husband had to pick up and then to acknowledge all the work that he had done and then to slowly fix them up without making him feel like he wasn't doing it the right way or something along those lines. I wanted to get home and get integrated as quickly as I could,...but I had to make sure that my husband didn't feel like I was doing it because it was something that he had failed to do...

Many experienced an awkward time during this early period at home. Children needed extra reassurance that mom was not leaving again anytime soon and physical closeness and cuddling. Mothers in the research study related that some of their children experienced some sleeping difficulties, clinginess, and anger with them initially or perhaps preferred the other parent, but others felt the separation made their bond with their children stronger and more resilient.

[P02] If I'm gone for any period of time, she's a lot more clingy when I get back, you know, up under me all the time, doesn't really want to leave, you know, wants to sleep in my bed, that kind of thing.

[P30] *But when I came back, he just wasn't adjusting well and was having these horrific tantrums and just all kinds of issues. Couldn't leave him for any length of time, even during the day for daycare was hard. So, we had him screened and then subsequently he was diagnosed not only with ADHD, but Oppositional Defiant Disorder, Bipolar as well.*

The participants also related that they experienced some personal health effects after the deployment. Mothers in the study reported nightmares, being quick to anger, feeling disassociated from family and work, and sadness.

[P14] *Once I got over there and I got very busy in the job I had, it was very high stress and I got mad a lot because of the stress. So while I was over there I was afraid of bringing that anger back and having the temper and the short fuse and all of that with my kids. And I just had to keep that in my head that it's completely different situations*

Going back to work could also be difficult, as it seemed that life had gone on while they were away and they no longer felt like they were part of the team or that there was not an acknowledgement of what they had experienced while away.

[P05] *I wasn't reintegrated at the end of the two weeks. And I sort of felt -- I felt really kind of lost and purposeless....I didn't expect it to be so painful....*

3. How do military mothers prepare themselves and their children for deployment?

Most military women know they will be deploying several months before the actual departure date. Some units are deployed together so that members are able to train and prepare ahead of time personally and with their families. Others however experienced a short time line that caused a higher level of stress for the individual as well as for the family in the rush to be ready to leave. Multiple activities had to be completed simultaneously beforehand. Before deployment, service members usually participated in training at the duty location and perhaps at a deployment station that required leaving for several weeks at a time or even relocating early before the actual deployment. On the home front, mothers needed to insure that powers of attorney, identification (ID) cards, and care plans were in place for their children. This was especially important, but complicated at times, for children who were staying with grandparents, for example, away from military facilities. One major decision was determining the primary caregiver during the deployment. Since, statistically, 40% of married military women are married to other service members, most expected their spouse to care for the children during the deployment. The married women in the study indicated that they also often arranged additional childcare to support their husbands having either her mother or mother-in-law live in the home or hiring nannies and au pairs to provide an extra pair of hands with childcare responsibilities. For single mothers, most often the caregiver was the maternal grandparent or other relative. This meant often relocating children to different cities, away from military resources, sometimes much earlier than the deployment date, to ease integration at new schools or daycare. For one mother in particular this meant relocating her children to her mother's home in August, even though she wasn't deploying until October. She spent most weekends traveling to visit them before she started the mandatory training and preparation.

Additionally, mothers noted trying to tap into other resources in the community, a strategy called “summoning the village.” One mother noted “It takes a village to raise a child,” ...I won't say it was easy because it surely wasn't easy, but it was easier because I had my Village People.” This particular mother sent out emails to everyone she knew and garnered wonderful help for her husband for respite evenings and weekend carpooling who became her “Village People” and “rescued” her husband on a regular basis. Pre-deployment mothers feared that leaving for the deployment while their child was young would mean that they would be forgotten while they were away.

[P07] Now, for me, leaving was extremely difficult because she was two and a half. Anyway, my big fear was that I would leave and come back and she wouldn't remember me.

[P20] (Mother of a 13 month old) I wanted the baby to know who I was. I didn't want her to reject me when I came back. I was worried about how my son would do in school.

[P23] I think, trying to accustom myself to the idea that particularly my one-year old, when I came back, was not going to really know who I was. I needed to understand that and deal with that.

Several thought separation during the infant years would be easier on the child noting that the child “won't remember me being away.” Some had intentionally volunteered to deploy while the children were under a year.

[P08] I would recommend to people to leave when your child's six months old if you're not breastfeeding because I think the younger they are, the less long term effects it's going to have on them. I don't think he even remembers it or has any concept of it at this point. He's three and a half now so it's been almost close to a year and a half now since I've been back.

Several of the mothers of young children were still breastfeeding while they prepared to deploy.

[P34] I was still breastfeeding when I thought I was going to deploy, and I had hoped to breastfeed at least through a year, but obviously the deployment had to affect my plans for that so that I had to completely wean before I left

[P23] I weaned her earlier than I would have otherwise. I still did breastfeed some up until I left but not nearly to the extent – it was maybe once or twice a day versus – I think I would have been pumping and she would have been breastfeeding a lot more than that.

To preserve their bond, an area of importance in the pre-deployment phase was setting up communication pathways (Communicating strategy), and establishing a presence to provide comfort in the mother's absence. At various points in OEF and OIF, communication venues varied from a community phone line to office-based chat capabilities using Internet phone/video

sites such as Skype. Some mothers early in the war experienced limited real time contact so prepared at home with postcards, notebooks, and other snail-mail based modalities in their plans to stay in touch. Mothers also noted leaving “reminders” of themselves such as “flat Stanley”-type mock-ups with their image; pillowcases with their photo; small gifts for the caregiver to use as a surprise memento; DVD’s or tapes with storybook recordings, and photo books.

[P02] *I ordered children’s book because [named website] delivers to Iraq, so I ordered...some children’s books and I had...video recording on my camera and I would record myself reading books to her and then, I would send those DVDs back home...so she had a really clear picture of mommy reading a book to her as well.*

[P05] *I tried to think of some things to share to maintain an ongoing relationship with them while I was gone, and we bought some special notebooks thinking we could mail them back and forth to each other, that we could construct a story together during the time*

Emotionally, as the deployment neared, mothers reported starting to distance themselves from their children as a protective mechanism in facing the impending separation and also to allow them to focus upon the upcoming mission in the wartime environment (Distancing).

[P05] *And I definitely noticed that once I got my orders I started finding other things, not consciously, but I was suddenly finding other things to do at night when it was time to read them a bedtime story, for example. I would be folding laundry and [husband] would be doing it. And that made me sad in a way, but I just couldn't -- I had to distance, almost, a little bit.*

The balancing strategy refers to the give and take that was needed in maintaining, yet relinquishing, the primary caretaking role while the mother was deployed. During the preparation for departure, mothers mentally prepared for someone else to provide the mothering role during her absence. This process, for most, was coming to the realization that they would not be involved in the daily decision making and support provided physically and emotionally for their children.

