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The Effects of Multiple Deployments on Army Adolescents

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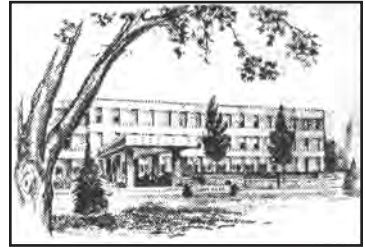
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THE EFFECTS OF MULTIPLE DEPLOYMENTS ON ARMY ADOLESCENTS

Leonard Wong
Stephen Gerras

January 2010

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Several people made key contributions to this monograph and deserve special recognition. Colonel Tommy Baker, assigned to the Army and Air Force Exchange Service, provided coupons used to thank adolescents and parents who volunteered to be interviewed for this monograph. Colonel Murf Clark conducted an excellent editorial peer review that was both comprehensive and thoughtful. Dr. Rick Jacobs, Department of Psychology at Penn State, enthusiastically provided valuable feedback on the statistical analysis used in this monograph. Finally, Mr. Jerry Crutch, FORSCOM G-1 Office, offered timely advice, relentless effort, and unwavering support to make this monograph a reality.

Comments pertaining to this report are invited and should be forwarded to: Director, Strategic Studies Institute, U.S. Army War College, 122 Forbes Ave, Carlisle, PA 17013-5244.

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FOREWORD

Multiple deployments have become a way of life for our Soldiers. In Army families, these frequent deployments increase the burden on children who must face the stress and strain of separation and anxiety. This monograph takes a much-needed, detailed look at the effects of multiple deployments on Army adolescents. The following pages reinforce some of what we already know concerning deployments and children, but they also reveal some very interesting, counterintuitive findings that challenge the conventional wisdom concerning Army adolescents.

This study goes beyond merely explaining the impact eight years of war is having on the children of our Soldiers; rather, it explores the specific factors that increase or alleviate stress on Army adolescents. This monograph reveals that Army adolescents, contrary to what many believed, are much more self-aware and resilient. Furthermore, it demonstrates that they are capable of understanding the multiple implications of having a parent serve in the all-volunteer Army during a time of war. Army children may experience the anxiety and stress that often surround a parent's deployment, but this monograph concludes that there are factors that policy makers, leaders, and parents can influence to increase a child's ability to cope with a life of repeated deployments. In this era of persistent conflict, we should carefully consider such findings.



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SUMMARY

This monograph examines the effects of multiple deployments through the perspectives of U.S. Army soldiers, spouses, and children. We sought to identify factors that predict the level of stress experienced by Army adolescents during a deployment and also to determine the key indicators of the overall ability of Army adolescents to cope with a life of repeated deployments.

Our analysis shows that the factors that best predict lower levels of stress in adolescents during a deployment are: (1) high participation levels in activities—especially sports, (2) a strong family, and (3) the adolescent's belief that America supports the war. Interestingly, the cumulative number of previous deployments is not significantly related with adolescent levels of deployment stress.

The results also show that the best predictors of an adolescent's overall ability to cope with a life of deployments are a strong nondeployed parent, the child's belief that America supports the war, a strong family, and the adolescent's belief that the deployed soldier is making a difference. Of note, the strongest of these predictors is the child's perception that their deployed parent is making a difference.

Overall, the findings reinforce the advantages of a strong family and the value of staying busy to mitigate the negative effects of a deployment. The monograph also highlights, however, the role of attitudinal factors, such as the influence of public opinion concerning the war and the importance—in a life marked by multiple deployments—of an adolescent's confidence that their parent's call to duty is meaningful and thus worth the sacrifice.

THE EFFECTS OF MULTIPLE DEPLOYMENTS ON ARMY ADOLESCENTS

With deployments to Afghanistan since 2001 and to Iraq since 2003, many of America's warriors have experienced four or five combat deployments in the last decade. This new way of war has led to a flurry of increased interest in the psychological effect of deployments on our troops. The community has made significant advances in understanding Post-Traumatic Stress Disorder (PTSD), combat stress, as well as pre- and post-deployment stress assessments for soldiers. Serving alongside those 1.1 million soldiers in uniform, however, are a million others who are also experiencing the stresses and strains of a life of deployments – Army children.

The new reality of repetitive deployments has led to innovative programs and policies designed to assist Army children in dealing with the difficulties of deployments. Initiatives – ranging from “flat daddies” replacing deployed soldiers at the dinner table, to Sesame Street's Elmo helping deployed families to *Talk, Listen, and Connect*, to senior leaders ceremoniously signing the Army Family Covenant at installations across the world – point to the growing concern that multiple deployments may be as stressful to Army children as they are to soldiers. Despite the increased attention and seemingly endless resources directed at children of deployed servicemembers, though, there has been very little research examining the effects of multiple deployments on children.

