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THE EFFECTS OF MILITARY DEPLOYMENT ON CHILDREN'S
PSYCHOSOCIAL FUNCTIONING AS RELATED TO PARENTAL STRESS AND
MARITAL SATISFACTION

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THE EFFECTS OF MILITARY DEPLOYMENT ON CHILDREN'S
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A DISSERTATION APPROVED FOR THE
DEPARTMENT OF EDUCATIONAL PSYCHOLOGY

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This manuscript is dedicated to

Dr. Albin Owings Kuhn,

my grandfather, a veteran and leader in higher education,
who inspired me to pursue my dream of earning a doctorate.

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Table of Contents

List of Tables	vii
Abstract.....	viii
 <u>Chapter One</u>	
Introduction	1
Problem Statement.....	3
Purpose of Current Study	5
 <u>Chapter Two</u>	
Literature Review	7
Theoretical Framework	7
Military Children’s Psychosocial Functioning.....	8
Developmental Issues	8
Relationship Between Mothers and Children.....	10
Effects of Parental Separation on Children	11
Military Parental Stress	14
Need for Research on Military Families	14
Effects of Parental Stress on Children.....	15
Marital Satisfaction Within the Military	17
Impact of Deployment on Spouses.....	18
Effects of Deployment on Marital Satisfaction.....	20
Effects of Marital Satisfaction on Children.....	23
Hypotheses	24
 <u>Chapter Three</u>	
Method.....	26
Participants	26
Instruments	26
Procedure.....	30
Design and Analysis	31
 <u>Chapter Four</u>	
Results	35
Demographics.....	35
Missing Data.....	37
Hypothesis One	38
Hypothesis Two.....	45
Hypothesis Three.....	47
 <u>Chapter Five</u>	
Discussion.....	50
Implications	58
Future Research	60

Limitations.....	62
Conclusion.....	63
References	77
Appendices:	
Appendix A: Strength and Difficulties Questionnaire (Ages 4-10)	88
Appendix B: Strength and Difficulties Questionnaire (Ages 11-17)	90
Appendix C: Perceived Stress Scale.....	92
Appendix D: Kansas Marital Satisfaction Scale	93
Appendix E: Demographic Information Questionnaire	94
Appendix F: IRB Approved Message for Participation in Study.....	96
Appendix G: IRB Approval.....	97

List of Tables

Table 1: Demographic Information	64
Table 2: Frequencies of Deployment	65
Table 3: Demographic Information of Children Selected for SDQ	66
Table 4: Means, Standard Deviations, and Correlations for the Study Variables	67
Table 5: Multivariate Analysis of Variance, Hypothesis One: Impact of Deployment Status and Gender on Children’s Psychosocial Functioning.....	68
Table 6: Multivariate Analysis of Variance, Means for the Impact of Deployment Status and Gender on Children’s Psychosocial Functioning.....	69
Table 7: Multivariate Analysis of Variance, Hypothesis One: Impact of Deployment Status and Age (4-10 year-olds and 11-17 year-olds) on Children’s Psychosocial Functioning	70
Table 8: Multivariate Analysis of Variance, Means for the Impact of Deployment Status and Age (4-10 year-olds and 11-17 year-olds) on Children’s Psychosocial Functioning	71
Table 9: Multivariate Analysis of Variance, Hypothesis One: Impact of Deployment Status and Age (Preschool, School-Age, and Adolescence) on Children’s Psychosocial Functioning	72
Table 10: Multivariate Analysis of Variance, Means for the Impact of Deployment Status and Age (Preschool, School-Age, and Adolescence) on Children’s Psychosocial Functioning	73
Table 11: Multivariate Analysis of Variance, Hypothesis One: Impact of Combat Status on Children’s Psychosocial Functioning	74
Table 12: Multivariate Analysis of Variance, Hypothesis Two: Impact of Deployment Status on Levels of Perceived Stress and Marital Satisfaction.....	75
Table 13: Simultaneous Multiple Regression, Hypothesis Three: The Predictive Ability of Perceived Stress and Marital Satisfaction on Children’s Psychosocial Functioning	76

Abstract

Military families are a unique population, facing high demands especially during times of separation due to deployment. Previous research highlights the significant impact of parental deployment on children's well-being. Researchers have begun to question how current deployments to Iraq and Afghanistan affect the social, emotional, and behavioral outcomes of military children. The current study examined the psychosocial functioning of children with deployed and nondeployed parents. In addition, the study assessed the degree to which parental perceived stress and marital satisfaction account for variation in children's psychosocial functioning. A total of 365 female military spouses completed the Strength and Difficulties Questionnaire (SDQ), a measure of psychosocial functioning, the Perceived Stress Scale (PSS), and the Kansas Marital Satisfaction Scale (KMSS). Children experiencing parental deployment demonstrated higher levels of psychosocial functioning difficulties compared to children not experiencing parental deployment. However, the relationship between deployment status and children's psychosocial functioning did not vary according to gender or age. Although previous research has found differences in children's behavior due to type of deployment, the current study did not find a significant difference in psychosocial functioning between children with a parent deployed to a combat zone compared to children with a parent deployed to a non-combat zone. Moreover, females with a spouse deployed perceived their lives as more stressful, yet differences between marital satisfaction and deployment status were not found. Lastly, mother's perceived stress was a significant predictor of children's psychosocial functioning, whereas marital satisfaction was not.

Chapter One

Introduction

“Since the Vietnam War, the psychosocial risks associated with military service for soldiers and their families have received increasing attention by researchers” (Jensen, Lewis, & Xenakis, 1986, p. 225). The literature suggests that military families have greater psychosocial difficulties compared to the general population (Lagrone, 1978; Flake, Davis, Johnson, & Middleton, 2009). Traditionally, families were expected to adapt to the values and norms of the military. However, the military’s high demands on the family have sometimes been met with dissatisfaction and intolerance (Drummet, Coleman, & Cable, 2003). One of the most challenging demands that military life engenders is separation due to deployment.

Parental separation has a profound impact on the family in general, and children in particular (Herzog & Everson, 2007). Children are especially at risk during parental deployment due to the fact that their developmental issues are exacerbated by feelings of anxiety during caregivers’ absence (Rush & Akos, 2007). Paden and Pezor (1993) contended that “when one considers the effect of either peacetime or wartime stressors on military children, a developmental perspective should be utilized” (p. 4). Depending on the child’s age, responses to stressors may be very different. Attachment theorists claim that separation from a parent, particularly the major attachment figure, can be highly detrimental (Paden & Pezor, 1993). Herzog and Everson (2007) explained that the military member may view their deployment as business as usual, but children experience this separation as a loss of daily contact with their parent(s).

The strength of the family has often been a key factor in a child's experience with deployment. Studies have concluded that the reaction of the nondeployed parent to a spouse's deployment moderates the effect of the deployment on the children (Orthner & Rose, 2005; Flake et al., 2009; Wong & Gerras, 2010). Flake et al. (2009) surveyed 116 Army spouses of deployed soldiers and found that the most significant predictor of child psychosocial functioning during wartime deployment was parental stress. Almost one-half (42%) of the parents reported "clinically significant" levels of parenting stress, and in turn, these parents were more likely to report psychosocial problems in their children. Spouses of deployed personnel often face challenges of coping as a single parent, maintaining a household, and experiencing marital strain due to a deployment-induced separation (Mansfield et al., 2010).

"Emotions related to separation affect not only interactions with children, but also the marital relationship" (Drummet et al., 2003, p. 281). There may be benefits for partners during separation, such as time to spend with friends, which can lead to a more satisfying relationship following reunion. However, separation coupled with the inability to communicate regularly often diminishes couple intimacy (Jacobs & Hicks, 1987). Karney and Crown (2007) proposed an integrative model, demonstrating how deployment can directly affect the "adaptive processes" of the couple. These processes consist of the ways in which spouses interact, communicate, resolve problems, understand each other, and provide support. The model indicates that deployment can have direct impact on the couple's adaptive processes as well as indirect effects via emergent traits, such as posttraumatic stress disorder (PTSD). These changes in adaptive processes are posited to affect marital satisfaction. However, empirical

evidence for an association between deployment and problems in military marriages is inconsistent across studies and remains an open question (Allen, Rhoades, Stanley, & Markman, 2010; Karney & Crown, 2007).

Research on families at large has evidenced a positive relationship between marital satisfaction and child adjustment. When parents are dissatisfied with their marital relationships and are having conflicts, their children show more internalizing and externalizing problem behavior, insecure attachment, and social difficulties (Howes & Markman, 1989; Katz & Gottman, 1993). On the other hand, when parents are satisfied with their marital relationship, their children do well and demonstrate high levels of psychosocial adjustment (Ferguson & Allen, 1978; Pawlak & Altman Klein, 1997). For example, Gottman and Katz (1989) found that children from martially distressed homes demonstrated more negative peer interaction and had worse health compared to children from homes not characterized by conflict. In fact, Emery (1982) concluded that marital discord is the best familial predictor of childhood behavior problems.

Problem Statement

Over the past decade, both the number and duration of military deployments by U.S. soldiers have significantly increased, affecting not only the soldiers, but their families as well (Newby, 2005). Since 2001, military families have experienced extraordinary circumstances due to the number of deployments to Iraq and Kuwait for Operation Iraqi Freedom and to Afghanistan in support of Operation Enduring Freedom. In fact, toward the end of 2005, more than 180,000 soldiers were deployed (Nelson Goff, Crow, Reisbig, & Hamilton, 2007). In 2006, approximately 1.89 million

U.S. children had at least one parent in the military, 1.17 million had parents in the active-duty component, and 713,000 had parents in the reserve component (Chandra et al., 2010). “The effect of parental deployment on families and children is of mounting concern as tours lengthen and multiple deployments to combat zones increase (Lincoln, Swift, & Shorteno-Fraser, 2008, p. 984).

Mansfield et al. (2010) purported that the current warfare in Iraq and Afghanistan differs greatly from that of other conflicts involving the United States. The authors explained that combat during the 1991 Gulf War ended quickly with few U.S. casualties. In contrast, current operations have involved the first sustained ground combat since the Vietnam War, followed by a period of insurgent attacks. “The psychosocial burden on families of deployed military personnel is less well understood and perhaps not comparable to that of previous deployments, given current service conditions” (p. 102).

Behavioral-health counseling sessions for soldiers and family members have increased 65% since 2004. According to TRICARE, the military health care program, many new patients are children suffering depression or anxiety due to a parent away at war. Children had 42% more counseling sessions in 2009 compared to 2005 (Zoroya, 2010). Increased stress among military family members before, during, and after deployment is a likely mechanism for the development of mental health problems. Studies examining the effects of deployment on spouses of deployed soldiers have demonstrated an increase in marital dissatisfaction, divorce, and declining emotional health. However, previous research was limited to short deployments (less than 6 months) and limited combat operations (e.g. Operation Desert Storm). Moreover, prior

studies have had small sample sizes and low survey response rates (Mansfield et al., 2010).

Clearly, many families are affected by parental deployment. In fact, for the first time in history, the number of military dependents (spouses and children) outnumbered Active Duty and Reserve members (Chartrand & Siegel, 2007). The Department of Defense and private organizations have efforts to provide appropriate mental health resources and deployment support for families. Yet, more work is needed to better understand how parental deployment affects children's psychosocial functioning. Policy statements from both the American Psychological Association (APA) and the Department of Defense Task force on Mental Health have called for research on the effects of deployments on military children (Chartrand, Frank, White, & Shope, 2008). In 2006, APA established a Task Force on Military Deployment Services for Youth, Families, and Service Members. The Task Force released a preliminary report identifying the current mental health needs and challenges related to deployment. Limitations related to the dearth of rigorous research on the mental health of military families were noted. Particularly, there are considerable holes in our understanding of the psychological and social effects of the unique characteristics of the Global War on Terror (Lincoln et al., 2008). Therefore, the current study aims to address this gap in the literature.

Purpose of Current Study

Research has demonstrated that both cognitive and behavioral changes accompany long periods of separation (Jensen et al., 1986). Currently, deployments are about 12 to 15 months, which represents a significant portion of a young child's life

(Chartrand et al., 2008). Therefore, it is important to further research how parental deployment influences children in order to provide military families with the necessary services and interventions. The purpose of the current study is to compare the psychosocial functioning of military children currently experiencing parental deployment with the psychosocial functioning of military children not experiencing parental deployment. Psychosocial functioning is defined as a child's psychological development within a social environment (Flake et al., 2009). Moreover, due to the fact that parental stress and marital satisfaction impacts children's psychosocial functioning, the present study will assess the degree to which these constructs account for variation in children's psychosocial functioning.

Chapter Two

Literature Review

The present study examined the psychosocial functioning of children ages four through seventeen with deployed and nondeployed parents as related to parental stress and marital satisfaction. The following chapter presents a review of the relevant literature pertaining to the theoretical framework for the study, military children's psychosocial functioning, military parental stress, and marital satisfaction within the military.

Theoretical Framework

Attachment styles are relational orientations developed from large-scale perceptions of self and others (Miller, 1999). John Bowlby is credited for his work in attachment, separation, and loss. Bowlby's attachment theory is "based on the central postulate that people, motivated by survival, act in ways to achieve and maintain proximity to a clearly identified individual who is perceived as more capable of coping with the environment" (Applewhite & Mays, 1996, p. 27). Having a responsive and available attachment figure gives a child a sense of security, causing the child to strive to maintain the relationship and value it. Baumeister and Leary (1995) posited that the motive to establish and maintain a minimal level of satisfying closeness to others is an inborn, fundamental human need to belong. When unfulfilled, a variety of deleterious psychological and physical outcomes follow.