[P20] *I'm the mom. I'm the one who straightens up, who does all the grocery shopping, who really runs the household so I was concerned how it would work. At the same time, I was like, “This is a great opportunity for you to step up. You say you're this modern dad, well, go for it.”*

[P20] *For the 11-year-old, I just pretty much told him. I made a very thorough kind of turnover book, if you can imagine – everything that was going on – well, I mean, not obviously but I managed the household as far as the family calendar so I made a very thick booklet of contacts and I planned out his summer. Each week of the summer had its own pocket protector in the book and I'd written on it, “This day camp is paid for. This experience, you need to turn in the form on the first day.” I kind of made a turnover book for my au pair and my husband*

Mothers expressed awareness, but reluctance, to begin to “let go” of their control as they neared the time in which they needed to turn over child care responsibilities over to the deployment caregivers (Balancing strategy). Typical of this concern, one mother described her experience as she prepared to leave:

[P25] *I was worried that things weren't going to get done to my standard... everything from how are they going to get dressed, what to get fed, their school work, and soccer, music, all that. But I kind of had to tell myself that once I'm away I won't have control over those matters I'll just have to leave it to the folks, to my husband at that time as well as the nanny. We did a very good planning phase prior to my deployment with the daily schedule, their activities, the school calendar, everything. So we did the best we could to prepare for that.*

Mothers also spoke of the need as military service members to fulfill the requirements and expectations of their military commitment to do their part in supporting the wartime mission. Most knew that deployment at some point was inevitable and spoke of trying to balance the needs of their family with deployment timing.

[P01] *I'm an Army nurse and actually I had a lot of guilt the fact that I hadn't deployed anywhere and so I think the hardest part of being a mother is balancing. Maybe it's because I just have too much guilt but trying to balance all of these different things of knowing that there are certain requirements to the job that I have and then also that I have certain responsibilities to my children and trying to find a balance between those.*

[P02] *I wanted to you know go ahead and try to do it earlier. Uh – I – that -- that's probably the – my husband and I sat and talked a lot about and trying to time it, um, where it would be the least impact on her*

Most of the mothers relating this dilemma indicated appreciation for having the opportunity to control the timing to the extent it was possible. Some units rotated at the same time so having a semi-firm date was helpful in preparations. For those who were fillers to deploying units, being able to negotiate timing was especially helpful in feeling that the family was settled and ready as well for the separation.

Concurrent with balancing, mothers began to prepare the children for the separation. Mothers explained the care they took in shaping the message in terms of when and why she would be leaving at a level appropriate for the child's developmental level (Protecting strategy). In their message, the mothers were careful to reassure children of their love, that they would return home safely, and included suggestions of how they would stay in touch with each other during the separation.

One mother described the message she gave her children:

[P10] *I said, "Honey, I'm here because I have to get the bad guys because they want to hurt you and [your brother]. I have to get them put away so that they won't go here and they won't hurt you, but I'm doing this for you, okay? I'm going to be back and I'm going to be home, and I'm going to talk to you every day on Skype just like if I was home.*

We're going to read, and we're going to talk, and you're going to tell me how your day was."

It was important to the mothers to be honest with their children, but also not to alarm them unnecessarily.

The goal of many actions during preparation was to maintain life for the child(ren) as much as possible to what they were used to in terms of their activities and home life. This strategy was labeled normalizing.

[P26] My two girls are very social. One was in Girl Scouts and the other was in soccer. So the nanny shuttling them around I think helped normalize their schedule and their routine. So I think that helped.... they pretty much are in a stable environment and I had my mom and dad in the area so they came and saw them, participated in their activities, their school and music, sports. I didn't really perceive that the kids were having any troubles struggling with the adjustments or coping.

While the mothers tried to get their families set up to continue life "as normal" they also faced acknowledging the important milestones they would be missing while they were deployed. In anticipation of these missed events, many set up small gifts to be presented at birthdays, cards to be distributed, and communication venues to in some way share in the celebration for holidays, birthdays, or special accomplishments. Harder was the anticipation of missing developmental milestones such as first steps, first words, and first birthdays.

[P02] Missing the everyday life. I missed 15 months of her life, you know, and you – you see toddlers now and – and it's like I missed that whole piece of her life.

[P21] ...just knowing that you're going to miss the baseball season, the football season, new sports events, music, all the little concerts and stuff like that, that was hard. Then there was with my little one, she was maybe a little over 2 when I actually left, and just with her it was just growing and knowing who I was and having a relationship with her like I had had with my son when he was younger.

4. How do military mothers manage the separation from their children during deployment?

Interestingly, in the interviews, mothers were asked to describe how they came to be deployed and how they readied themselves and their children for the separation. While they spent a few minutes describing the preparation, often they superficially described the actual deployment period, choosing instead to talk about when they returned home and re-integrated with their family. It was somewhat telling, and indicated a need to probe further, for them to describe the actual deployment period. For the mothers in the study, the deployment period was a bittersweet time. After getting settled, most sought to open up communication channels (Communication strategy) depending on what they found available in theater. During the deployment, communication was critical. Mothers tried to maintain frequent communication and participation, as much as possible, in the life of the family. Many enjoyed a daily "call" either

by phone or web-based portal such as Skype. But at the same time, they recognized that they needed to relinquish “control” so that the designated caregiver could provide the care that they currently could not. This was difficult when they would observe, through Internet-based communication, or perhaps hear comments from friends or family members, of differences noticed in how the children were being cared for while they were away.

[P23] *I would hear about things over the phone. He [husband] and I were talking – I just tried to let it go and I just had to remind myself that these were not things that were going to kill my children and it needed to not be important because I had to realize that my making an issue of it, it wasn't going to change anything and we –it's just going to be frustrating for me and I'm just going to anger my husband who was doing the best that he could and that wasn't going to be helpful for anybody*

Recordings and videotapes left at home proved particularly comforting for the children. Mothers mentioned reading stories while being video or audiotaped that children would use at bedtime each night.

[P02] *...for her to hear my voice and to see my face was the biggest connection for her*

The mothers would also send “surprises” to the children to celebrate special events or just to show them they were thinking about them even though she was away.

[P16] *Well, I did have the ability to be able to go shopping, so I was able to buy them -- I would always send them a package every two months, just to let them know I was thinking of them. So for Christmas I ended up getting them these cute little dresses, and I sent those to them, and I called them.*

[P21] *I sent home birthday cards. My son had two birthdays while I was over there. My daughter had a birthday. I sent little packages of little souvenirs that I'd pick up once in a while, sent letters. They still have those.*

Achieving balance in “being the mother,” became very challenging as well once mothers were actually thousands of miles away and families were dealing with life without her.

[P15] *...all I ever hear on my end of the telephone is how hard it is on him and how ill he's been. So it kind of made me feel bad a lot but I couldn't be there and do things for them. So I think that was probably the most stressful part is knowing that they were having a hard time but there really was nothing I could do except just kind of listen and then offer to try to get my family or his family over to help him out*

Having access to immediate communication could have both positive and negative connotations. On the one hand, children and mothers felt reassured that they were available for advice, but at other times, when problems arose at home, issues could distract the mothers from the military mission. This mother found creative ways to help out her family from afar and even to provide “mothering” oversight in anticipating her children’s needs:

[P20] *I think what with the Internet, there's a lot you can still do. Summer plans, one of the weeks of my son's summer fell through, and I just got on the phone and got on the Internet and got him into a computer camp. I called a 1-800 number from Iraq and got him into a computer camp and got that all set up. My daughter outgrew her crib, and I went online and ordered a toddler bed to be delivered. I sent books and stuff to the kids using Amazon. There really isn't an excuse to say you can't be connected when you have the Internet.*

Other mothers ordered winter coats as the seasons changed or clothing in larger sizes as it was evident on Skype that pants were becoming shorter. In many ways, this helped mothers feel in touch with their families and provided an outlet to enact her mothering role during the deployment. Those with more negative experiences included this mother who had left her child with a relative where some drug-related unrest occurred resulting in some gunshots being fired in the immediate vicinity.

[P19] *My first instinct was to at least see how it plays out because I was prepared to go to the command and say, "I need emergency leave to go get my kid." I didn't want to overreact because my sister didn't sound overly worried, and I didn't want to be jumping the gun but it bothered me and I think that was one of the things that... I lost focus. I lost so much focus when I was over there... Well, I got in trouble a couple of times because I would like leave [my weapon]....That's a big no-no in the battle range...I just walked away from it. I walked away from the weapon.*

Fortunately, for this mother, she was able to re-deploy early and reassure herself that nothing untoward happened to her daughter. It is evident however that receiving news like this from the homefront however can be distracting and possibly dangerous for the service member should they become unfocused as to their surroundings and protection. Health issues with the children could also be distracting as mothers felt at a loss when children experienced surgeries and illness while they were deployed. Several children needed PE tubes and waiting out the surgery from a distance was stressful for the mothers.

[P31] *She had to have two adenoids taken out and tubes put in. That happened while I was gone and of course, that was just horrible because then, of course, you think of all the horrible things that can go wrong even though it's a nothing surgery, but of course, as a mom, all the thoughts of, "She doesn't understand the surgery. She doesn't understand what's going on. She knows that Mom's just not there." You know what I mean? What was neat, though, is my mom was really good. She's a nurse, too. They took pictures at the hospital and everything. The surgical team had taken a picture with them and her in her little gown and all that kind of stuff, so they were really good. It was, of course, weeks later that I got the pictures, but they even signed a little card and said, "We're taking very good care of [your daughter]."*

Another issue re-emerged once mothers were "down range," many remarked how difficult it was to miss the child's development and holidays that marked important milestones in their growth and life together as now the reality set in regarding the actual separation.

[P03] *He started talking, walking, potty training, all that and I missed all of it. When I went to Iraq,....I missed her first day of kindergarten, losing her first teeth.*

Yet, mothers also acknowledged the important work they were doing in the deployment and for their units, patients, host country, and the United States.

[P10] *It's just the purpose of it and it is our job. Everything my kids get, it comes from the service of my country, so I have to give back to my country. That's how I feel, we're helping each other and this is what we're here for.*

“Trying to keep life normal” for the children was a theme that emerged in the study with regularity. It was important to the mothers to know that the children weren't missing out on sports, extracurricular activities, or family excursions because of her absence.

[P26] *I'm pretty close to them so even though I was deployed I talked to them a lot and called frequently. My kids would put me on the speakerphone while playing the piano or they would tell me when their spring flowers were out. You know, tried to have a normal life, so to speak.....They would tell me what they were doing. They'd draw pictures and send it to me and vice versa. I sent pictures of me in Iraq and showed them as much as I can show them anyway of my daily routine. So I think it helped them sort of gain some amount of insight of what my life is like. It's not like I'm completely absent. In fact, my middle daughter was—how old was she—twelve at the time, and her statement when I got back was, “Mommy, it's as if you never left”.*

One of the concerns that emerged for mothers on the homefront was the unevenness of support from their units for the family left behind. Normally, at military locations with frequent deployments, family readiness, or support, groups (FRG) are an institutionalized resource offering companionship, support, and information to spouses of deployed service members. For those in communities off post/base, or perhaps fathers or grandparents, serving as the designated children's caregivers, the FRG's were not as accessible due to timing, distance, or feelings that they were not included in these predominately-female programs. For those in off post/base communities, especially those at a distance, several children were dis-enrolled from Tricare and mothers ran into a wall of bureaucracy in trying to reestablish eligibility adding unnecessary stress to the deployment. For this parent, despite being a dual military family and having a power of attorney in place, she, as sponsor, was required to complete the paperwork to correct the mistaken disenrollment:

[P33] *My oldest one got dis-enrolled from TRICARE, randomly, this last deployment.... Randomly, he got dis-enrolled from TRICARE, but because he was my dependent, even though his father is active duty, they would not allow him to re-enroll him. He had to scan and email me the application. I had to fill it out and mail it back. Then, he had to take it to the hospital with a power of attorney that I had to go and get because you don't think to get your child's parent a power of attorney.*

Even more concerning, one single mother related that her son was dropped from TRICARE while she was deployed and despite having the appropriate powers of attorney for her mother to provide care and access medical services, the individuals she contacted wanted her to come in person to re-register the child in the system. Since she was deployed and unable to comply, the child remained un-enrolled throughout the remainder of her deployment. Fortunately, the child did not become ill during the time mom was away. Still, there seemed to be no “give” in the system or recognition that in-person requirements were unrealistic for those who were currently deployed.

During the actual deployment, children were cared primarily cared for by the other parent in two-parent families. For those who were single parents or divorced, most usually the children were placed with grandparent(s) or another relative rather than the other parent. One divorced mother situated her children first with her parents before informing her prior spouse of the deployment worrying that her custody might be disrupted if she were to allow the children to live with him during the deployment.

[P01]...I really didn't give their father the opportunity to say send them here and that's part of the reason why I didn't actually talk it up too much....my biggest angst in all that time was that he would come in and try to take them with him and then had he taken them, what would have been the challenges of trying to get them back or whether or not I would have had any trouble getting them back

Interestingly, 16 mothers indicated that during the deployment, husbands had additional live-in assistance either from his mother, mother-in-law, or an au pair or nanny hired to provide back up during the deployment.

[P20] I had a stable childcare situation. We had an au pair who had agreed to stay for most of the deployment and I just felt it was time to go.

[P26] We hired a live in nanny both times to try to help I guess stabilize their routines

[P32] ...it was a little bit easier because my mom was going to move out and move into my house while I was gone so my husband could still keep working and getting up at the same time and I think the only thing that changed for him was he had to take them to school and my mom took my youngest one to the elementary school

Despite some “bumps in the road”, most mothers in the study expressed appreciation for the excellent care provided by their husbands, mothers, mother-in-law, au pair, nanny, or other caregiver and knew their children had been well cared for and loved.