As Applewhite and Mays (1996) emphasized, Bowlby proclaimed that anxiety, depression, aggressive behaviors, and phobias are conditions rooted in the protest, despair, and detachment reactions to childhood separations. Both the intensity and

duration of the separation affect how the child will respond to the experience. The longer the parental absence, the more difficult it is for the child to adjust. Children typically exhibit acute reactions and may develop long-term psychopathology due to parental separation. Nevertheless, a child's ability to adapt to these stresses is mediated by variables, such as their caregiver's stress and depression (Kelley, Finkel, & Ashby, 2003). Contrary to the prevailing belief in the 1970s, Jensen et al. (1995) concluded that even though children in military families are exposed to more stressors, they do not demonstrate higher baseline levels of psychopathology compared to civilian children. These authors suggested that the higher degree of external control and authority, the closer observation of children, and the absence of parental unemployment may decrease behavioral and emotional problems. Nonetheless, this study did not consider deployment status as a factor related to children's levels of psychopathology.

Military Children's Psychosocial Functioning

Developmental issues. Theories of development offer parameters to help organize what we might expect at different stages of life. Developmental theorists, such as Erik Erikson and Jean Piaget, focused on the cognitive, affective, biological, and interpersonal variables, suggesting how people grow and develop (Austrian, 2008). "Various stages of development present new tasks for the child to master and new defenses to employ" (Paden & Pezor, 1993, p. 4). Paden and Pezor (1993) emphasized that depending on a child's developmental stage, their responses to stressful situations, such as parental deployment, may be quite different. Preschool children may react to brief parental absences as if they were forever, due to the fact that these children do not have a fully developed sense of time. Sleep disturbances, defiance, toileting difficulties,

and aggression are typical behaviors of toddlers. Preschool children are often plagued with feelings of guilt, magically thinking that they are responsible for their parent going away (Amen, Jellen, Merves, & Lee, 1988). Conversely, school-age children are actively expanding their relationships outside the family. Their struggle for peer group acceptance may be disrupted by symptoms of withdrawal, aggression, and depression due to parental separation. Adolescents are struggling with identity issues and individuation from their parents, which can be seen through challenging authority and rebelling. Troubled adolescents demonstrate anger, depression, social withdrawal, and aggression. Adolescents' reactions to deployment tend to be more forthright, openly expressing anger, sadness, and feelings of loneliness at one end of the spectrum, or denial of any emotional reaction and aloofness at the other end (Amen et al., 1988). Externalizing behaviors may include substance abuse and illegal activities (Paden & Pezor, 1993).

Children in the military differ from civilian children because they are subjected to a variety of unique stressors, such as frequent, often sudden moves; forced adaptation to new communities and schools; and regular separation from a parent due to deployments. Paden and Pezor (1993) contended that military children may experience significant conflict and frustration, resulting in behavioral disturbances. Civilian children may experience one or more of these same stressors, but typically not all at once.

Chartrand et al. (2008) reported that to their knowledge, there are no published studies examining the behavioral effect of current wartime deployments (Iraq and Afghanistan) on children 5-years-old and younger. Thus, Chartrand et al. described the

impact of military deployment on the behavior of children aged 1 ½ to 5 years as reported by their primary caregiver and childcare provider. Results indicated that children between 3 to 5 years-old with a deployed parent evidenced greater behavioral symptoms than children without a deployed parent, after controlling for the nondeployed parent's stress and depressive symptoms. In addition, children aged between 1 ½ and 3 years reacted differently to parental deployment than those ages 3 to 5 years-old. Specifically, the younger children demonstrated significantly lower externalizing symptoms, such as attention difficulties and aggression, than the older group of children. Chartrand et al. explained that the time between 18 and 35 months is key for the development of attachment relationships. The main attachment figure for most children is their mother. Consequently, when a father is deployed, these young children have more time with their preferred attachment figure, providing a secure base during parental separation. In contrast, older children are more aware of their parent's absence.

Relationship between mothers and children. A review of longitudinal studies of children whose fathers were POWs or MIAs found that mother's attitude toward separation and mother's ability to cope with the separation, seemed to account for children's adjustment (Hunter, 1988). Therefore, it is important to address the relationship between mother's and children's adjustment during separation, which may influence children's short-term and long-term emotional and behavioral development.

Kelley (1994) examined both children's behavior and the degree to which mothers experienced dysphoria, depressive behavior, and self-esteem fluctuations. Participants completed the Beck Depression Inventory (BDI), Generalized Contentment

Scale (GCS), Index of Self-Esteem (ISE), and Child Behavior Checklist (CBCL) on three separate occasions: pre-deployment, mid-deployment, and post-deployment. In addition, the study looked at how a more stressful wartime deployment (Persian Gulf War) differed from the routine peacetime separations that military families often experience.

The results of the study revealed that short paternal absences during a peacetime separation, which constitute 6 months or less, are associated with temporary emotional and behavioral difficulties in children. Mothers reported that children exhibited more internalizing and externalizing behavior before deployment, yet the behavior decreased over time. Kelley (1994) suggested that the re-establishment of mother-child patterns of communication and the father's return may have accounted for improved child behavior. Yet, children whose fathers were deployed during the Persian Gulf War demonstrated no improvement over time. Thus, children experiencing a peacetime deployment demonstrated less internalizing and externalizing behaviors compared to children experiencing a wartime deployment. Furthermore, consistent with previous research, military wives reported more depressive behaviors prior to and during deployment compared to the reunion phase. Kelley concluded that maternal adjustment and children's behavior differ as a result of the type of deployment. The research study also supported the association between maternal behavior and child dysfunction.

Effects of parental separation on children. "Children in recent times have had to learn to adapt to parental separation as more parents balance the often competing demands of family and job responsibilities" (Applewhite and Mays, 1996, p. 23). It was reported that almost 37,000 children were separated from their parents due to

deployment to the Persian Gulf. Empirical research examining the adjustment of military children demonstrates that fighting, defiance, anxiety, anger, sadness, and school difficulties are common among military children with absent fathers (Hillenbrand, 1976; Hunter 1982, McCubbin, Hunter, & Dahl, 1975).

Previous research has demonstrated increased tearfulness/sadness in girls and discipline problems in boys, with boys being at higher risk for symptoms (Jensen, Martin, & Watanabe, 1996; Rosen, Teitelbaum, & Westhuis, 1993). Researchers have often described the effects of parental deployment as more significant for boys than girls (Paden & Pezor, 1993). Given that the majority of deployed parents are fathers, it may be that boys are more vulnerable to the loss of a male figure in the home (Blount, Curry, & Lubin, 1992). In contrast, Sears, Pintler, and Sears (1946) noted that preschool aged boys who had their fathers present in the home were more aggressive than boys whose fathers were deployed. On the other hand, girls whose fathers were away serving in the military demonstrated a slight increase in aggression compared to their father-present counterparts.

A survey of about 500 active-duty families served by a pediatric clinic at an Army hospital in Georgia indicated childhood behavioral and somatic problems during father separation. At least one child in 66 percent of the families experienced behavioral or medical symptoms, such as phobias (particularly fear of the dark), disciplinary problems, somatic complaints, and a decline in grades, during their parent's deployment (Yeatman, 1981). Similarly, Rosen et al. (1993) found that children developed a wide-range of symptoms including nightmares, acting out behavior, and sadness in reaction to Operation Desert Storm.

Applewhite and Mays (1996) explored both mother and father separation in the military in order to better understand the influence that separation may have on the quality of a child's psychosocial functioning. From an attachment theory perspective, maternal separation may create more distress for children than the absence of their father. Consequently, the researchers predicted that children who have experienced maternal separation will exhibit a deficit in the quality of their psychosocial functioning compared to children who have experienced extended paternal separation. The questionnaire used was designed as a multidimensional instrument to measure a child's experience with parental separation, current psychosocial functioning, and the level of family stressors. The data collected indicated that the researchers' hypothesis was not supported. Children who had experienced an extended maternal separation did not show difficulties in several areas of psychosocial functioning compared to children who had extended separation from their fathers. Therefore, children who have been separated from their mothers are not more adversely affected compared to children who have experienced paternal separation. Nevertheless, the study reinforced that a child's psychosocial development may be influenced by both paternal and maternal separation.

Similarly, Jensen et al. (1996) assessed 383 children and their remaining caretaking parent concerning child and family functioning as well as life stressors during Operation Desert Storm. The study's results indicated that children with deployed parents demonstrated modestly higher levels of child depression compared to children whose parents were not deployed. Interestingly, no differences were found in anxiety levels or parent reports of children's behavior problems. Like children, parents with deployed spouses also reported higher levels of depression.

As mentioned previously, Kelley (1994) concluded that children's behavior differs as to whether their parent is deployed to a combat zone or a non-combat zone. Lincoln et al. (2008) highlighted that having a parent sent to an active combat zone with an undetermined return date may be one of the most stressful childhood events. Lester et al. (2010) examined the impact of parental combat deployment and parental distress on the prevalence and severity of behavioral and emotional adjustment problems among school-aged children. Approximately one-third of the children demonstrated clinically significant symptoms of self-reported anxiety as compared with community norms. It is important to note that the cumulative length of parental deployments during the child's lifetime was associated with increased externalizing symptoms and risk for depression. Clearly, having a parent deployed to a combat zone incorporates additional stressors on the family. Peebles-Kleiger and Kleiger (1994) referred to wartime deployment as a "catastrophic" stressor to children and families. Although this conclusion may be overstated, it is realistic to recognize that wartime deployment is different and more upsetting compared to routine, non-combat deployment (Cozza, Chun, & Polo, 2005).

Military Parental Stress

Need for research on military families. "Increased stress among military family members before, during, and after deployment is a potential mechanism for the development of mental health problems" (Mansfield et al. 2010, p. 102). In fact, military spouses report that separations are their greatest source of dissatisfaction with military life (Black, 1993). Yet, most studies of deployment-related stress during the current conflicts in Iraq and Afghanistan have focused on the post-deployment symptoms evidenced by soldiers. Stress experienced by spouses and other family

members has received little research attention, but has a potential effect on general health status and a possible secondary impact on deployed or returning military members. The majority of studies examining the effects of deployment on service members' families have focused on the secondary effects of living with a returned soldier who is experiencing post-traumatic stress disorder (PTSD), other psychiatric conditions, or interpersonal behavior changes (Warner, Appenzeller, Warner, & Grieger, 2009).

Drummet et al. (2003) argued that military families and their needs have been somewhat unrecognized over the years. Although programs to assist families during stressful times have been established, they have gone relatively unutilized due to the stigma of accessing services, underdevelopment because of funding restrictions, and lack of awareness about what is needed. In fact, few recent empirical investigations examine the effect of deployment on children and families. Although previous findings may inform our understanding of the impact of deployment in general, inferences from these studies may not generalize to the current global conflict or adequately account for the unique characteristics of today's military families (Sheppard, Weil Malatras, & Israel, 2010).

Effects of parental stress on children. Sheppard et al. (2010) noted that molecular family stability, which is defined as the consistency and predictability of routines within the family environment, may be impacted by deployment, and thus, indirectly affects child outcomes. "Deployment may challenge the remaining parent's ability to maintain normal family activities and routines" (p. 605). A disruption in molecular family stability (parenting) may be a product of additional stress due to

parental deployment, such as limited resources to manage the household. Warner et al. (2009) assessed the stresses experienced by spouses at the time of deployment departure. The largest stressors were associated with managing appointments, specifically with regards to getting time off work or time away from the family. It has been noted that the reaction of the nondeployed parent to a spouse's deployment moderates the impact of the deployment on the children (Wong & Gerras, 2010).

Previous studies have demonstrated that parental stress during wartime deployment is the most significant predictor of child psychosocial functioning (Flake et al., 2009). Flake et al. (2009) conducted a study, using standardized psychosocial health and stress measures, to identify predictors of children at "high risk" for psychosocial morbidity during deployment. Measures included the Pediatric Symptom Checklist (PSC), the Parenting Stress Index-Short Form (PSI-SF), and the Perceived Stress Scale (PSS). Classification of parents with "clinically significant" stress on the PSI-SF and PSS correlated significantly with children at "high risk" on the PSC. Parents with high stress on the PSI-SF were more likely to rate their children with problematic behavior, and high PSS scores increased the probability of a child at "high risk" for psychosocial difficulties. The researchers noted that a limitation of this study included the lack of a concurrent nondeployed control group, preventing the ability to attribute increased rates of stress in the sample to solely deployment.

Additional research has documented the association between parenting stress and child problematic behavior. Rosen et al. (1993) obtained psychological symptom profiles on 1,601 children of soldiers deployed during Operation Desert Storm (ODS), and the nondeployed spouse's symptoms (typically the mother) were measured using

the 25-item Hopkins Symptom Checklist (HSCL). A high score on the HSCL was significantly correlated with a number of symptoms in children, particularly the eldest and second child. An increase in sadness, eating problems, nightmares, sleeping problems, and a perceived need for counseling were noted. Interestingly, while overall reports of symptoms experienced by children during ODS tended to be high, clinical attention was rarely warranted. In fact, the greatest predictor of counseling during ODS was a previous history of counseling for emotional problems.

Palmer (2008) proposed that the effects of military life on child psychosocial and academic outcome may follow an indirect pathway entailing parental stress and psychopathology. “The implication of this theoretical pathway is that indirect effects of the military setting (i.e., effects upon the parents) may better account for child outcome than direct effects of the military upon the child” (p. 206). Heightened parental stress and pathology in the nondeployed spouse, in addition to the absence of the deployed parent, is likely to negatively impact the quality of the parent-child interactions. Children are responsive to parental stress and may mimic how parents respond (Pfefferbaum, 1997; Fletcher, 1996). For instance, Drummet et al. (2003) purported that if a mother’s reaction to her spouse’s deployment is depression, her children may mirror her depressive symptoms or behavior, particularly if they manifest as parental unresponsiveness and inattentiveness. Clearly, further research examining the impact of parental stress on children’s adjustment as a result of deployment warrants attention.