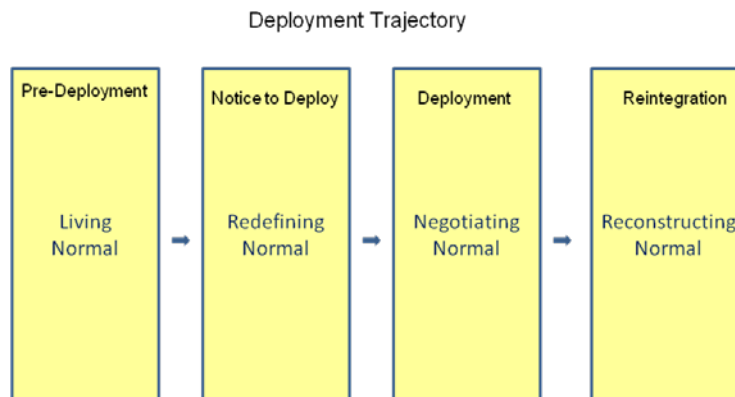
[P02] He [husband] did incredibly well. He learned how to use the community resources. We had a really, really good friend that was stationed in Kansas with him and he used resources to help him manage with taking care of her when he had to – had to be at work for various reasons or study or whatever so he really, truly, truly surprised me.

He even learned how to do her hair which – that was – that to me was the kicker, the icing on the cake

5. How do military mothers manage their relationship with their children during and following deployment?

Mothers managed the relationship with their children during and following deployment in individual ways, yet themes emerged from the experiences of the thirty-seven participants in aggregate that may be useful for other military mothers who deploy in the future. The strategies used to preserve the bond between the mother and child have been articulated in answer to previous questions. A combination of honesty, communication of the love for the child, being developmentally appropriate, and using tangible representations of their caring distinguished the approach mothers used in preparing and managing the separation.

Figure 3: Stages of military mother deployment



From the interviews with the mothers, the deployment trajectory naturally broke in to the phases as previously detailed in the literature (Logan, 1987; Peebles-Kleiger & Kleiger, 1994; Pincus, House, Cristenson, & Adler, 2005) (See Figure 3). Before the deployment notification, the family and service member were “living normal” or the usual life of the family. With notification to deploy, the family and military mother began preparations for the deployment that was labeled “redefining normal” as the family members planned childcare, living arrangements, and communication strategies during the deployment to come. Families recognized that “normal” for the family would look differently during the deployment so in the preparation stage it was important in achieving readiness to deploy that all the details were worked out in advance, for how life would be organized while the mothers were away. During the deployment, the team named this stage “negotiating normal” as the planned arrangements were now active. The negotiation occurred as some plans did not work out, some needed to be changed along the way, and moms balanced their involvement with the family from a distance. As discussed previously, mothers continued to want to be involved in family decision-making, significant events, and anticipation of children’s needs, such as clothing and bedding. Upon return, the mothers had to fit back into the family and return to work as they readjusted to being at home again. Often, they felt disassociated from both as they realized that life had gone on without them while they were

away. The team named this stage “reconstructing normal” as life did not return to the way things were prior to the deployment, but the family members had to all actively participate in determining how life was to be like after the mother returned. As one mother [S05] noted, “So there was a lot of negotiation that way, and are we going to be able to negotiate this or not? And so we had a lot of problems....Not that anyone was saying, "You don't belong," but how do you belong, and where do you belong was really hard.... I didn't really feel like I knew where I fit in anymore” Others echoed the feeling of detachment:

[P37] I'm not the big dog on the scene anymore; that life went on without me and they really did do a lot of stuff without my being there and that was a hard one. Not that I didn't want them to continue on but I was a part of this family too but I felt like the outsider. It took about four months before I could actually get back into any of the routines that I had done pre-deployment. Just even knowing what bills are due when, how are we paying this, what are you doing as far as savings planning, how are you running the entire household. It took me about four months to just even get one thing that I used to do back up under my belt again

Most of the mothers who felt this way indicated that it took about 4-6 months for them to feel part of life stateside in their “reconstructed” normal.

6. What strategies were effective in maintaining relationship with children during deployment?

Analysis of the interview data in this study revealed several strategies that were helpful to mothers in maintaining the relationship with their children during and following the deployment. These were identified as critical in the core process “preserving the sacred bond”. The strategies were labeled communicating, distancing, protecting, normalizing, balancing, and summoning the village. In creating the model that emerged from the findings (see Figure 1), these strategies were used from the point at which mothers learned they were deploying and then in various amounts throughout the deployment experience. Communicating included the type, frequency, and quality of the ways in which mothers remained in contact with their children and family. Skype and other web-based communication modalities were invaluable in staying in visual and auditory contact. Distancing referred to the self-protective defense mechanisms for mothers in somewhat compartmentalizing the home front with the mission. By “pulling back” from trying to manage home responsibilities, the deployed mothers were able to focus upon the mission, trust that their children were being well cared for, and keep emotionality under control. Protecting was focused more toward the children. This strategy referred to actions the mother used to shape and reinforce the message for her children that she was safe and coming home to them. Normalizing was a goal throughout the deployment that the child(ren)’s life was as least disrupted as was possible. It was important to the mothers that their children continue to be able to participate in all their usual activities and that home life continued as was normal for them. Balancing was a struggle for the mothers wanting to continue to participate in their usual mothering activities, yet recognizing that they needed to relinquish control over that role to other caregivers during the separation. Summoning the village involved reaching out and using resources and community support throughout the deployment to supplement and protect the children’s caregivers so that they weren’t isolated or overwhelmed.

Relationship of current findings to previous findings:

Since this project was started, more literature has emerged focused the phenomenon of maternal deployments and the effects of deployments on the military child. There appears to be two waves of studies: those emerging after the first Gulf War and now those emerging in response to the current wars in Iraq and Afghanistan. Following the first Gulf War, Angrist and Johnson (2000) documented effects of female separations as compared to their male counterparts. They found that military women who deploy appear to experience more divorces as compared to the deployed males. Similarly, Wynd and Dzedzicki (1992) found that women experienced more separation anxiety than men during deployments in Desert Shield/Desert Storm related to not being able to parent their children. Vogt and her colleagues (2005) similarly have documented the mental health effects associated with deployment stressors differentiating by gender, but not with a primary focus upon military women with children.