Marital Satisfaction Within the Military

“The quality and stability of relationships in military families have become increasingly important concepts in family research” (McLeland, Sutton, & Schumm,

2008, p. 836). Thus, researchers have investigated such topics as relationship transitions, marital interactions, marital satisfaction, as well as the effects of deployment on spouses. Zoroya (2010) examined the divorce rates in 2008 among Marine soldiers and concluded that enlisted soldiers divorced their spouses at a higher rate in 2008 than any other time in the past 16 years. Zoroya explained that Michael Mullen, chairman of the Joints Chiefs of Staff, reported that the stress among military families continues to be intense after years of multiple combat deployments and lengthy separations. Furthermore, many soldiers' combat tours were extended to 15 months, and many returned home only to face another deployment in a year. Mental health problems, such as post-traumatic stress disorder and depression, have increased as well, resulting in more marital stressors.

Impact of deployment on spouses. Military spouses have reported that deployments result in loneliness, role shifts, and concerns about the safety and well-being of the deployed military member. On the other hand, a military member's return home can be both joyous and stressful for families. The spouse and military member have to readjust to one another in addition to understanding that it is almost impossible to return to life as it was before the deployment. It can be stressful to renegotiate responsibilities, rules, and boundaries (Faber, Willerton, Clymer, MacDermid, & Weiss, 2008).

The spouse's reunion with the military member is also more stressful if the soldier is experiencing PTSD and/or depression. As Hogancamp and Figley (1983) emphasized, the symptoms of PTSD and depression, such as nightmares, withdrawal from activities, and detachment from others, can inhibit the soldier's reconnection to

family members. Numerous studies have demonstrated that spouses of soldiers with PTSD are at an increased risk for experiencing psychological and marital distress. In fact, greater symptom severity in combat soldiers is related to lower marital satisfaction in spouses (Renshaw, Rodrigues, & Jones, 2008).

Black (1993) claimed that “support groups should be the foundation of any intervention to help spouses” (p. 276). Although the majority of spouses state that they would participate in programs designed to help them cope with military-induced separations, most do not want to use formal services due to the stigma attached to not being able to handle their own problems. Rather, spouses reported that they would prefer self-help or support group structures with access to professional services. Moreover, pre-deployment interventions are directly related to spouses’ satisfactory adjustment during deployment. Consequently, support groups should begin before the deployment, continue through the deployment, and end after the family member has returned. Participating in pre-deployment and post-deployment phases helps foster family adaptability (Black, 1993).

Burrell, Durand, and Fortado (2003) investigated how a spouse’s level of integration in the military community influences his or her physical and mental health. Due to the fact that cohesion and support have been linked to health outcomes, the researchers hypothesized that spouses who demonstrated low levels of cohesion would have higher levels of distress compared to spouses who were more integrated into the military way of life. Spouses who attended few family support group meetings and had only a couple friends in the unit were considered to encompass a low level of integration. Despite the differences between spouses exhibiting high and low levels of

integration, there were no significant differences between the groups with regards to their physical health. Over 95 percent of the spouses reported that their current state of physical health was in the average-to-excellent range. In addition, three-quarters of all spouses were doing well psychologically and did not reveal symptoms of depression. Burrell et al. purported that their results may be due to the fact that the study focused only on spouses whose soldiers were not deployed.

Schumm, Bell, Knott, and Rice (1996) examined the effects of military separation and changes in marital satisfaction over time for spouses with soldiers deployed to Somalia for Operation Restore Hope. The researchers focused on the influence of four stressors: pregnancy, loneliness/missing their spouse, problems communicating with their spouse, and experiencing the death of a close friend/family member. Results from the study indicated that being stressed during a spouse's deployment does not necessarily detract from marital satisfaction. Yet, the researchers emphasized that the spouses in the study experienced a relatively brief deployment, with most soldiers returning in 6 months. In addition, over half the soldiers had previous experience with deployments, which may have afforded their spouses an opportunity to prepare for the deployment to Somalia. Schumm, Bell et al. concluded that experiencing stressful conditions during military-induced separation does not necessarily dictate an end to a couple's marriage. Most spouses in the study were able to maintain or improve their marital satisfaction, even when undergoing stressful events.

Effects of deployment on marital satisfaction. Several research studies have investigated the relationship between deployment and marital satisfaction. Schumm,

Hemesath, Bell, Palmer-Johnson, and Elig (1996) analyzed data from over 800 enlisted soldiers to assess differences in marital satisfaction as related to participation in Operation Desert Storm. Results indicated that there was no significant overall change with respect to marital satisfaction before and after the war. Similarly, Schumm, Bell, and Gade (2000) researched the changes in self-reported soldier marital satisfaction and marital quality before, during, and after a peacekeeping deployment to the Sinai peninsula. The objective of the study was “to see if separation reduced marital satisfaction and if that satisfaction would return to pre-deployment levels after the soldiers returned to the United States (p. 815). Like the study by Schumm, Hemesath et al. (1996), scores on marital satisfaction and marital quality did not change permanently as a result of an oversea deployment. The researchers purported that marital instability is possibly a consequence of prior conditions rather than an effect of deployment. Hence, the outcomes for soldiers who said that their marriage was in trouble pre-deployment were compared to the outcomes for soldiers who said that their marriage was not in trouble pre-deployment. Schumm et al. (2000) reported that of the 38 married soldiers who declared that their marriage was not in trouble, 33 were still married to the same spouses after returning from their deployment. Nevertheless, of those 33, one was thinking of divorce and four reported that their marriage was now in trouble. Moreover, of the 11 military members who described their marriage as in trouble prior to deployment, seven were still married to the same spouse post-deployment. Consequently, the researchers concluded that having marital troubles prior to deployment did not appear to be correlated with lower marital stability. Yet, results

demonstrated some marital instability post-deployment even among couples with strong marriages prior to deployment.

Although the previous studies indicated relatively no changes regarding marital satisfaction as a result of deployment, McLeland et al., (2008) showed that pre-deployment and post-deployment situations are often associated with lower marital satisfaction for months before, months after, and during the deployment. Using the Kansas Marital Satisfaction Scale, service members who were either anticipating an upcoming deployment or recovering from a recent deployment reported lower scores on the scale. These results supported the researchers hypothesis, which purported that separation from a loved one may affect close relationships and reduce satisfaction, not only during the separation, but before and after as well. Currently, many service members' deployments are being lengthened to 18 months away from home, rather than 6 to 8 months. Since marital satisfaction may not only be lower during deployment, but before and after deployment, the window of low marital satisfaction is now approaching 24 months or more (McLeland et al., 2008). In addition, the researchers emphasized that many military families are entering a third combat deployment since 2002.

With regards to the effects of deployment on marital satisfaction, the majority of studies have assessed marital satisfaction from the soldiers' perspective, rather than the perspective of the soldier's spouse. Nelson Goff et al. (2007) conducted a study to assess the impact of traumatic stress symptoms on the relationship satisfaction of Operation Iraqi Freedom and Operation Enduring Freedom soldiers. Although the authors assessed both soldiers' and spouses' perceptions of marital satisfaction, their research focused specifically on the effects of soldiers' trauma history and symptoms,

rather than the impact of symptoms experienced by spouses. Specifically, the study sought to identify how individual trauma history and trauma symptoms of soldiers influence the relationship satisfaction of soldiers and their spouses. The results of the study indicated that soldiers' trauma symptoms significantly predicted their own and their partners' marital satisfaction. In particular, high levels of trauma symptoms in soldiers, such as sexual problems, dissociation, and sleep disturbances, did predict lower relationship satisfaction for soldiers and their spouses. The trauma symptoms reported by the participants were directly related to their traumatic history and not necessarily general symptomatology (Nelson Goff et al., 2007). Overall, this study further identified the relationship between a soldier's trauma symptoms and relationship satisfaction.

Effects of marital satisfaction on children. Fincham (1998) argued that when studying children, marital relationship should be examined. According to the family systems perspective, the child is embedded in a family system and can never be understood independently of that system. Emotions or behavior in a specific family subsystem may impact other subsystems within the family (Parke, 2004). To study children alone is incomplete because a critical element of the system, the marriage, is disregarded. "The marriage constitutes part of the environment that may directly influence the child and provides a context that facilitates or impedes effective parenting and may thereby influence the child indirectly" (Fincham, 1998, p. 544).

In general, research has demonstrated a positive relationship between marital satisfaction and child adjustment. Children evidence more internalizing and externalizing behaviors when parents are having conflicts and are dissatisfied with their

marital relationships (Howes & Markman, 1989; Katz & Gottman, 1993). In contrast, children demonstrate high levels of psychosocial adjustment when their parents are satisfied with their relationship (Ferguson & Allen, 1978; Pawlak & Altman Klein, 1997). Fishman and Meyers (2000) analyzed data from the National Survey of Families and Households, and concluded that parents' reports of marital satisfaction were significantly associated with child symptomatology. A significant inverse correlation between parents' ratings of marital satisfaction and child psychological distress was found. Children whose parents endorsed low levels of marital satisfaction, tended to be sad, experience peer problems, and were not as compliant compared to children whose parents reported higher levels of marital satisfaction. Interestingly, mothers' marital satisfaction was related to parent-child involvement. Mothers who were not satisfied in their marriages were less likely to spend time with their children, show affection, and offer praise, supporting the notion that marital satisfaction is associated with parenting style.

Hypotheses

“An examination of the literature regarding military deployment and its effects on children makes clear that there is a paucity of recent empirical research, in general, and that further elaboration of existing knowledge is warranted” (Sheppard et al., 2010, p. 601). In sum, the literature reviewed provides support for the structure of the current study. Specifically, the following hypotheses are examined:

Hypothesis 1: Children's psychosocial functioning will differ by (a) parent deployment status, (b) gender, (c) age, and (d) parental deployment to a combat zone versus non-combat zone.

Hypothesis 2: Females with a spouse deployed will demonstrate higher levels of perceived stress and marital dissatisfaction compared to females without a spouse deployed.

Hypothesis 3: Children whose mothers endorse higher levels of perceived stress and marital dissatisfaction will demonstrate greater psychosocial functioning difficulties.

Chapter Three

Method

Participants

The participants for the present study were female military spouses from all branches in the military: Army, Navy, Marine Corps, Air Force, and Coast Guard. Moreover, it was required that the subject's child or children were between the ages of 4 and 17 so that the study adhered to the age range determined by the research instrument measuring psychosocial functioning. Participants were recruited via military spouse support websites, email distribution lists, as well as snowball sampling. A total of 375 military mothers completed the research instruments. The majority of responses were from spouses in the Navy and Marine Corps due to the accessibility of these groups. As a result, the sample is not representative of all services, yet is a reasonably robust sample of families experiencing parental deployment and families not experiencing parental deployment.

Instruments

A majority of studies that have assessed the psychosocial functioning and well-being of military children have used the Child Behavior Checklist (CBCL), which is a parental-report behavior problem assessment. The CBCL is widely used with established psychometric properties. However, parents often report that the CBCL is too long. In contrast, the Strengths and Difficulties Questionnaire (SDQ) is a shorter instrument that assesses the parental perspective of child adjustment. The SDQ has been compared to the CBCL, suggesting that they provide similar information with the SDQ preferred by parents (Gledhill & Garralda, 2005). For the present study, it is

important to note that when referring to children's psychosocial functioning as measured by the SDQ, it is the parent's perception of their child's psychosocial functioning.

The SDQ asks about 25 attributes, some positive and others negative. The 25 items are divided between the following 5 scales: emotional symptoms, conduct problems, hyperactivity/inattention, peer relationship problems, and prosocial behavior. Two versions of the SDQ are available depending on the child's age. There is a version for 4 to 10 year-olds (Appendix A) and for 11 to 17 year-olds (Appendix B). The two different versions of the SDQ are considered equivalent. They are identical except for minor changes in wording on a few items. For instance, the term "children" is used for 4 to 10 year-olds, where as the term "youth" is used for 11 to 17 year-olds. Goodman (2001) examined the psychometric properties of the SDQ and confirmed the predicted five-factor structure. "Factor analyses showed that nearly all items loaded primarily, and usually exclusively, on the predicted five factors, covering emotional symptoms, conduct problems, hyperactivity/inattention, peer problems, and prosocial behavior" (Goodman, 2001, p. 1343). Reliability was in general satisfactory, whether judged by internal consistency (mean Cronbach's alpha: 0.73), cross-informant correlation (mean: 0.34), or retest stability after 4 to 6 months (mean: 0.62). Furthermore, the validity of the SDQ was determined by how strongly the various scales were associated with the presence or absence of psychiatric disorders. SDQ scores above the 90th percentile were associated with a substantial increase in psychiatric risk. Thus, the reliability and validity of the SDQ make it a useful instrument to measure the behavioral and emotional adjustment of children and adolescents (Goodman, 2001).

The Perceived Stress Scale (PSS) is a measure of the degree to which situations in an individual's life are appraised as stressful (Cohen, Kamarck, & Mermelstein, 1983). Cohen and Williamson (1988) explained that the items were designed to assess how unpredictable, uncontrollable, and overloaded respondents find their current state of affairs. In addition, the scale includes direct queries regarding current levels of experienced stress. The instrument was developed for use in community samples with at least a junior high school education. "The items are easy to understand and the response alternatives are simple to grasp. Moreover, the questions are of a general nature and hence are relatively free of content specific to any subpopulation group" (p. 34). Cohen et al. (1983) demonstrated that the PSS provided better predictions than did life-event scales of psychological symptoms, physical symptoms, and utilization of health services. Furthermore, the PSS evidenced adequate internal and test-retest reliability and correlated in the expected direction with self-report and behavioral criteria. Of note, although highly correlated with depressive symptomatology, the PSS proved to measure a different and independently predictive construct. The PSS is presented in Appendix C.

As demonstrated in the previous literature review, the majority of studies have investigated the soldiers' marital satisfaction, rather than the spouses' marital satisfaction. Nelson Goff, et al. (2007) researched both soldiers' and spouses' perceptions of marital satisfaction, but their research focused specifically on the effects of soldiers' trauma history and symptoms. The current study assessed the nondeployed spouses' marital satisfaction utilizing the Kansas Marital Satisfaction Scale (KMSS). Many research studies have used only single items of marital adjustment or quality to

assess marital satisfaction. For instance, Schumm, et al. (2000) measured marital satisfaction by a single item which asked the soldier to rate his or her relationship on a scale from 1 (very unhappy) to 7 (very happy). This limits both the reliability and validity of such measures. The KMSS instrument shows concurrent validity estimated by high correlations with other measures of marital quality, such as the Revised Dyadic Adjustment Scale and the Marital Satisfaction Questionnaire. The Kansas Marital Satisfaction Scale has three items: How satisfied are you with your marriage? How satisfied are you with your relationship with your husband/wife? How satisfied are you with your husband/wife as a spouse? Most often a seven-point response scale is used with higher scores representing higher marital satisfaction (McLeland et al., 2008). Refer to Appendix D for the complete KMSS, including directions and response format.

Schumm, Crock, Likcani, Akagi, and Bosch (2008) assessed the potential of the KMSS for use in research with larger active duty military samples. Different versions of the KMSS were administered to 154 Army personnel, alternating between the five-response format (very dissatisfied, somewhat dissatisfied, mixed, somewhat satisfied, and very satisfied) and the seven-response format (extremely dissatisfied, very dissatisfied, somewhat dissatisfied, mixed, somewhat satisfied, very satisfied, and extremely satisfied). The KMSS yielded high levels of internal consistency with both types of response formats. As expected, both versions of the instrument provided evidence of construct validity with a scale measuring marital instability. Schumm et al. concluded that the KMSS may serve as a practical brief measure of marital adjustment for clinicians working with distressed military families.

In addition to the SDQ, PSS, and KMSS, participants were asked to complete a demographic questionnaire. The demographic questionnaire was adapted for this study from the demographic form used at the Terrorism and Disaster Center at the University of Oklahoma Health Sciences Center. The questionnaire consists of 13 items, inquiring about gender, age, race/ethnic identification, deployment status, etc. (Appendix E).

Procedure

Using SurveyMonkey software, the SDQ, PSS, KMSS, and the demographic questionnaire were formatted online enabling participants to access the survey at anytime. Participants first completed the demographic questionnaire, followed by the SDQ, PSS, and KMSS. Potential participants were sent the link to the survey via email distribution lists and online military spouse clubs. They were presented with a message from the researcher, approved by the Institutional Review Board, inviting them to participate (Appendix F). The subject's decision whether or not to participate did not result in penalty or loss of benefits to which they are otherwise entitled. Subjects' responses to the survey were anonymous, and there was no link from completed instruments to identified participants. Participants were not directly compensated for participating in the study. However, for every completed survey returned a donation was made to the National Military Family Association.

Participants with more than one child were instructed to answer the Strength and Difficulties Questionnaire (SDQ) based on the child in their family who exhibited the most concern. As a result, mothers did not choose a child at random. Rather, the data collected focused on those children experiencing the most distress. Completion of the

questionnaires served as evidence of informed consent, and the current research study was approved by the Institutional Review Board (Appendix G).

Design and Analysis

To thoroughly examine the first hypothesis, multivariate analyses of variance (MANOVAs) were conducted. A two-way MANOVA allows for simultaneous analysis of mean differences on the dependent variables while also taking into account the correlations among the dependent variables. The five factors/scales of the SDQ (emotional symptoms, conduct problems, hyperactivity/inattention, peer problems, and prosocial behavior) served as the dependent variables. A two-way between-groups analysis of variance (ANOVA), which looks at the individual and joint effect of two independent variables on one dependent variable, was considered for this hypothesis. In this case, the total SDQ score would have served as the single dependent variable. The total SDQ is generated by summing the scores from all the scales, excluding the prosocial scale. However, more information is obtained by conducting a MANOVA for each part of the first hypothesis due to the fact that the groups can be compared on a range of different characteristics (5 factors/scales of the SDQ).

Based on previous research, the current study purported that children with a deployed parent would demonstrate greater difficulty in psychosocial functioning compared to children without a deployed parent (Yeatman, 1981; Rosen et al., 1993; Applewhite & Mays, 1996; Jensen et al., 1996). Moreover, the study hypothesized that boys and girls would differ with regards to levels of psychosocial functioning (Paden & Pezor, 1993). Thus, for the first MANOVA, deployment status and gender served as the independent variables with the five factors of the SDQ as the dependent variables.

This study examined age in two different ways, and thus, the same statistical analysis was conducted twice. First, age was divided into younger (4 to 10 years-old) and older children (11 to 17 years-old) according to the two versions of the SDQ. Second, age was divided into preschool (4 to 6 years-old), school-age (7 to 12 years-old), and adolescence (13 to 17 years-old) based on approximate stages of development (Austrian, 2008). It is important to note that dividing ages in this manner is an approximation derived from developmental theories, and individuals do vary. Two-group MANOVAs were used to test the hypothesis that a significant difference in psychosocial functioning exists concerning age when divided by younger/older children and by developmental stages. Deployment status and age were the independent variables with the five factors of the SDQ as the dependent variables. Furthermore, to examine whether or not a significant difference exists between the psychosocial functioning of children experiencing a parent deployed to a combat zone compared to children with a parent deployed to a non-combat zone, a one-way MANOVA was conducted. Combat status served as the independent variable and participants' scores on the five factors of the SDQ served as the dependent variables.

When a two-way MANOVA demonstrated statistically significant mean differences, univariate ANOVA follow-tests were used to isolate the sources of the multivariate effects. The univariate ANOVA follow-up tests determined on which dependent variables the groups actually differed. For instance, the means of the dependent variables for boys and girls were compared to determine directionality.

The second hypothesis purported that females with a soldier deployed would evidence greater levels of perceived stress and marital dissatisfaction compared to

females without a soldier deployed. In other words, it was predicted that females with a service member deployed would have significantly higher scores on the PSS and lower scores on the KMSS compared to females without a service member deployed. To analyze the second hypothesis, a one-way MANOVA was utilized. This statistical analysis assessed the mean differences between deployment status (independent variable) and levels of perceived stress and marital satisfaction (dependent variables). The between-subjects tests determined if a statistically significant difference existed.

In order to test the third hypothesis, a simultaneous multiple regression analysis was conducted to explore the relationship between one continuous dependent variable (psychosocial functioning as measured by the total SDQ) and two independent variables or predictors (perceived stress and marital satisfaction). Compared to simple regression, which focuses on the predictive relationship between two variables (the predictor variable and the criterion variable), multiple regression analyzes the effect of a set of predictors on a criterion variable. The coefficient of determination provides the proportion of variance in psychosocial functioning (criterion variable) explained by the set of predictors (perceived stress and marital satisfaction). In addition, the regression coefficients and t-tests assessed direction as well as statistical significance for each predictor. The predictors are isolated to determine which ones are accounting for significant variation in the criterion variable.

Indeed, the study of the effects of parental deployment on children's psychosocial functioning as related to parental stress and marital satisfaction is important. It is hoped that the information gained from this study will provide clinicians working with military families with evidence-based guidance. Additionally,

it is thought that the current research study will effectively demonstrate the need for further education and intervention in this area.

Chapter Four

Results

Demographics

Demographic information was obtained via a 13-item questionnaire that participants completed after agreeing to partake in the study. To examine demographics, frequencies and descriptive statistics were conducted. Approximately 5,000 potential participants were sent the link to the survey via email distribution lists and online military spouse clubs. A total of 365 female military spouses completed the research measures, indicating a response rate of about 14%. Responses from five male participants were removed due to the fact that the study only assessed the perceptions of female spouses. In addition, participants whose children were not within the designated age range (4 to 17 years-old), were also removed. It was observed that these participants began completing the demographic questionnaire, but then exited the survey when they were asked to identify a child between the ages of 4 and 17 who exhibited the most concern.

The 365 military wives varied in age from 19 to 58 years-old with a mean age of 35.91 and standard deviation of 5.822. Regarding race/ethnic identification, the majority of the participants, N=322, identified themselves as White/Caucasian (88.2 %). Their spouses varied in age from 21 to 66 years-old with a mean age of 37.10 and standard deviation of 6.350. Furthermore, the majority of participants identified their partners as White/Caucasian (N=314, 86%).

Of the five branches in the military, 207 participants in the present study were from the Army (56.7%), 13 were in the Air Force (3.6%), 139 in the Navy (38.1%), 1

Marine (.3%), and 2 Coast Guard members (.5%). Three participants did not respond to this question (.8%). In addition to the branch of service, participants reported their spouses' status in the military, which consisted of 208 Reservists (57%), 5 National Guard members (1.4%), 148 Full-Time/Active Duty service members (40.5%), and 4 missing responses (1.1%). Table 1 provides a detailed description of demographic information.

Regarding deployment status, 156 (42.7%) spouses were currently deployed at the time of data collection, and thus, 209 (57.3%) spouses were not deployed. Of the 156 service members deployed, 126 (81.8%) were deployed to a combat zone and 28 (18.2%) were in a non-combat zone (2 missing data). Furthermore, 138 (89.0%) participants indicated that their partner's deployment was a source of stress, while 17 (11.0%) reported that the deployment was not a source of stress. The length of deployment varied from one month to 24 months (2 years) with a mean of 11.12 months and standard deviation of 2.998. The majority of participants experiencing deployment were amid a 12-month deployment assignment (N=96, 62.7%). At the time of data collection, participants' spouses had been deployed anywhere from less than one month to 21 months, with a mean of 4.40 months and standard deviation of 3.818. Table 2 further details the frequencies of participants' total length of deployment and time already served in their current deployment assignment.

All participants were asked to identify the number of previous deployments that their partner has experienced. These numbers ranged from zero (no previous deployments) to 25 with a mean of 2.99 and standard deviation of 2.975. Most participants' partners had one (20.8%) or two (23.0%) previous deployments. Of the

365 military families assessed, 106 (29.0%) service members had pending deployments, whereas 254 (69.6%) did not (5 missing data, 1.4%). The length of time before the pending deployment varied from less than one month to 36 months (3 years) with a mean of 9.17 and standard deviation of 7.762.

Prior to completing the Strength and Difficulties Questionnaire (SDQ), participants with more than one child were asked to answer the items based on the child in their family that exhibited the most concern. The children selected ranged in age from 4 to 17 years-old with 192 males (52.6%) and 173 females (47.4%). In addition, the majority of participants identified their child as White/Caucasian (N=303, 83.0%). Table 3 reports the demographic information of the children selected for the study. Based on their child's age, participants chose either the SDQ for 4 to 10 year-olds (N = 239, 65.5%) or the SDQ for 11 to 17 year-olds (N = 126, 34.5%).

Table 4 shows the mean values, standard deviations, and correlations for the study variables. Emotional symptoms, conduct problems, hyperactivity/inattention, and peer problems were all positively correlated with each other and negatively correlated with prosocial behavior. PSS scores were positively correlated with emotional symptoms, conduct problems, hyperactivity/inattention, and peer problems, but were negatively correlated with prosocial behavior. Scores on the KMSS were not significantly correlated with any of the five factors of the SDQ, yet demonstrated a negative correlation with PSS scores.

Missing Data

During data analysis, it is important to inspect the data file for missing data. Particularly when doing research with human beings, it is rare that complete data will

be obtained from each participant (Pallant, 2007). In many studies, as participants are completing a survey, test, or other measure, they do not give responses for every item. Thus, missing data are often due to item nonresponse. Another source of missing data is participant attrition (Schlomer, Bauman, & Card, 2010). In the case of the present study, participants may have failed to complete the entire questionnaire due to fatigue or boredom. It was noted that 13 (3.6%) participants exited the survey after completing the Strength and Difficulties Questionnaire (SDQ), leaving the Perceived Stress Scale (PSS) and Kansas Marital Satisfaction Scale (KMSS) unanswered.

Most often, cases containing nonresponses are deleted and only cases with complete data are retained. Schlomer et al., (2010) concluded that this is not an advisable method given that the remaining cases may be a biased subsample of the total sample. Consequently, the findings and interpretations of the results may be affected. “Deletion methods are not as much a strategy for handling missing data as they are approaches for ignoring missing data” (Schlomer et al., 2010, p. 3). Therefore, in order to address this issue, methods such as imputation or substitution are used. The present study utilized imputation by inserting the median response within two points of each missing response, which is considered a better option compared to mean substitution.

Hypothesis One

The first hypothesis predicted that children’s psychosocial functioning would differ by (a) parent deployment status, (b) gender, (c) age and (d) parental deployment to a combat zone versus non-combat zone. A two-way MANOVA was conducted to examine the impact of deployment status and gender on psychosocial functioning, as measured by the five factors of the SDQ. Deployment status and gender served as the

independent variables with emotional symptoms, conduct problems, hyperactivity/inattention, peer problems, and prosocial behavior as the dependent variables. The test of homogeneity of variance-covariance matrices was met due to the fact that Box's Test of Equality of Covariance Matrices was not statistically significant, $p = .184$. This suggests equivalence of covariance matrices. The resulting MANOVA indicated that the main effect of deployment on the set of dependent variables was statistically significant, Wilks' Lambda = .949, $F(5, 357) = 3.799$, $p = .002$. The effect size (partial eta squared = .051) was medium and the power for the test was good at .937. Similarly, the main effect of gender on the set of dependent variables was statistically significant, Wilks' Lambda = .920, $F(5, 357) = 6.227$, $p = .000$, with a moderate effect size (partial eta squared = .080) and extremely good power at .996. However, the interaction of deployment status and gender on the set of dependent variables was not statistically significant, Wilks' Lambda = .980, $F(5, 357) = 1.461$, $p = .202$. As a result, the relationship between deployment status and psychosocial functioning did not vary according to gender.