Of special note in the Gulf War and in the current conflict, military mothers have been deployed shortly after returning from maternity leave or during the first year of their child's life. Concerns have been raised in the literature as the effects of maternal separations from the child upon attachment, a particularly important process during infancy (Schen, 2005). Studies have considered maternal separations as they occur for incarceration; mothers leaving children in home countries to immigrate for work or education; homelessness; hospitalization for mental illness; and during evacuation in war-torn areas. Studies have also focused primarily upon school aged children and adolescents in military related research, and less often on younger children (Huebner, Mancini, Wilcox, Grass, & Grass, 2007)

Historically, most research on military deployment has focused upon normal rotations incurring separations for overseas assignments, peacekeeping operations, and more recently during wartime. Primarily these studies have focused upon the reaction of the military member, in most cases father separations, and effects upon those left behind. For example, Blount, Curry, and Lubin (1992) described the adjustments that are required of the remaining spouse, who has usually been the wife. These include decision making, new responsibilities such as "mechanical repairs, dealing with financial matters, cooking, child care, or housekeeping once done by the deployed spouse...[and] may entail learning new skills" (p. 77); changes in relationships with children; and some isolation from support systems. Black (1993) suggests that military families are more vulnerable to crisis as a result of the pile-up of stress inherent in military life. These include "frequent moves, the potential for being deployed into hostile environments, frequent periods of family separation, geographic isolation from extended family support systems, low pay, young age as compared to the general civilian population, and a high incidence of young children living in the home" (p. 273). Knapp and Newman (1993) similarly found a vulnerability to psychological distress associated with separation in military wives who reported an accumulation of stressors.

In general, research on military women has been more problem focused in nature. In a MEDLINE literature review, search terms of *military women*, *military mothers*, *deployment*, and *war* located research dealing with active duty and reserve component/National Guard women. The majority of these articles were concerned with military women's reproductive health () risk factors such as HIV and sexually transmitted diseases (); training issues (); nutrition and weight control () health promotion (Agazio Ephraim, Flaherty, & Gurney, 2002); and specific

illnesses (Bohan, 1983). There has been limited research published on military mother deployments.

Pierce, Vinokur, and Buck (1998) conducted the most comprehensive study considering the effects of deployment upon mothers and children. They used a quantitative survey design measuring strains in major life domains to include job strain, financial strain, parenting strain, depression, and ability to provide for children during deployment, anxiety symptoms, children's adjustment problems and life changes as major variables in the study. The sample included active duty Air Force mothers participating in the study approximately two years after the Gulf War. Mothers reported difficulty providing comprehensive care for their children. Of the children with married mothers, 77% stayed with fathers or stepfathers, 21% stayed with mother's parents or siblings, and 2% stayed with paternal grandparents. For children who stayed with extended family, 67% changed residence at the time of the separation; 73% changed schools, and 7% were separated from one or more siblings. Mothers in the reserves or guard forces and officers reported greater difficulties in finding care for their children during the deployment. Interestingly, the mothers "who had experienced more difficulty in finding care, scored lower in their role and emotional functioning and reported more symptoms of depression and anxiety" two years following the deployment (Pierce & Buck, 1998, p.3).

Also conducted following the first Gulf War, Godwin (1996) focused her dissertation research on an ethnographic study of military women's deployments tracing the experience from pre-deployment through reunion. She was able to articulate some of the strategies women use to make sense of the experience and how they manage the long separation from family and loved ones. Her study did not specifically consider only deployed mothers and in fact only had 3 mothers in her sample, but the study provides support for this project in terms of viewing the experience across the trajectory of stages articulated in previous research.

Most recently, with the advent of Operation Enduring Freedom in Afghanistan and Operation Iraqi Freedom, military mothers are receiving more attention in the lay press and in research. Recent articles in *The Washington Post* (12/30/2008) and *NPR* (2/14/2008) detailed accounts of single parent soldiers who have lost custody of their children to their ex-husbands while deployed related to an "unstable home life" despite having been awarded full custody in their divorce proceedings. As noted by the *Post*, "female troops may be particularly at risk because mothers are more likely to have custody of children after a divorce. 'For them to go away for 15-18 months, it opens the door to these challenges.'" (Tyson, 2008, p. A01). In addition, in report of the Congressional Joint Economic Committee, it was noted, "women in the military are more likely to be a single parent or married to another member of the military and thus face the possibility of a dual deployment. Issues such as child care access, adequacy of medical leave and access to appropriate health care services are often heightened in importance during period of deployment and when faced with the uncertainty of being redeployed. Certainly, at a minimum, military mothers are faced with multiple stressors between work and home responsibilities exacerbated with the increased operational tempo and frequency of deployment since the war began in 2001. The concerns most often translate into recruitment, retention, and possible health issues for military women committed to a military career.

Michelle Kelley and her colleagues have built a program of research focused upon military mothers and normative separations before and during OIF and OEF. She compared Navy mothers deployed for sea duty to those with shore duty to determine predictors of retention. Those who indicated intent to stay were most often those committed to a career in the military, satisfied with the benefits, and felt that children benefitted from workday separations. Those who expressed concerns about balancing work and family responsibilities and a high commitment to the mothering role were less likely to remain on active duty (Kelley, 2001). She notes that her findings support those of Pierce and her colleagues. Her studies, while focused on military mothers, did not include women deployed for wartime missions, the sample, while representative of Navy women, was small, and “findings must be considered exploratory” (p.69). In her follow-on study (Kelley et al, 2002), she found that commitment to mothering could act as a protective factor for depression and other psychological symptoms during and following deployment. Because her sample participated in routine sea duty deployments, the team found that the “length of the most recent separation, rather than time away from the child the previous year, predicted mothers reports of psychological adjustment” (p. 211). Other protective factors for mother reaction to the deployment included time in service, being married, greater perceived support from the child’s father and friends, and older children (Kelley, 2002). Kelley’s work highlighted the need in this study to describe stress, health, and other psychological effects that the deployment may elicit in the mothers and children before, during, and after a wartime deployment as opposed to the peacetime duty deployment rotations studied in her research.

Contradictory findings emerged from Roper’s (2005) study of Air Force single parent mother who were scheduled for deployment. She found that the mothers “experienced a greater level of separation anxiety and employment related concerns than Army single fathers, but there were not significant differences in separation effects. The study also suggested that Air Force single parent mothers and Army military fathers had similar emotions and concerns when balancing a career and family during deployment and separation” (p. ii).

In her dissertation, Hopkins-Chadwick (2005) explored stress, role strain, and health in young Air Force women with and without preschool children. Hopkins-Chadwick did not find significant differences between the two groups, but unfortunately did not report the absolute levels of role strain and stress of the two groups, but only noted that “multiple role strain (measured as frequency and severity of daily hassles) was an important variable” in the study and that role strain was evident for both groups of women (p. 69). More recently, Hopkins-Chadwick and Ryan-Wenger (2009) reported further analysis of these findings. In this publication, they noted, for enlisted women in the sample, motherhood was not a significant variable in the predictor variables, but increased role strain, increased stress, decreased health, and decreased military career aspirations” were found in both groups (p. 409).

Effects of military maternal separation on children

About 2 million children are living with military families, ether active duty or reserve component (Chartrand & Siegel, 2007). While military children become accustomed to the peacetime routine of frequent moves and temporary absences of parents, less is known about their responses to parental separation during wartime. In a conceptual article, Lincoln, Swift, and Shorteno-Fraser (2008) described the reactions and response to separation based on age and developmental level. They note that infant response is related to the stress and anxiety displayed

by the remaining caregivers. The infant may react “by becoming more irritable and unresponsive, vulnerable to sleep disruption, eating problems, and increased periods of crying” (p. 987). Toddlers may display more resistive behaviors and perhaps become more clingy. Preschoolers may regress “to behaviors that they have previously outgrown” (p. 987). School aged children have more awareness of what is happening and the potential danger faced by the deploying parent. Consequently, most studies of military children’s reaction to deployment have focused upon school aged or older (Huebner et al, 2007; Shamai & Kimhi, 2007).