Given that deployment status and gender demonstrated statistically significant mean differences on the set of dependent variables, univariate ANOVA follow-up tests were examined to identify where the groups actually differed. Levene's tests were not significant for the five dependent variables, suggesting homogeneity of variance assumption was met in the five cases. Since a number of separate analyses are being examined, it is suggested that a higher alpha level is set in order to reduce the chance of a Type I error (i.e. finding a significant result when there is not one) (Tabachnick & Fidell, 2007). Using a Bonferroni adjustment, the alpha level of .05 was divided by 5

(dependent variables), giving a new alpha level of .01. The between-subjects tests revealed that emotional symptoms were significantly different between children experiencing a parent deployed versus children not experiencing a parent deployed, $F(1, 361) = 13.268, p = .000$. An inspection of the mean scores indicated that children with a parent deployed demonstrated more emotional symptoms ($M = 4.455$) than children without a parent deployed ($M = 3.488$). Moreover, the between-subjects tests determined that males and females significantly differed with regards to conduct problems, $F(1, 361) = 7.585, p = .006$, and hyperactivity/inattention, $F(1, 361) = 17.176, p = .000$. Males ($M = 2.655$) exhibited more conduct problems compared to females ($M = 2.040$), and males ($M = 5.492$) demonstrated more hyperactivity/inattention compared to females ($M = 4.324$). Table 5 presents the results of the MANOVA and the univariate ANOVA follow-up tests with deployment status and gender as the independent variables and emotional symptoms, conduct problems, hyperactivity/inattention, peer problems, and prosocial behavior as the dependent variables. Refer to Table 6 for the means of the analysis.

MANOVAs were also used to investigate whether differences in psychosocial functioning exist with regards to age. Based on the two versions of the SDQ (4 to 10 year-olds and 7 to 11 year-olds), the first MANOVA examined the difference in psychosocial functioning between younger and older children. The five factors of the SDQ served as the dependent variables with age and deployment status as the independent variables. Box's Test of Equality of Covariance Matrices was not statistically significant, $p = .134$, suggesting that the assumption of homogeneity of variance-covariance matrices was met. The main effect of deployment status on the

combined dependent variables was statistically significant, Wilks' Lambda = .963, $F(5, 357) = 2.732$, $p = .019$, with a small to medium effect size (partial eta squared = .037) and good power at .821. The main effect for age on the set of dependent variables was also statistically significant, Wilks' Lambda = .912, $F(5, 357) = 6.901$, $p = .000$, indicating that children's psychosocial functioning did differ depending upon whether the child was younger (4 to 10 years-old) or older (11 to 17 years-old). The effect size (partial eta squared = .088) was moderate and the power for the test was extremely good at .998. Furthermore, the interaction between deployment status and age on the five factors of the SDQ was not statistically significant, Wilks' Lambda = .977, $F(5, 357) = 1.671$, $p = .141$.

Next, univariate ANOVA follow-up tests were used to isolate the sources of the multivariate effects for deployment status and age. Levene's Test of Equality of Error Variances was not significant for emotional symptoms, conduct problems, and hyperactivity/inattention. However, Levene's tests were significant for peer problems and prosocial behavior, indicating that the assumption of equality of variance was violated in these two cases. As a result, Tabachnick and Fidell (2007) suggest setting a more conservative alpha level, such as .025 or .01, for determining significance for these variables in the univariate F-tests. Furthermore, due to multiple testing with 5 dependent variables, it is beneficial to utilize a Bonferroni adjustment (dividing the alpha level by 5). Consequently, the alpha level was set to .01 for emotional symptoms, conduct problems, and hyperactivity/inattention (.05 divided by 5). With regards to peer problems and prosocial behavior, the alpha level was adjusted twice and results were only considered significant if the probability value was less than .005 (.025

divided by 5). Examination of the between-subjects test revealed that emotional symptoms, $F(1, 361) = 6.973, p = .009$, were significantly different between children with a parent deployed compared to children without a parent deployed. Children experiencing parental deployment exhibited more emotional symptoms ($M = 4.372$) than children not experiencing parental deployment ($M = 3.617$). Further investigation of the between-subjects tests demonstrated that younger (4 to 10 years-old) and older (11 to 17 years-old) children significantly differed in the areas of peer problems, $F(1, 361) = 16.335, p = .000$, and prosocial behavior, $F(1, 361) = 9.861, p = .002$. Older children exhibited more peer problems ($M = 2.935$) and less prosocial behavior ($M = 7.151$) compared to younger children ($M = 2.030$ and $M = 7.853$). Refer to Tables 7 and 8 for the results of the MANOVA.

A final two-way MANOVA was conducted in order to examine the effect of age according to approximate stages of development. Children's ages were divided into preschool (4 to 6 years-old), school-age (7 to 12 years-old), and adolescence (13 to 17 years-old). Deployment status and age by developmental stages served as the independent variables with the five factors of the SDQ as the dependent variables. Similar results to the preceding MANOVA (younger vs. older children) were obtained. The assumption of homogeneity of variance-covariance matrices was met given that Box's Test of Equality of Covariance Matrices was not significant, $p = .554$. There was a statistically significant difference for deployment status on the combined dependent variables, Wilks' Lambda = .948, $F(5, 355) = 3.914, p = .002$, with a medium effect size (partial eta squared = .052) and good power at .944. A significant main effect was also found for age by developmental stages, Wilks' Lambda = .845, $F(10, 710) = 6.231$,

$p = .000$, with a moderate effect size (partial eta squared = .081) and strong power at 1.000. As a result, children's levels of psychosocial functioning did differ in terms of age when divided by developmental stages. However, a statistically significant interaction effect was not found between deployment status and age by developmental stages, Wilks' Lambda = .966, $F(10, 710) = 1.243$, $p = .259$, revealing that the relationship between deployment status and psychosocial functioning does not vary according to age by developmental stages.

Again, univariate ANOVA follow-up tests were examined since significant main effects were found for deployment status and age by developmental stages on the five factors of the SDQ. Equal variances were assumed for emotional symptoms, conduct problems, hyperactivity/inattention, and peer problems given that Levene's tests were not significant. Yet, Levene's test was significant for prosocial behavior. An alpha level of .01 (Bonferroni adjustment) was used for emotional symptoms, conduct problems, hyperactivity/inattention, and peer problems to reduce the chance of a Type I error due to multiple analyses. Moreover, to account for the violation of Levene's test as well as the separate analyses, the alpha level for prosocial behavior was adjusted twice and set to .005 (Tabachnick & Fidell, 2007). Examination of the between-subjects tests showed that children with a parent deployed significantly differed from children without a parent deployed in the areas of emotional symptoms, $F(1, 359) = 11.877$, $p = .001$, and prosocial behavior, $F(1, 359) = 8.603$, $p = .004$. Children experiencing parental deployment demonstrated more emotional symptoms ($M = 4.402$) and less prosocial behavior ($M = 7.210$) compared to children not experiencing parental deployment ($M = 3.448$ and $M = 7.840$). In addition, significant differences were found

between age by developmental stages for peer problems, $F(2, 359) = 7.064, p = .001$, and prosocial behavior, $F(2, 359) = 8.113, p = .000$. Further inspection of the mean scores indicated that adolescents ($M = 2.926$) exhibited higher levels of peer problems than school-age ($M = 2.347$) and preschool ($M = 1.860$) children. Moreover, school-age children ($M = 8.066$) demonstrated more prosocial behaviors compared to preschool children ($M = 7.482$) and adolescents ($M = 7.027$). The complete MANOVA results are presented in Table 9 and 10.

In order to assess whether significant differences exist between parental combat status (deployment to a combat zone vs. non-combat zone) and psychosocial functioning, a one-way MANOVA was utilized. As mentioned previously, 126 participants were deployed to a combat zone, while 28 participants were deployed to a non-combat zone. “Nonorthogonal design refers to any experimental design in which the numbers of observations are not equal in each and every cell” (Appelbaum & Cramer, 1974, p. 335). It is important to note that although the number of participants in each group is quite different, research purports that there is no logical difference between orthogonal and nonorthogonal analysis of variance (Appelbaum & Cramer, 1974). Consequently, a one-way MANOVA is an appropriate statistical analysis to examine this hypothesis. Combat status served as the independent variable with the five factors of the SDQ as the dependent variables. Box’s Test of Equality of Covariance Matrices was not significant, $p = .905$. The main effect of combat status on the set of dependent variables was not statistically significant, $F(5, 148) = .420, p = .834$, indicating that children’s psychosocial functioning did not differ according to combat status. Given that a significant mean difference was not found, univariate ANOVA

follow-up tests were not examined. See Table 11 for the results of the one-way MANOVA.

Overall, the first hypothesis received mixed support. Children's psychosocial functioning did differ according to deployment status, gender, and age. In contrast, children's psychosocial functioning did not differ by combat status. It is important to note that no significant interactions were found. In other words, changes in children's psychosocial functioning over levels of deployment status (parent deployed/parent not deployed) did not depend on the level of age (younger/older and preschool/school-age/adolescence) gender (boys/girls), or combat status (deployed to a combat zone/deployed to a non-combat zone).

Hypothesis Two

The second hypothesis predicted that females with a spouse deployed would demonstrate higher levels of perceived stress and marital dissatisfaction compared to females without a spouse deployed. In other words, it was predicted that participants experiencing spousal deployment would have significantly higher scores on the Perceived Stress Scale (PSS) and lower scores on the Kansas Marital Satisfaction Scale (KMSS) compared to participants not experiencing spousal deployment. A one-way MANOVA was conducted with deployment status as the independent variable and levels of perceived stress and marital satisfaction as the dependent variables. The homogeneity of variance-covariance matrices assumption was not violated due to the fact that Box's Test of Equality of Covariance Matrices was not significant, $p = .020$. There was a statistically significant difference between participants with a spouse deployed and participants without a spouse deployed on the combined dependent

variables, Wilks' Lambda = .948, $F(2, 349) = 9.569$, $p = .000$. The effect size (partial eta squared = .052) was medium and the power for the test was very good at .980.

Given the significant main effect for deployment status, the between-subjects tests were utilized to consider the dependent variables separately. Levene's test was not significant for PSS scores, $p > .05$, but was significant for KMSS scores, $p < .05$.

Consequently, the alpha level for KMSS scores was set to a more conservative level of .01 to determine significance in the univariate ANOVA follow-up tests (Tabachnick & Fidell, 2007). Females with a spouse deployed demonstrated significantly different scores on the PSS compared to females without a spouse deployed, $F(1, 350) = 17.828$, $p = .000$. On the other hand, females experiencing spousal deployment did not differ significantly on KMSS scores from females not experiencing spousal deployment, $F(1, 350) = .138$, $p = .710$. Consequently, the second hypothesis achieved mixed support. Inspection of the mean scores indicated that participants with a spouse deployed perceived their lives as more stressful ($M = 20.328$) compared to participants without a spouse deployed ($M = 17.240$). These results correspond to data gathered from the demographic questionnaire. Of the 154 participants experiencing deployment, the majority denoted that their partner's deployment was a source of stress, 138 (89.0%).

Although KMSS scores did not differ according to deployment status, it is interesting to note that overall participants reported satisfaction in their marriages. Crane, Middleton, and Bean (2000) utilized the KMSS to distinguish between the martially distressed and nondistressed. The researchers concluded that a total of 17 or above on the KMSS indicates that the individual is nondistressed, and a score of 16 or below indicates some degree of marital distress. Participants with a spouse deployed

had a mean score of 17.292 on the KMSS, while participants without a spouse deployed exhibited a KMSS mean score of 17.111. Refer to Table 12 for the results of the MANOVA addressing the second hypothesis.

Hypothesis Three

The third hypothesis predicted that children whose mothers endorsed higher levels of perceived stress and marital dissatisfaction would demonstrate greater psychosocial functioning difficulties. A simultaneous multiple regression analysis was conducted to explore the predictive ability of a set of independent variables (perceived stress and marital dissatisfaction as measured by PSS and KMSS scores) on one continuous dependent variable (psychosocial functioning as measured by the total SDQ). Results indicate that PSS scores are positively and significantly correlated with total SDQ scores, $p < .05$. Therefore, as mothers' levels of perceived stress increase, their children's psychosocial functioning difficulties increase. On the other hand, KMSS scores are negatively correlated with total SDQ scores, and this relationship is not significant, $p > .05$.

The coefficient of determination, R square = .189, provides the proportion of variance in psychosocial functioning explained by the set of predictors. Perceived stress and marital dissatisfaction explain 18.9% of the variance in psychosocial functioning, and this proportion of variance is statistically significant, $F(2, 351) = 40.594, p = .000$. Next, it is important to know which of the variables (perceived stress or marital dissatisfaction) contributed to the prediction of the dependent variable (psychosocial functioning) (Pallant, 2007). It is evident through examination of the standardized coefficients that PSS scores make the strongest unique contribution to

explaining psychosocial functioning (beta = .435), while KMSS scores make much less of a contribution (beta = .001). Further investigation indicates that PSS scores make a statistically significant unique contribution to the prediction of psychosocial functioning ($p < .05$), whereas KMSS scores do not ($p > .05$).

These results are further supported by inspecting the semipartial correlation coefficients. The PSS scores have a semipartial correlation coefficient of .428. When squared, this value equals 18.3, indicating that PSS scores uniquely explain 18.3% of the variance in children's psychosocial functioning. Thus, the value of R square would drop significantly if PSS scores were not included in the model. KMSS scores have a semipartial correlation coefficient of .001, which equals .000 when squared. As a result, KMSS scores do not explain any of the variance in children's psychosocial functioning.

The value of adding the squared semipartial correlation coefficients (.183 + .000 = .183) does not equal the total R square, .189. This is due to the fact that squared semipartial correlation coefficients represent only the unique contribution of each independent variable to the total variance of the dependent variable, with any shared variance taken out (Tabachnick & Fidell, 2007). The total R square, .189, expresses the unique variance explained by each independent variable as well as the shared variance (Pallant, 2007). There is a small correlation ($r = -.175$) between the two independent variables (PSS scores and KMSS scores), and thus, a slight amount of shared variance is partialled out when both are included in the model. Table 13 presents the results of the simultaneous multiple regression.