Related to research with military mothers, Vinokur, and Buck (1998) found that the strongest predictor of adjustment problems for children during a mother deployment was related to the number of life changes experienced as a result of the separation. They noted, “children with older mothers and the children who were younger or who had a very young sibling experienced greater adjustment problems than did children of younger mother and children who were older” (p. 1300). Children whose mothers were away longer or stationed in the combat theater demonstrated greater stress. Of note, despite finding war-related behavior problems, two years after the deployment these problems did not predict subsequent behavior problems and the children did not “demonstrate more symptoms of stress than children whose mothers were not deployed” (Pierce & Buck, 1998, p. 3). These findings were similar to those of Kelley and others (2001) who studied children of deployed Navy mothers post-Desert Shield/Desert Storm deployment. They also found younger children more susceptible to depression and sadness as well as more behavior problems in general compared to children whose mothers were not deployed. Despite these findings, in general, “group differences were modest and overall mean scores were in the normal range” (p. 464) indicating no lasting pathology for the children with a deployed mother.

In comparison to other studies of children whose fathers were deployed for war or humanitarian missions, research has shown these experiences pose unique stressors for them and for their families (Amen et al, 1988; Black 1993; Blount, Curry, & Lubin, 1992; Jensen, Martin, & Watanabe, 1996). According to Kelley and others (2001), the degree to which the children experience stress depends upon several factors to include previous experience with separations; the nature of the deployment; the parent’s emotional development, satisfaction with the military, and stability of the marriage; and most importantly the developmental level of the child. Interestingly, Jensen, Martin, & Watanabe (1996) found not only younger children experiencing higher depression, but also a marked increase for boys making them especially vulnerable to deployment effects. This study was particularly valuable, as the researchers had previously collected data on the children prior to the war’s beginning, so they were able to “prospectively evaluate the impact of wartime deployment by comparing follow up ratings” (Cozza, Chun, & Polo, 2005, pg 373). Considering that this study primarily considered the effects of father deployments, it is unclear if the findings would be similar for children with deployed mothers.

Ryan-Wenger (2001) demonstrated the resilience of military children in comparison with a group of civilian children. Her findings showed no difference in levels of anxiety or psychopathology when considering the threat of war. Comparably, Applewhite and Mays (1996) demonstrated that psychosocial functioning in military children did not differ based upon maternal or paternal separations. In his study, 55 fathers and 55 mothers completed survey packets to identify predictors of child psychosocial functioning. While the authors note the

contradictory nature of their findings regarding maternal versus paternal separation, the study was limited by a convenience sample dependent on recall of the child's first extended separation. There was also a potential bias in a response rate of 52% as "families whose experiences with separation may be significantly different from those who were included in the study" (p. 36). More recently, Chartrand, Frank, White, and Shope (2008) in their cross-sectional study found "that children aged 3 years or older with a deployed parent exhibit[ed] increased behavioral symptoms compared with peers without a deployed parent after controlling for caregiver's stress and depressive symptoms"(p. 1094). Obviously, contradictory evidence continues to emerge in regarding effects of deployment on children.

A recently completed dissertation considered communication between parents and children before, during, and after a parental absence for 2 months or longer. Pollom (2005) compared absences due to incarceration or deployment. While only 9 of the 54 participants included distal deployed mothers and stay at home fathers, Pollom noted that in particular, more research was indicated to focus upon maternal absence. She found that parents employed a "mix of communication strategies and emotional climate management to maintain relationships" (p. 175). She noted that "parent/child distal relationships used maintenance strategies that were different from those of other relationships" (p. 176). Even though the main focus was primarily on communication, Pollom's work was particularly relevant in grounding the methodology of this study to focus on the process of how military mothers maintain relationship over the trajectory of the deployment. Pollom's study highlighted how this process can vary at different time points, however her small number of military women, aggregated with military men and incarcerated individuals, does not provide depth of understanding for military mothers and their children. Furthermore, her focus primarily elicited communication strategies, a significant component, but perhaps not the only process involved in maintaining relationship during the deployment.

Findings of current study in context of existing literature

The findings from this study will add to the literature in several ways. First, the findings extend the understanding of the military mother's experience of deployment. An initial model of the experience was developed organized around the core process of "preserving the sacred bond". Mothers shared multiple strategies they used in maintaining the relationship with their children that may be shared in a toolkit to inform future deploying women, health care providers, and policy makers in terms of the need for resources and support for the female servicemember and her family. Additionally, this study reconceptualized the phases of the deployment experience for the military mother as process: family normalizing activities rather than as a purely temporal experience.

Second, this project not only shed light on how the mother experienced deployment, but also opened a window upon the families' experience of maternal separation. Varied child care arrangements and pre-planning were focused upon children being able to experience a "normal" life and activities to the greatest extent possible protected from disturbing information or images that would cause fear regarding the mother's safety. Traditional family support was often not as available or effective when the caregiver was not a stay-at-home mother. This study highlighted the need for policy changes in supporting parents/caregivers who may not be female, are employed during the day, or reside off-post or away from military installations.

This project also highlighted issues for younger aged children in terms of the limited knowledge currently of how they experience deployment, particularly separation from their mother in the early years of life. The literature surprisingly lacks empirical research in this age group, relying instead of developmental theory to hypothesize how deployment is experienced at different levels. Qualitatively, this study validated findings of other researchers during deployment .and post-deployment with the display of internalizing and externalizing behaviors exhibited by the children and observed by the mothers on their return. This study raised questions in terms of how deployment can affect attachment since many mothers expressed fears of not being recognized on their return and some subsequent relationship effects after young age deployment separation. This study highlighted indications for policy revisions such as rethinking when service members should become eligible for deployment after a birth or adoption, how long service members should be given for re-integration leave, and how soon after a deployment should a service member receive notice to re-deploy or PCS. All of these are issues that have been discussed in the lay press but more limited in research literature.

Effect of problems or obstacles on the results: In the final sample, the team was not able to recruit as many in the Air Force, Navy, or reserve component that we had desired to have in the sample. This could have been due to recruiting at Bragg and in the NCA, however, multiple services use WRNMMC (previously WRAMC and NNMC) and the recruitment was disseminated at national level conferences where we were able to enroll different services. Additionally, we had a final sample with many more officers and in the nursing specialty than we would have liked. The long time in obtaining IRB approval set the start time for the project about a year later than anticipated resulting in perhaps fewer deployments and fewer individuals willing to participate.

Limitations: Despite efforts to recruit across services, the final sample included predominantly Army women working in health-related fields. This limits the generalizability of the findings to other services and perhaps other specialties. In addition, the recognition of the limitations of qualitative research also poses threat to generalization.