Like the previous two hypotheses, the third hypothesis received mixed support. Children whose mothers endorsed higher levels of perceived stress demonstrated greater psychosocial functioning difficulties, yet children whose mothers endorsed higher levels of marital dissatisfaction did not demonstrate greater psychosocial functioning difficulties. The results indicate that mother's perceived stress emerged as a statistically significant predictor of children's psychosocial functioning, whereas mother's marital dissatisfaction did not emerge as a statistically significant predictor of children's psychosocial functioning.

Chapter Five

Discussion

The current Global War on Terror is uniquely characterized by lengthy and multiple deployments, shorter stays at home between deployments, and greater risk of death, injury, and psychological problems among service members (Chandra, Burns, Tanielian, Jaycox, & Scott, 2008; Park, 2011). Yet, service members are not the only ones affected by deployment. Many spouses and children also experience increased stress, both cognitive and behavioral changes, related to the deployment of a loved one (Jensen et al., 1986; Chandra et al., 2008). “A common saying in the military is that when one person joins, the whole family serves” (Park, 2011, p. 65).

Lincoln et al. (2008) noted that there are considerable holes in our understanding of the psychological and social effects of the Global War on Terror. There is a growing concern about how parental deployments to Iraq and Afghanistan affect the long-term social, emotional, and behavioral outcomes of military children (Chartrand & Spiegel, 2007). Sheppard et al. (2010) reported that despite this concern, few recent empirical investigations study the impact of deployment on children and families. Consequently, the purpose of the current study was to address an important gap in the literature regarding how parental deployment affects children’s psychosocial functioning. Furthermore, the present study examined the degree to which parental stress and marital satisfaction account for variation in children’s psychosocial functioning.

Previous research demonstrates the significant impact of parental deployment on children’s mental health and behavior (Applewhite & Mays, 1996; Chandra et al., 2010; Flake et al., 2009; Hillenbrand, 1976; Hunter 1982; Jensen et al., 1996; McCubbin et

al., 1975; Rosen et al., 1993; Sheppard et al., 2010). “Parental deployment can affect physical health, academic performance, behavior problems, depression, and anxiety of military children” (Park, 2011, p. 67). The results of the current study are consistent with the literature given that children’s psychosocial functioning did differ according to parental deployment status. Children experiencing parental deployment demonstrated higher levels of psychosocial functioning difficulties compared to children not experiencing parental deployment, specifically in the area of emotional symptoms. Children with a parent deployed exhibited significantly more emotional symptoms (i.e. easily scared, unhappy, tearful, and many worries) compared to children without a parent deployed. These results correspond to the findings by Jensen et al. (1996), which concluded that children experiencing parental deployment during Operation Desert Storm demonstrated modestly higher levels of child depression compared to children not experiencing parental deployment. Similarly, Rosen et al. (1993) found that children whose parent deployed with the Army during Operation Desert Storm exhibited more internalizing behavior, such as nightmares and sadness, relative to children whose parent was not deployed.

Interestingly, the means for the five factors of the SDQ were all in the predicted direction, even though emotional symptoms was the only construct to achieve statistical significance. Examination of the means demonstrated that children with a deployed parent had higher levels of emotional symptoms, conduct problems, hyperactivity/inattention, peer problems, and lower levels of prosocial behavior compared to children without a parent deployed. In fact, both conduct problems and prosocial behavior would have been significant if the alpha level correction (Bonferroni

adjustment) had not been taken into account. Looking at the constructs in this manner may be capitalizing on chance; however, the results do match with theoretically meaningful predictions (Applewhite & Mays, 1996; Hillenbrand, 1976; Hunter, 1982, Jensen et al., 1996; McCubbin et al., 1975; Paden & Pezor, 1993; Rosen et al., 1993; Yeatman, 1981).

Although the current study found a significant difference on the psychosocial functioning of children by deployment status, the effect size of this difference was medium (partial eta squared = .051). The effect size, also referred to as strength of association, denotes the relative magnitude of the differences between means (Pallant, 2007). The fact that the effect size is not large may be due to a possible reporting bias by parents. The study asked parents with more than one child to answer the SDQ based on the child in their family who exhibited the most concern. As a result, parents experiencing deployment may have wanted to portray their child in a positive manner, resulting in underreporting. Given the stressors of deployment, it may be harder for parents to admit/disclose difficulties with their child. Similarly, when researching the difference between children's internalizing/externalizing behavior and parental deployment status, Kelley et al. (2001) noted possible reporting bias. Childcare providers (not parents) reported that children in the deployment group exhibited slightly higher levels of externalizing behaviors (i.e. aggressiveness and noncompliance).

In addition to potential reporting bias by parents, the less than expected difference between the psychosocial functioning of children and deployment may be due to children's resiliency. Park (2011) emphasized that although military deployment poses risks, it is equally important to acknowledge that many military children and

families exhibit resilience and growth throughout this time. “During the deployment of a family member, parents report that their children are closer to family and friends, and that they are more responsible, independent, and proud” (Park, 2011, p. 68).

Researchers have recently concluded that military families appear to be robust and quite adaptive (Cozza et al., 2005; Ryan-Wenger, 2001). “In one sense, the unique stressors faced by military families may make them a special population but not an at-risk population in general” (Sheppard et al., 2010, p. 604). The difference in children’s psychosocial functioning and deployment status could in fact be minimal, and thus, mothers may have overreported their child’s symptoms in the current study.

The interaction effect between deployment status and gender was not significant in the present study. Therefore, the relationship between deployment status and psychosocial functioning did not vary according to children’s gender. However, a significant gender difference was found on psychosocial functioning. Males (boys) exhibited more psychosocial functioning difficulties compared to females (girls). Further investigation revealed that boys demonstrated more conduct problems and hyperactivity/inattention relative to girls. Although not significant, it is interesting to note that boys with a parent deployed had higher levels of conduct problems, hyperactivity/inattention, and peer problems compared to girls with a parent deployed. Moreover, girls experiencing parental deployment had higher levels of emotional symptoms compared to boys experiencing parental deployment. These results are consistent with the literature, which reported an increase in tearfulness/sadness for girls and discipline problems for boys during deployment (Jensen et al., 1996; Rosen et al., 1993). In fact, researchers have noted that the effects of deployment are more

significant for boys than girls, which may be due to boys' greater vulnerability to the absence of a male figure (Blount et al., 1992; Paden & Pezor, 1993). This research correlates with the findings of the present study given that boys were rated higher than girls on three of the four constructs that constitute difficulties in psychosocial functioning.

The current study examined age using younger (4 to 10 years-old) and older (11 to 17 years-old) children and investigated age by developmental stages (preschool, school-age, and adolescence). The results for both younger/older children and developmental stages demonstrated no significant interactions, revealing that the relationship between deployment status and psychosocial functioning does not vary according to age. However, statistically significant age differences on psychosocial functioning were found in the areas of peer problems and prosocial behavior. Older children (11 to 17 years-old) exhibited more peer problems and less prosocial behavior compared to younger children (4 to 10 years-old). In addition, adolescents demonstrated higher levels of peer problems compared to school-age and preschool children, and school-age children evidenced more prosocial behaviors compared to preschool children and adolescents. Paden and Pezor (1993) noted that adolescents are struggling with identity issues, which may emerge as anger, social withdrawal, and aggression. It is likely that these characteristics lead to problems with peers. On the other hand, school-age children are working towards increasing their relationships outside of the family. Ladd and Price (1987) pointed out that prosocial behavior facilitates peer relationships and successful transitions to school, which corresponds to the school-age children's higher levels of prosocial behavior in the present study.

Overall, similar patterns in age were found for children with or without a deployed parent.

Previous literature cites mixed results regarding the impact of age and deployment status. Chartrand et al. (2008) found an age by deployment interaction. Specifically, children aged 3 years or older experiencing parental deployment had significantly higher levels of externalizing behavior compared to same-age children not experiencing parental deployment and children younger than 3, regardless of deployment status. On the other hand, Flake et al. (2009) reported that children's age was not a significant predictor of overall psychosocial functioning. Rather, parents' educational level was the demographic variable that significantly predicted an increase in psychosocial morbidity (physical, emotional, or cognitive dysfunction).

Peebles-Kleiger and Kleiger (1994) suggested that wartime deployment is a "catastrophic" stressor to children and families. Uncertainty surrounding a parent's safety, an increase in responsibilities, and possible relocation are challenges faced by children during wartime deployment (Park, 2011). The current study did not find a significant difference between the psychosocial functioning of children experiencing parental deployment to a combat zone compared to children with a parent deployed to a non-combat zone. These results are inconsistent with previous studies that found differences in children's behavior as a function of type of deployment (Kelley, 1994). However, most of the wartime deployment research has focused on the impact of Operation Desert Storm or earlier conflicts (Cozza et al., 2005). Compared to prior deployments for the U.S. military, deployments to Iraq and Afghanistan have very different characteristics (Chandra et al., 2008). "The military operations under way in

Iraq and Afghanistan require more-intensive and more-prolonged use of U.S. military power than at any time since the Vietnam War” (Hozek, Kavanagh, & Miller, 2006, p. iii). This long period of war has involved urban conflict, suicide bombers, and roadside bombs, leading to the highest number of casualties for any operation since Vietnam (Hozek et al., 2006). Children’s understanding of their parent’s combat status is influenced by a variety of factors, such as media coverage, school and community environment, parenting, etc. Due to the fact that the characteristics for the wars in Iraq and Afghanistan are unique, it appears that children with a deployed parent experience psychosocial functioning difficulties regardless of combat status.

The results of the present study concluded that females with a spouse deployed perceived their lives as more stressful relative to females without a spouse deployed. This is expected given that separations are spouses’ greatest dissatisfaction with military life (Black, 1993). Mansfield et al. (2010) reported that wives of deployed Army soldiers exhibited an increased risk for depressive, anxiety, sleep, and acute stress reaction and adjustment disorders. Yet, Schumm, Bell et al. (1996) concluded that experiencing stressful conditions during deployment does not necessarily lead to marital dissatisfaction. The current study did not find a difference in marital satisfaction for spouses with or without a partner deployed. In fact, participants with a spouse deployed reported an overall satisfaction with their marriage. These results coincide with the study conducted by Schumm, Bell et al., which found that spouses were able to maintain or improve their marital satisfaction despite undergoing stressful events.

Moreover, the current study’s results demonstrated that mothers’ perceived stress was a significant predictor of children’s psychosocial functioning. Children

whose mothers reported higher levels of perceived stress exhibited greater psychosocial functioning difficulties. These results are consistent with research conducted by Flake et al. (2009), which concluded that parental stress was the most significant predictor of child psychosocial functioning during wartime deployment. However, a limitation of the study by Flake et al. was the lack of a nondeployed control group. Since the current study included a nondeployed group, the higher rates of parental stress can be attributed to deployment. In contrast to perceived stress, marital dissatisfaction was not a significant predictor of children's psychosocial functioning. These results are inconsistent with earlier research that highlighted the importance of marital quality in the prediction of children's psychological adjustment (Howes & Markman, 1989; Katz & Gottman, 1993). Fishman and Meyers (2000) examined the relationship between mothers' marital satisfaction and child behavior problems. Parents who endorsed low levels of marital satisfaction were less involved with their children, and subsequently, these children exhibited greater psychological distress. Nevertheless, the study by Fishman and Meyers did not examine the marital satisfaction of military wives during deployment, and researchers have emphasized that the association between deployment and marital problems is inconsistent (Allen et al., 2010; Karney & Crown, 2007).

Given that marital satisfaction did not differ according to deployment status and did not emerge as a significant predictor of child psychosocial functioning, it appears that marital satisfaction is more robust than expected. "A military separation marks the possible starting point for a process of stress management and resiliency that can strengthen, not weaken, in the face of change" (Wiens & Boss, 2006, p. 25). Nondeployed spouses today likely have a better understanding of what to expect during

deployment and how to prepare. Weins and Boss (2006) reported that in order to successfully manage deployment, military families need to acknowledge that they are responsible for their own level of preparedness. This includes financial planning, updating legal documents and wills, etc. Furthermore, the researchers emphasized that regular communication with the deployed service member is a key factor to managing the stress of separation. The recent advances in technology, such as face-to-face communication via webcam, enable spouses to keep their deployed partner psychologically present although they are physically absent. Moreover, in January 2011, a government wide plan to strengthen military family support was initiated with agencies uniting to offer new resources and support programs, such as an increase in behavioral health care services (Wilson, 2011). As a result, marital satisfaction may be affected less by current deployments given our greater understanding of how to prepare for deployments stressors, advances in technology, and an increase in resources.

Implications

John Bowlby's attachment theory emphasized that children strive to maintain a relationship with a responsive attachment figure, providing them with a sense of security. Without this security, children experience acute reactions, such as anxiety and depression (Applewhite & Mays, 1996). The current study adheres to Bowlby's attachment theory given that children with a deployed parent exhibited greater levels of psychosocial functioning difficulties compared to children without a parent deployed. As a result, efforts must be made to increase a child's sense of security during deployment. Blount et al. (1992) noted that this can be challenging due to the increased responsibilities for the remaining parent, which subsequently, decreases time available

to spend with children. Nevertheless, research has demonstrated that flexible gender roles, active coping strategies, and community and social supports serve as protective factors during a military separation (Wiens & Boss, 2006). For example, Jensen and Shaw (1996) reported that playing an active role, through activities such as emailing and letter writing, enhances a child's internal locus of control. Perhaps an active role enables the child to develop a stronger sense of security, mediating the effects of deployment.

In addition to supporting Bowlby's attachment theory, the current study emphasized the important relationship between the nondeployed parent's perceived stress and children's psychosocial functioning. Researchers have proposed an indirect pathway by which parental psychological distress impacts children's emotional and behavioral symptoms through impairments in parent-child interactions (Lester et al., 2010; Palmer 2008). Treatment implications derived from this pathway include efforts to ameliorate negative parent-child interactions (Palmer, 2008). For example, parenting classes and psychoeducation may help to reduce parental stress, which in turn decreases child distress.