Conclusion:

This study increased understanding of mother separations during wartime deployments. From the data emerged the core process of “preserving the sacred bond” between mother and child along with strategies mothers found useful throughout the separation. The strategies were labeled communicating, distancing, protecting, normalizing, balancing, and summoning the village.

Significance of Study or Project Results to Military Nursing

Several issues were identified that have implications for policy revisions and development. FRG inclusiveness, family careplans, time to deployment after delivery for breastfeeding mothers, and policies regarding length of deployment and stabilization need a re-look in terms of considering the impact upon the service member, the military family and retention. Findings will be useful for developing a military mother tool-kit to personalize the experience for maternal separations in contrast with paternal separations. Additional areas for research were indicated in elucidating the effects of separation on mothers and young children especially in the area of attachment and development. First, to emerge from this project, a proposal was submitted recently to explore the deployment experience using an art-based interview with children and their parents. The next project will explore attachment effects of deployment with mothers and young children. A larger quantitative study is also planned to include more military mothers who have deployed to explore their experiences and validate findings from this study.

While military families have some of the same issues to deal with as non-military ones, military life and deployment can place strains on families and stress existing support systems. Deployment of military mothers offers many intervention points as identified in this study. Pre-deployment, mothers need reassurance, anticipatory guidance, and a plan for their children's and their personal health while they are deployed. During re-integration, nurses are in a key position to recognize and intervene early for post-traumatic stress, and the readjustment of the family. Understanding the deployment trajectory and the issues that may arise during each phase provides nurses an increased sensitivity in recognizing and individualizing assessment of the military family. Women want to serve their country, but they also want to make sure their children are well cared for and their families are safe.

Changes in Clinical Practice, Leadership, Management, Education, Policy, and/or Military Doctrine that Resulted from Study or Project

None to date. Two articles have been submitted (PAO through WRNMMC; one in press already) and the findings have been disseminated at one local, two regional, and two national level conferences. Two other publications are planned along and the team is planning to submit a book prospectus as a tool-kit for military mothers and health care professionals. This publication will present the experience of deployment with practical advice that emerged from the interview data to inform and improve preparation, deployment, and re-integration time periods. The team hopes that these efforts in dissemination will also receive attention from senior leadership and at the policy level to increase understanding of issues involved in military mother deployments and result in policy revisions to address some of those difficult situations encountered in the deployment trajectory.

References Cited

- Agazio, J, Ephraim, P, Flaherty, N, and Gurney, C (2001). Health promotion in active duty women with children. *Women and health*, 35 (1), 65-82. PMID: 11942470
- Amen, D.G., Jellen, L., Merves, E., & Lee, R.E. (1988). Minimizing the impact of deployment separation on military children: Stages, current preventive efforts, and system recommendations. *Military Medicine*, 153, 441-446. PMID: 3141832
- Angrist, JD & Johnson, JH (2000). Effects of work-related absences on families: Evidence from the Gulf War. *Industrial and Labor Relations Review*, 54(1), 41-58.
- Applewhite, LW & Mays, RA (1996). Parent-child separation: A comparison of maternally and paternally separated children in military families. *Child and Adolescent Social Work Journal*, 13(1), 23-39.
- Black, W.G. (1993). Military-induced family separation: A stress reduction intervention. *Social Work*, 38(3), 273-280. PMID: 8511656
- Blount, B.W., Curry, A., & Lubin, G.I. (1992). Family separations in the military. *Military Medicine*, 157, 76-80. PMID: 1603391
- Bohan, J.S. (1983). A strategy for efficient diagnosis and treatment of dysuria in women in the military setting. *Military Medicine*, 148(3), 245-247. PMID: 6408506
- Chartrand, MMD, Frank, DA, White, LF & Shope, TR (2008). Effect of parents' wartime deployment on the behavior of young children in military families. *Archives of Pediatric and Adolescent Medicine*, 162 (11), 1094-1095. PMID: 18981347
- Cozza, SJ, Chun, RS, & Polo, JA (2005). Military families and children during Operation Iraqi Freedom. *Psychiatric Quarterly*, 76(4), 371-378. PMID: 18981347
- Godwin, SA (1996). An ethnography of women's experience with military deployment. (Doctoral dissertation, United States International University, 1996). *Dissertation Abstracts International*, 57/08, 5359.
- Hopkins-Chadwick, DL (2005). Stress, role strain, and health in young enlisted Air Force women with and without preschool children (Doctoral dissertation, The Ohio State University, 2005). *Dissertation Abstracts International*, 66/06), 3057.
- Hopkins-Chadwick, Denise L., and Nancy Ryan-Wenger. "Stress in Junior Enlisted Air Force Women With and Without Children." *Western Journal of Nursing Research* 31.3 (2009): 409-427. DOI: 10.1177/0193945908328261
- Huebner, A. J., Mancini, J. A., Wilcox, R. M., Grass, S. R. and Grass, G. A. (2007), Parental Deployment and Youth in Military Families: Exploring Uncertainty and Ambiguous Loss. *Family Relations*, 56: 112–122.

- Jensen, PS, Martin, D, & Watanabe, H (1996). Children's response to parental separation during Operation Desert Storm. *Journal of the American Academy of Child and Adolescent Psychiatry*, 35(4), 433-441. PMID: 8919705
- Kelley, ML, Hock, E, Jarvis, MS, Smith, K.M, Gaffney, MA & Bonney, JF, (2002). Psychological adjustment of Navy mothers experiencing deployment. *Military Psychology*, 14(3), 199-216. ISSN: 0899-5605 CINAHL AN: 2004014439
- Kelley, M.L., Hock, E, Smith, K.M., Jarvis, M.S., Bonney, J.F., & Gaffney, M.A. (2001). Internalizing and externalizing behavior of children with enlisted Navy mothers experiencing military-induced separation. *Journal of the American Academy of Child and Adolescent Psychiatry*, 40(4), 464-471. PMID: 11314573
- Knapp, T.S. & Newman, S.J. Variables related to the psychological well being of Army wives during the stress of an extended military separation. *Military Medicine*, 158 (2), 77-80. PMID 8441501
- Lincoln, A, Swift, E, Shorteno-Fraser, M (2008). Psychological adjustment and treatment of children and families with parents deployed in military combat. *Journal of Clinical Psychology*, 64(8), 984-992. PMID: 18612969
- Logan, KV (1987). The emotional cycle of deployment. *U.S. Navy Proceedings*, 113, 43-47.
- Mann, B. (2009). Military moms face tough choices. NPR. Retrieved February 14, 2009 at <http://www.npr.org/templates/story/story.php?storyId=88501564>.
- Peebles-Kleiger, M.J. & Kleiger, J.H. (1994). Re-integration stress for Desert Storm families: Wartime deployments and family trauma. *Journal of Traumatic stress*, 7 (2), 173-193. PMID: 8012742
- Pierce, P.F. & Buck, C.L. (1998). Wartime separation of mothers and children: Lessons from Operations Desert Shield and Desert Storm. *Military Family Issues: The research digest*, 2 (2), 1-4.
- Pierce, P.R., Vinokur, A.D., & Buck, C.L. (1998). Effects of war-induced maternal separation on children's adjustment during the Gulf War and two years later. *Journal of Applied Social Psychology*, 28(14), 1286-1311. DOI: [10.1111/j.1559-1816.1998.tb01677.x](https://doi.org/10.1111/j.1559-1816.1998.tb01677.x)
- Pincus, SH, House, R, Cristensen, J., & Adler, LE (2005). The emotional cycle of deployment: A military family perspective. *Journal of the Army Medical Department*, 615-623.