Overall, mental health professionals, health care providers, community leaders, and military unit representatives need to be educated about the issues pertaining to children and families during deployment. It would be beneficial to utilize established screening methods in order to identify families that require assistance. Both the PSS and SDQ are short, reliable tools that could easily be used by providers. Once identified, efficacious interventions that focus on decreasing parental stress, developing

coping skills for children, and enhancing social support networks need to be implemented.

Future Research

Given that the majority of research on deployment has examined the impact of prior conflicts rather than the current wars in Iraq and Afghanistan, additional research is needed to further understand how the unique characteristics of the Global War on Terror affect military children and families. Due to possible reporting bias by parents, future studies should examine the perspectives of individuals included in the military family's larger social system, such as extended family and teachers. In fact, research has demonstrated negative effects of deployment on children's academic performance, as measured by lower test scores (Engel, Gallagher, & Lyle, 2010; Lyle, 2006).

Academic performance appears to be significantly affected by parental deployment and was not investigated in the current study. Moreover, additional studies should assess children's experiences and perspectives, especially due to the relationship between parental stress and children's psychosocial functioning as found in the current study and earlier research (Flake et al., 2009). It would be interesting to compare the perspective of the nondeployed parent on their child's psychosocial functioning with the child's perspective of his/her own psychosocial functioning.

Furthermore, research has tended to focus on the risk factors and negative effects of deployment on the family. Park (2011) noted that in order to provide effective services, we need to have an understanding of the challenges as well as the strengths. Earlier studies demonstrated that military children function as well or better than civilian children on indices of health, well-being, and academic achievement (Park,

2011). Jensen, Xenakis, Wolf, and Bain (1991) reported that military children did not exhibit an increase in psychopathology or elevated symptomatology compared to their civilian counterparts. Therefore, it would be beneficial to incorporate resiliency measures in future studies. For instance, the Resiliency Scales for Children and Adolescents – A Profile of Personal Strengths (RSCA), assesses a child's sense of optimism and self-efficacy, vulnerability to stress, and sense of relatedness to others (Prince-Embury, 2008). By examining resiliency, a more comprehensive approach to supporting military families is likely to be achieved through incorporating both strength-based and problem-focused interventions.

In addition to researching resiliency, combat status (deployment to a combat zone versus non-combat zone) requires further investigation. Although this study did not find combat status to be significant with regards to children's psychosocial functioning, future research should address other factors that mediate the impact of combat status. For instance, children's exposure to and understanding of the Global War on Terror may be influenced by media coverage, communication with the deployed parent, and available social support networks. In addition, it would be interesting to examine the relationship between deployment status and children's psychosocial functioning while controlling for other potentially important variables, such as service member's branch of service (i.e. Army, Navy, Marine Corps, Air Force, or Coast Guard), rank (i.e. Officer or Enlisted), and component (i.e. Reserves, National Guard, or Active Duty). For example, in a pilot study, Chandra et al. (2008) found that the nondeployed spouse of an active duty service member cited increases in child

responsibilities and roles, whereas the nondeployed spouse of a reserve service member reported more child loneliness and disengagement.

Lastly, it would be beneficial to examine marital satisfaction in a more detailed manner. Although the KMSS is a practical measure of marital adjustment, it consists of only three items. This measure does not ask about marital conflict and discord, which has been linked to child behavior problems (Emery, 1982). Future research should examine conflict based marital dissatisfaction and the impact this has on military children. Ultimately, further inquiry in various directions would help enhance our understanding of military children and families.

Limitations

Although the present study offers important information regarding the impact of deployment and children's psychosocial functioning, several limitations should be noted. The primary limitation to this study is the sample utilized, which is not representative of military families in terms of branch of service and race/ethnic identification. Although the sample size was robust, of the five branches in the military, the majority of participants were in the Army (56.7%) and Navy (38.1%). In addition, 88.2% of the participants identified themselves as White/Caucasian. Consequently, the results of the study need to be interpreted with caution and may not generalize to the military community as a whole.

Furthermore, since participation was voluntary, spouses who completed the questionnaires may not represent all deployed and nondeployed families. Mothers who took the initiative to respond to the study could be more involved in and active with the military community, possibly influencing perceptions of their child's psychosocial

functioning. In addition, given that the study asked mothers to answer questions based on the child who was demonstrating the most concern, several children within these families were not included. Lastly, this study assumed the assessment of traditional families with mothers as the nondeployed spouse and fathers as the deployed service member. Considering the diversity of military families, valuable information may have been overlooked since the study only focused on nondeployed mothers' perspectives. Although Applewhite and Mays (1996) did not find a significant difference in psychosocial functioning between children experiencing maternal versus paternal military separation, the unique characteristics of the wars in Iraq and Afghanistan suggest that their results cannot generalize to today's military children and families. In fact, the researcher was contacted by a nondeployed father who questioned the study's limitation of only assessing nondeployed mothers. Clearly, more research is needed to address these limitations.

Conclusion

“Compiling and describing information related to deployment and child and family outcomes are worthwhile endeavors” (Sheppard et al., 2010, p. 607). The military is a unique population that deserves the attention and respect of researchers to examine the challenges and strengths of military children and families. The current study provided findings that both supported and differed from previous research, emphasizing the need for continued work in this area. Overall, the ultimate goal is to enhance our understanding of military families in order to better serve those who are serving our country.

Table 1

Demographic Information

Variable	Female Participants		Male Spouses	
	Frequency	Percent	Frequency	Percent
Age				
18 – 24	11	3.0	10	2.7
25 – 29	45	12.3	29	8.0
30 – 39	224	61.4	204	55.9
40+	85	23.3	122	33.4
Ethnicity				
American Indian/Alaskan Native	4	1.1	5	1.4
Asian/Asian	5	1.4	5	1.4
American/Pacific Islander				
Black/African	7	1.9	10	2.7
American/Afro-Caribbean				
White/Caucasian, Not of Hispanic origin	322	88.2	314	86.0
Hispanic/Latino	11	3.0	15	4.1
Multiracial/Other	16	4.4	14	3.8
Missing	0	0	2	.5
Military Branches				
Army			207	56.7
Air Force			13	3.6
Navy			139	38.1
Marine			1	.3
Coast Guard			2	.5
Missing			3	.8
Military Status				
Reservists			208	57.0
National Guard			5	1.4
Full-Time/Active Duty			148	40.5
Missing			4	1.1
Deployment Status				
Deployed			156	42.7
Not Deployed			209	57.3
Combat Status				
Combat Zone			126	80.8
Non-Combat Zone			28	17.9
Missing			2	1.3

Table 2

Frequencies of Deployment

Months	Total Length of Deployment		Current Time In Deployment	
	Frequency	Percent	Frequency	Percent
0 (less than 1 month)	----	----	4	2.6
1	1	.7	31	20.4
2	2	1.3	36	23.7
3	1	.7	20	13.2
4	3	2.0	8	5.3
5	1	.7	6	3.9
6	11	7.2	3	2.0
7	4	2.6	8	5.3
8	4	2.6	7	4.6
9	4	2.6	5	3.3
10	----	----	4	2.6
11	2	1.3	17	11.2
12	96	62.7	2	1.3
13	13	8.5	----	----
14	6	3.9	----	----
15	3	2.0	----	----
16	----	----	----	----
17	----	----	----	----
18	1	.7	----	----
19	----	----	----	----
20	----	----	----	----
21	----	----	1	.7
22	----	----	----	----
23	----	----	----	----
24	1	.7	----	----

Table 3

Demographic Information of Children Selected for the SDQ

Variable	Children Selected for SDQ	
	Frequency	Percent
Gender		
Male	192	52.6
Female	173	47.4
Age		
4	44	12.1
5	29	7.9
6	43	11.8
7	33	9.0
8	26	7.1
9	33	9.0
10	30	8.2
11	21	5.8
12	11	3.0
13	22	6.0
14	22	6.0
15	18	4.9
16	16	4.4
17	17	4.7
Ethnicity		
American Indian/Alaskan Native	7	1.9
Asian/Asian	4	1.1
American/Pacific Islander		
Black/African	7	1.9
American/Afro-Caribbean		
White/Caucasian, Not of Hispanic origin	303	83.0
Hispanic/Latino	8	2.2
Multiracial/Other	36	9.9

Table 4

Means (M), Standard Deviations (SD), and Correlations for the Study Variables

Variable	<i>M</i>	<i>SD</i>	1	2	3	4	5	6	7
1. Emotional Symptoms	3.901	2.614	---						
2. Conduct Problems	2.363	2.141	.371**	---					
3. Hyperactivity/ Inattention	4.938	2.796	.327**	.609**	---				
4. Peer Problems	2.327	2.045	.492**	.424**	.342**	---			
5. Prosocial Behavior	7.653	2.033	-.198**	-.576**	-.374**	-.333**	---		
6. Perceived Stress Scale	18.591	6.969	.340**	.390**	.329**	.239**	-.208**	---	
7. Kansas Marital Satisfaction Scale	17.190	4.529	-.080	-.028	-.054	-.061	.050	-.175**	---

Note. ** Correlation is significant at the 0.01 level (2-tailed)

Table 5

*Multivariate Analysis of Variance**Hypothesis One: Impact of Deployment Status and Gender on Children's Psychosocial Functioning*

	Wilks' Lambda Value	<i>F</i>	<i>p</i>	Partial Eta Squared	Observed Power
Deployment Status	.949	3.799	.002*	.051	.937
Gender	.920	6.227	.000*	.080	.996
Deployment Status x Gender	.980	1.461	.202	.020	.513

Variable	Deployment Status			Gender			Deployment Status x Gender		
	<i>F</i>	<i>p</i>	Partial Eta Squared	<i>F</i>	<i>p</i>	Partial Eta Squared	<i>F</i>	<i>p</i>	Partial Eta Squared
Emotional Symptoms	13.268	.000**	.035	2.717	.100	.007	2.560	.110	.007
Conduct Problems	4.345	.038	.012	7.585	.006**	.021	.006	.937	.000
Hyperactivity/ Inattention	.817	.367	.002	17.176	.000**	.045	.669	.414	.002
Peer Problems	.917	.339	.003	1.927	.166	.005	.286	.593	.001
Prosocial Behavior	5.385	.021	.015	3.353	.068	.009	1.062	.304	.003

Note. * $p < .05$, ** $p < .01$.

Table 6

Multivariate Analysis of Variance

Means for the Impact of Deployment Status and Gender on Children's Psychosocial Functioning

Dependent Variable	Deployment Status		Gender	
	Deployed	Nondeployed	Males	Females
Emotional Symptoms	4.455	3.488	3.719	4.104
Conduct Problems	2.631	2.163	2.655	2.040
Hyperactivity/ Inattention	5.095	4.821	5.492	4.324
Peer Problems	2.449	2.235	2.461	2.177
Prosocial Behavior	7.363	7.870	7.483	7.842

Table 7

Multivariate Analysis of Variance

Hypothesis One: Impact of Deployment Status and Age (4-10 year-olds and 11-17 year-olds) on Children's Psychosocial Functioning

	Wilks' Lambda Value	<i>F</i>	<i>p</i>	Partial Eta Squared	Observed Power
Deployment Status	.963	2.732	.019*	.037	.821
Age	.912	6.901	.000*	.088	.998
Deployment Status x Age	.977	1.671	.141	.023	.578

Variable	Deployment Status			Age			Deployment Status x Age		
	<i>F</i>	<i>p</i>	Partial Eta Squared	<i>F</i>	<i>p</i>	Partial Eta Squared	<i>F</i>	<i>p</i>	Partial Eta Squared
Emotional Symptoms	6.973	.009**	.019	.722	.396	.002	6.116	.014	.017
Conduct Problems	4.323	.038	.012	.058	.809	.000	.130	.719	.000
Hyperactivity/ Inattention	.511	.475	.001	.868	.352	.002	.142	.707	.000
Peer Problems	.906	.342	.003	16.335	.000***	.043	.305	.581	.001
Prosocial Behavior	6.860	.009	.019	9.861	.002***	.027	.482	.488	.001

Note. * $p < .05$, ** $p < .01$, *** $p < .005$.

Table 8

Multivariate Analysis of Variance

Means for the Impact of Deployment Status and Age (4-10 year-olds and 11-17 year-olds) on Children's Psychosocial Functioning

Dependent Variable	Deployment Status		Age	
	Deployed	Nondeployed	4-10 year-olds	11-17 year-olds
Emotional Symptoms	4.372	3.617	3.873	4.116
Conduct Problems	2.657	2.160	2.379	2.437
Hyperactivity/ Inattention	5.022	4.798	5.056	4.764
Peer Problems	2.589	2.376	2.030	2.935
Prosocial Behavior	7.209	7.795	7.853	7.151

Table 9

Multivariate Analysis of Variance

Hypothesis One: Impact of Deployment Status and Age (Preschool, School-Age, and Adolescence) on Children's Psychosocial Functioning

	Wilks' Lambda Value	F	p	Partial Eta Squared	Observed Power
Deployment Status	.948	3.914	.002*	.052	.944
Age	.845	6.231	.000*	.081	1.000
Deployment Status x Age	.966	1.243	.259	.017	.652

Variable	Deployment Status			Age			Deployment Status x Age		
	F	p	Partial Eta Squared	F	p	Partial Eta Squared	F	p	Partial Eta Squared
Emotional Symptoms	11.877	.001**	.032	3.331	.037	.018	1.590	.205	.009
Conduct Problems	4.931	.027	.014	.004	.996	.000	.571	.565	.003
Hyperactivity/ Inattention	.630	.428	.002	3.642	.027	.020	.250	.779	.001
Peer Problems	1.588	.208	.004	7.064	.001**	.038	.121	.886	.001
Prosocial Behavior	8.603	.004***	.023	8.113	.000***	.043	3.038	.049	.017

Note. * $p < .05$, ** $p < .01$, *** $p < .005$.