- Pollom, LH (2005). Parent/child distal relationships: A look at communication used before, during and after a parental absence (Dissertation, University of Missouri-Columbia). *Dissertation Abstracts International*, 67/01, AAT 3204272.
- Roper, LL (2007). Air Force single parent mothers and maternal separation anxiety (Dissertation, Capella University). *Dissertation Abstracts International*, 67/11, AAT 3243582.
- Ryan-Wenger, N.A. (2002). Impact of the threat of war on children in military families. *Journal of Pediatric Health Care*, 16 (5), 245-252. PMID: 12226593
- Schen, CR (2005). When mothers leave their children behind. *Harvard Review of Psychiatry*, 13(4), 233-243. PMID: 16126609
- Shamai, M. & Kimhi, S. (2007). Teenagers response to threat of war and terror: gender and the role of social systems. *Community Mental Health Journal*. 43(4):359-74. PMID: 17333347
- Tyson, A. (2008). Fighting War -- and for Custody. *The Washington Post*, December 30, 2008. Retrieved 2 February 2008 at <http://www.washingtonpost.com/wp-dyn/content/article/2008/12/29/AR2008122902611.html>
- Vogt, DS, Pless, AP, King, LA, & King, DW (2005). Deployment stressors, gender, and mental health outcomes among Gulf War I veterans. *Journal of Traumatic Stress*, 18 (2), 115-127. . PMID: 16281203
- Wynd, CA & Dziedzicki, RE (1992). Heightened anxiety in Army reserve nurses anticipating mobilization during Operation Desert Storm. *Military Medicine*, 157, 630-634. PMID: 1470371

Summary of Dissemination

Type of Dissemination	Citation	Date and Source of Approval for Public Release
Publications		
Publications in Press	<p>Agazio, J, Hillier, S, Throop, M, Goodman, P, Padden, D, Griener, S, & Turner, A. (in press). Mothers going to war: The role of nurse practitioners in the care of military mothers and families during deployment, <i>Journal of the American Association of Nurse Practitioners</i>.</p> <p>Goodman, P, Turner, A, Agazio, J, Throop, M, Padden, D, & Hillier, S. (in review). Deployment of Military Mothers: Implications for Military Policies and Operating Procedures. <i>Military Medicine</i>.</p>	<p>WRNMMC 10/22/12</p> <p>WRNMMC 10/22/12</p>
Published Abstracts		
Podium		

Presentations	<p>27 Feb-Mar 2, 2013, accepted for podium presentation, Deployment of Military Mothers: Model for Interventions, Southern Nursing Research Society, Little Rock, AK</p> <p>13-15 September 2012, podium presentation, Deployment of Military Mothers during Wartime, 2012 State of the Science Congress on Nursing Research, Washington, DC</p> <p>28-30 March 2012, podium presentation, Maintaining connectedness: Deployment of military mothers during wartime, 24th Annual Scientific Sessions, Eastern Nursing Research Society, New Haven, CT.</p> <p>18 May 2011, Invited presentation, Deployment of Military Mothers: Building a Program of Research, Research Day, Graduate School of Nursing, Uniformed Services University of the Health Sciences, Bethesda, MD</p>	<p>Request submitted WRNMMC</p> <p>WRNMMC 10/22/12</p> <p>WRNMMC 10/22/12</p>
Poster Presentations	<p>27-28 April 2011, poster, Deployment of Military Mothers During Wartime, Forging the Partnership, 2011 DOD/USDA Family Resilience Conference, Chicago, IL</p>	
Media Reports	<p>Study Seeks Strategies to Help Mothers Maintain Family Relationships During Deployment, <i>U.S.Medicine</i>, Retrieved at http://www.usmedicine.com/womenshealth/study-seeks-strategies-to-help-mothers-maintain-family-relationships-during-deployment.html</p>	
Other		

Reportable Outcomes

Reportable Outcome	Detailed Description
Applied for Patent	
Issued a Patent	
Developed a cell line	
Developed a tissue or serum repository	
Developed a data registry	

Recruitment and Retention Table

Recruitment and Retention Aspect	Number
Subjects Projected in Grant Application	40
	60
Subjects Available	unknown
Subjects Contacted or Reached by Approved Recruitment Method	unknown
Subjects Screened	51
Subjects Ineligible	0
Subjects Refused/did not sign consent or set up interview	16
Human Subjects Consented	41
Subjects Who Withdrew	4
Subjects Who Completed Study	37
Subjects With Complete Data	36
Subjects with Incomplete Data	1

Demographic Characteristics of the Sample

Characteristic	
Age (yrs)	38.24±6.5
Women, n (%)	37 (100%)
Race	
White, n (%)	23 (64%)
Black, n (%)	6 (17%)
Hispanic or Latino, n (%)	1 (3%)
Native Hawaiian or other Pacific Islander, n (%)	
Asian, n (%)	5 (13%)
Other, n (%)	1 (3%)
Military Service or Civilian	
Air Force, n (%)	6 (17%)
Army, n (%)	30 (83%)
Marine, n (%)	
Navy, n (%)	
Civilian, n (%)	
Service Component	
Active Duty, n (%)	33 (90%)
Reserve, n (%)	2 (5%)
National Guard, n (%)	
Retired Military, n (%)	2 (5%)
Prior Military but not Retired, n (%)	
Military Dependent, n (%)	
Civilian, n (%)	

Final Budget Report

No additional funds were requested during the work on this project. One rebudget request was submitted and approved to move some funds into travel for presentation at ENRS last spring. Approximately \$5000 remained in the budget at the completion of the study in the supply category. I think that we had the \$4000 remaining in supplies because I used a different transcriptionist service with encrypted digital file transmission and her cost was lower than that of the stenographer that I had used previously. Additionally we didn't need to pay courier costs for tape and transcription delivery. The other expense that we didn't need to use was the advertisement in the Army/Navy/Air Force Times as we were able to accrue our sample without placing the advertisement. Approximately \$900 was remaining in the fringe category and not sure why that didn't balance out with the salary expenditures. There was \$300 left in travel. Unfortunately I didn't have enough here to use for the State of the Science congress since the registration was over \$400 or I would have used all of the travel funds. I tried to really stretch the travel monies using some for a trip to Ft Bragg and presentations at two out of town conferences. All of the other planned expenditures were incurred as planned in the original budget.