Table 10

Multivariate Analysis of Variance

Means for the Impact of Deployment Status and Age (Preschool, School-Age, and Adolescence) on Children's Psychosocial Functioning

Dependent Variable	Deployment Status		Age		
	Deployed	Nondeployed	Preschool	School-Age	Adolescence
Emotional Symptoms	4.402	3.448	3.472	4.280	4.024
Conduct Problems	2.660	2.145	2.389	2.412	2.407
Hyperactivity/ Inattention	5.079	4.840	5.529	4.694	4.655
Peer Problems	2.516	2.240	1.860	2.347	2.962
Prosocial Behavior	7.210	7.840	7.482	8.066	7.027

Table 11

Multivariate Analysis of Variance

Hypothesis One: Impact of Combat Status on Children's Psychosocial Functioning

	Wilks' Lambda Value	<i>F</i>	<i>p</i>	Partial Eta Squared	Observed Power
Combat Status	.986	.420	.834	.014	.159

Table 12

Multivariate Analysis of Variance

Hypothesis Two: Impact of Deployment Status on Levels of Perceived Stress and Marital Satisfaction

	Wilks' Lambda Value	F	Sig.	Partial Eta Squared	Observed Power
Deployment Status	.948	9.569	.000*	.052	.980

Variable	Deployment Status			Deployed	Nondeployed
	F	p	Partial Eta Squared	Mean	Mean
Perceived Stress (PSS Scores)	17.828	.000*	.048	20.328	17.240
Marital Satisfaction (KMSS Scores)	.138	.710	.000	17.292	17.111

Note. * $p < .05$

Table 13

*Simultaneous Multiple Regression**Hypothesis Three: The Predictive Ability of Perceived Stress and Marital Satisfaction on Children's Psychosocial Functioning*

Model Summary						
R	R Square	Adjusted R Square	Std. Error of the Estimate	R Square Change	F Change	Sig. F Change
.434	.189	.184	6.51410	.189	40.594	.000

ANOVA					
	Sum of Squares	Df	Mean Square	F	p
Regression	3445.102	2	1722.551	40.594	.000*
Residual	14809.285	349	42.433		
Total	18254.387	351			

Coefficients					
	Unstandardized Coefficients		Standardized Coefficients		
	B	Std. Error	Beta	T	p
Perceived Stress (PSS Scores)	.450	.051	.435	8.874	.000*
Marital Satisfaction (KMSS Scores)	.001	.078	.001	.014	.989

Coefficients					
	95% Confidence Interval for B		Correlations		
	Lower Bound	Upper Bound	Zero-order	Partial	Part
Perceived Stress (PSS Scores)	.350	.549	.434	.429	.428
Marital Satisfaction (KMSS Scores)	-.152	.154	-.075	.001	.001

Note. *p < .05

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Appendix A

Strengths and Difficulties Questionnaire (Ages 4 – 10)

For each item, please mark the box for Not True, Somewhat True or Certainly True. Answer all of the items as best as you can even if you are not absolutely certain. Please give your answers on the basis on your child's behavior **over the last six months**.

1. What is your child's gender? Female Male

2. What is your child's age? _____

3. What is your child's race or ethnic identification? *Please check all that apply.*

<input type="checkbox"/> American Indian/ Alaskan Native	<input type="checkbox"/> Black/African American/Afro-Caribbean	<input type="checkbox"/> Hispanic/Latino
<input type="checkbox"/> Asian/Asian American/Pacific Islander	<input type="checkbox"/> White/Caucasian, not of Hispanic origin	<input type="checkbox"/> Other (Specify): _____ _____

	Not True	Somewhat True	Certainly True
Considerate of other people's feelings	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Restless, overactive, cannot stay still for long	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Often complains of headaches, stomach-aches or sickness	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Shares readily with other children, for example toys, treats, pencils	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Often loses temper	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Rather solitary, prefers to play alone	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Generally well behaved, usually does what adults request	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Many worries or often seems worried	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Helpful if someone is hurt, upset or feeling ill	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

	Not True	Somewhat True	Certainly True
Constantly fidgeting or squirming	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Has at least one good friend	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Often fights with other children or bullies them	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Often unhappy, depressed or tearful	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Generally liked by other children	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Easily distracted, concentration wanders	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Nervous or clingy in new situations, easily loses confidence	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Kind to younger children	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Often lies or cheats	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Picked on or bullied by other children	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Often offers help to others (parents, teachers, other children)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Thinks things out before acting	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Steals from home, school or elsewhere	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Gets along better with adults than with other children	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Many fears, easily scared	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Good attention span, sees chores or homework through to the end	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Appendix B

Strengths and Difficulties Questionnaire (Ages 11 – 17)

For each item, please mark the box for Not True, Somewhat True or Certainly True. Answer all of the items as best as you can even if you are not absolutely certain. Please give your answers on the basis on your child's behavior **over the last six months**.

1. What is your child's gender? Female Male

2. What is your child's age? _____

3. What is your child's race or ethnic identification? *Please check all that apply.*

<input type="checkbox"/> American Indian/ Alaskan Native	<input type="checkbox"/> Black/African American/Afro-Caribbean	<input type="checkbox"/> Hispanic/Latino
<input type="checkbox"/> Asian/Asian American/Pacific Islander	<input type="checkbox"/> White/Caucasian, not of Hispanic origin	<input type="checkbox"/> Other (Specify): _____ _____

	Not True	Somewhat True	Certainly True
Considerate of other people's feelings	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Restless, overactive, cannot stay still for long	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Often complains of headaches, stomach-aches or sickness	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Shares readily with other youth, for example CDs, games, food	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Often loses temper	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Would rather be alone than with other youth	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Generally well behaved, usually does what adults request	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Many worries or often seems worried	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Helpful if someone is hurt, upset or feeling ill	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

	Not True	Somewhat True	Certainly True
Constantly fidgeting or squirming	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Has at least one good friend	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Often fights with other youth or bullies them	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Often unhappy, depressed or tearful	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Generally liked by other youth	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Easily distracted, concentration wanders	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Nervous in new situations, easily loses confidence	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Kind to younger children	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Often lies or cheats	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Picked on or bullied by other youth	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Often offers help to others (parents, teachers, children)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Thinks things out before acting	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Steals from home, school or elsewhere	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Gets along better with adults than with other youth	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Many fears, easily scared	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Good attention span, sees chores or homework through to the end	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Appendix C

Perceived Stress Scale

The questions in this scale ask you about your feelings and thoughts **during the last month**. In each case, you will be asked to indicate by circling *how often* you felt or thought a certain way.

0 = Never 1 = Almost Never 2 = Sometimes 3 = Fairly Often 4 = Very Often

1. In the last month, how often have you been upset because of something that happened unexpectedly?.....0 1 2 3 4
2. In the last month, how often have you felt that you were unable to control the important things in your life?.....0 1 2 3 4
3. In the last month, how often have you felt nervous and “stressed”?.....0 1 2 3 4
4. In the last month, how often have you felt confident about your ability to handle your personal problems?.....0 1 2 3 4
5. In the last month, how often have you felt that things were going your way?.....0 1 2 3 4
6. In the last month, how often have you found that you could not cope with all the things that you had to do?.....0 1 2 3 4
7. In the last month, how often have you been able to control irritations in your life?.....0 1 2 3 4
8. In the last month, how often have you felt that you were on top of things?.....0 1 2 3 4
9. In the last month, how often have you been angered because of things that were outside of your control?.....0 1 2 3 4
10. In the last month, how often have you felt difficulties were piling up so high that you could not overcome them?.....0 1 2 3 4

Appendix D

Kansas Marital Satisfaction Scale

Please read each statement and ask yourself “How much do I agree?” There are no right or wrong answers. The best answer is the one that describes your personal view. Select the response that best indicates how much you agree with each statement.

1. How satisfied are you with your marriage?

Extremely Dissatisfied	Very Dissatisfied	Somewhat Dissatisfied	Mixed	Somewhat Satisfied	Very Satisfied	Extremely Satisfied
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2. How satisfied are you with your husband/wife as a spouse?

Extremely Dissatisfied	Very Dissatisfied	Somewhat Dissatisfied	Mixed	Somewhat Satisfied	Very Satisfied	Extremely Satisfied
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3. How satisfied are you with your relationship with your husband/wife?

Extremely Dissatisfied	Very Dissatisfied	Somewhat Dissatisfied	Mixed	Somewhat Satisfied	Very Satisfied	Extremely Satisfied
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Appendix E

Demographic Information Questionnaire

Please answer the following demographic questions.

Family Information

1. What is your age?

2. What is your race or ethnic identification? *Please check all that apply.*

- | | | |
|--|--|--|
| <input type="checkbox"/> American
Indian/Alaskan
Native | <input type="checkbox"/> Black/African
American/Afro-
Caribbean | <input type="checkbox"/> Hispanic/Latino |
| <input type="checkbox"/> Asian/Asian
American/Pacific
Islander | <input type="checkbox"/> White/Caucasian,
not of Hispanic
origin | <input type="checkbox"/> Other (Specify):
_____ |

3. What is your spouse/partner's age?

4. What is your spouse/partner's race or ethnic identification? *Please check all that apply.*

- | | | |
|--|--|--|
| <input type="checkbox"/> American
Indian/Alaskan
Native | <input type="checkbox"/> Black/African
American/Afro-
Caribbean | <input type="checkbox"/> Hispanic/Latino |
| <input type="checkbox"/> Asian/Asian
American/Pacific
Islander | <input type="checkbox"/> White/Caucasian,
not of Hispanic
origin | <input type="checkbox"/> Other (Specify):
_____ |

5. How many dependent children (age 18 and under) do you have?

- 1 2 3 4 5+

6. What are the ages and gender of your children?

Age_____ and Gender Female Male

Age_____ and Gender Female Male

Age_____ and Gender Female Male

Age_____ and Gender Female Male

Age_____ and Gender Female Male

Military Service Information

Please answer the following questions about your spouse/partner.

7. In what branch is your spouse/partner currently serving?
Please check one box per column.

<input type="checkbox"/> Army	<input type="checkbox"/> Full-Time
<input type="checkbox"/> Air Force	<input type="checkbox"/> Reserve
<input type="checkbox"/> Navy	<input type="checkbox"/> National Guard
<input type="checkbox"/> Marine	
<input type="checkbox"/> Coast Guard	

Please answer the following questions regarding you and your family's experiences with military deployment. Please check only one box per question.

8. Is your spouse/partner currently deployed?
 Yes No (Continue to #13)

9. If yes, is your spouse/partner deployed to a combat zone?
 Yes No

10. What is the length of your spouse/partner's current deployment?

11. How long has your spouse/partner been deployed?

12. Is your spouse/partner's deployment a source of stress?
 Yes No

13. How many previous deployments has your spouse/partner had?

14. Does your spouse/partner have any pending deployments?
 Yes No (Continue to survey questions)

15. If yes, what is the length of time before the deployment?

Appendix F

IRB Approved Message for Participation in Study

Dear Military Spouses –

I am writing to request your participation in my research study on the well-being of children in military families. I am a doctoral student under the supervision of Dr. Terry Pace at the University of Oklahoma. The purpose of this research is to better understand the effects of deployment on families.

To be eligible for this study, you must be a female military spouse with at least one child between the ages of 4 and 17. The survey is anonymous and will take about 10 to 15 minutes to complete. Participation is voluntary, and you may withdraw participation at any time.

Plus, for every survey returned, a donation will be made to the National Military Family Association!!

For those interested in participating in this study, click on the following hypertext link (or cut and paste it into your browser):

<https://www.surveymonkey.com/s/LLNH8QQ>

This will take you to the consent form and questionnaire.

Please forward the link to the study to as many military families you know!

The OU IRB has approved the context of this message but not the method of distribution. The OU IRB has no authority to approve distribution by mass email. The University of Oklahoma is an Equal Opportunity Institution.

Thank you,

Laura K. Frazier, M.A.
University of Oklahoma

Appendix G

IRB Approval



The University of Oklahoma

OFFICE OF HUMAN RESEARCH PARTICIPANT PROTECTION - IRB

IRB Number: 12374
Amendment Approval Date: March 31, 2011

April 01, 2011

Laura Frazier
Educational Psychology
3200 Marshall Ave. Suite 100
Norman, OK 73069

RE: IRB No. 12374: Well-Being of Children in Military Families

Dear Ms. Frazier:

On behalf of the Institutional Review Board (IRB), I have reviewed your protocol modification form. It is my judgement that this modification allows for the rights and welfare of the research subjects to be respected. Further, it has been determined that the study will continue to be conducted in a manner consistent with the requirements of 45 CFR 46 as amended; and that the potential benefits to subjects and others warrant the risks subjects may choose to incur.

This letter documents approval to conduct the research as described in:

Amend Form Dated: February 09, 2011

Protocol Dated: February 09, 2011

Consent Form - Subject Dated: February 09, 2011 Information sheet

Survey Instrument Dated: February 09, 2011 Demographic questionnaire

Survey Instrument Dated: February 09, 2011 Perceived Stress Scale

Survey Instrument Dated: February 09, 2011 Kansas Marital Satisfaction Scale

Amendment Summary:

Revised protocol to include additional measures: Perceived Stress Scale and the Kansas Marital Satisfaction Scale.

Editorial changes to the demographic questionnaire.

Revised study population to include females only.

Revised the consent form to reflect changes in procedures, compensation, length of participation, and contact information.

Other study will result in a dissertation.

This letter covers only the approval of the above referenced modification. All other conditions, including the original expiration date, from the approval granted February 09, 2009 are still effective.

If consent form revisions are a part of this modification, you will be provided with a new stamped copy of your consent form. Please use this stamped copy for all future consent documentation. Please discontinue use of all outdated versions of this consent form.

If you have any questions about these procedures or need additional assistance, please do not hesitate to call the IRB office at (405) 325-8110 or send an email to irb@ou.edu.

Sincerely,
A handwritten signature in black ink, appearing to read "Aimee Franklin".

Aimee Franklin, Ph.D.
Vice Chair, Institutional Review Board

LT_Amend_Form_Appr_Doc

1015 West Lindsey, Suite 150 Norman, Oklahoma 73069 PHONE: (405) 325-8110