Research on the effects of wartime deployments on military children began with Operation DESERT STORM in 1990 to 1991. Studies during that time showed increased levels of sadness and depression in

Army children, but the overall results did not support the notion that children of deployed soldiers suffered any prolonged effects.¹ Extrapolating the DESERT STORM experience to the current wars in Iraq and Afghanistan, however, appears problematic because of significant differences in the conflicts. For example, the Gulf War was largely a conventional war fought by conventional forces on a conventional battlefield. The current conflicts in Iraq and Afghanistan include more complex, ambiguous, and potentially more stressful counterinsurgency operations. During Operation DESERT STORM, public opinion—a factor commonly associated with soldier morale—was broad and generally supportive. In contrast, American public support for the wars in Iraq and Afghanistan has waxed and waned dramatically over the last 8 years. Most importantly, though, the Gulf War was measured in days and weeks while the wars in Iraq and Afghanistan are being measured in months, years, and even decades. Today's military adolescents are required to cope with a childhood of repeated deployments instead of persevering through a one-time event. The new normal for military adolescents is a life of recurring deployments.

Other recent studies on military children have yielded some clues concerning the impact of multiple deployments. Angela Huebner and her colleagues conducted focus groups at camps for youths aged 12 to 18 who had experienced parental deployments to Iraq or Afghanistan. Huebner found that children had perceptions of uncertainty and loss, changes in mental health, and conflicts in relationships.² In another study conducted at summer camps for children of deployed parents, Anita Chandra and her colleagues administered surveys to parents/caregivers (mostly

mothers) and their children aged 7 to 17. While they found that the number of deployments experienced by a family was not associated with significant differences in a child's level of worry, they did find that caregivers reported levels of emotional and behavioral difficulties that were higher than those reported by parents/caregivers in the general population.³

In a more recent study, Chandra and another group of colleagues conducted computer-assisted telephone interviews with children and caregivers applying to a free summer camp for families of deployed service members. They found that the length of parental deployment and the mental health of the nondeployed caregiver were significantly associated with the number of challenges experienced by children (as observed by the caregiver) during deployments.⁴

The 2005 Survey of Army Families, a wide-ranging survey sent to Army spouses approximately every 4 or 5 years, included questions about deployment. According to Army spouses who participated in the study, half of their children coped well with deployments while 37 percent of their children seriously worried about what could happen to their deployed parent.⁵ Similarly, the 2008 Survey of Active Duty Spouses administered by the Department of Defense (DoD) found that 60 percent of military spouses reported that their children had increased levels of fear and anxiety when a parent deployed.⁶

Eric Flake and his colleagues surveyed 116 Army spouses of deployed soldiers and found that in children between the ages of 5 and 12, one-third could be at high risk for psychological and social problems. Of the surveyed spouses (mostly mothers), 42 percent reported high levels of parenting stress. These parents, in turn, were more likely to report psychosocial problems in their children.⁷

While recent studies examining the effects of deployments on children have produced a valuable foundation of knowledge, researchers could extend studies on deployments in at least two ways. First, much of what we know about the impact of deployments on children is based on studies that rely mostly on the perspective of the spouse. Adding the child's perspective may provide a broader, more accurate assessment. Second, many studies attempt to determine if deployments produce stress in Army children. With multiple deployments more commonplace and the literature maturing, it may now be appropriate for research efforts to shift to determining ways to minimize that stress.

Our study examined the effects of multiple deployments on Army families—specifically the adolescent children—through the eyes of soldiers, spouses, and children. With almost a million children in Army families, the absence of a deployed parent will likely influence a generation of adolescents. This monograph explores several factors that may mitigate the stresses of deployments on children, and it seeks to identify key coping strategies to aid Army adolescents in lives marked by frequent deployments.

INFLUENCES ON DEPLOYMENT STRESS

This monograph rests on the assumption that deployments indeed cause stress in Army children. Previous research supports that finding and households on Army installations around the world confirm it. That assumption allowed us to focus our research effort on the critical task of identifying factors that may mitigate deployment stress and enable adolescents to cope with a life of having a parent repeatedly deploy.

Our hypotheses, based on previous research and experience, predicted six factors that might affect the levels of stress experienced by adolescents during a deployment. These factors are:

The Cumulative Effect of Deployments.

Although Chandra *et al.* (2008) found in their research that the number of previous deployments was not associated with significant differences in a child's level of worry, many policymakers and parents still maintain that the cumulative effect of multiple deployments has a detrimental effect on adolescent stress. As Barbara Thompson, director of the Pentagon's Office of Family Policy/Children and Youth, stated, "The [Defense] department recognizes that these multiple, long-term deployments are really tough on families."⁸ In subsequent testimony before a Senate Armed Services subcommittee concerning a DoD study surveying 13,000 active duty and 16,000 reserve component spouses, Thompson added, "it was very clear that spouses were concerned about the cumulative effects of deployments on their children."⁹

Strong Families.

The strength of the family has traditionally been a key factor in an adolescent's experience with deployment. Several studies have found that the reaction of the nondeployed parent to a spouse's deployment moderates the impact of the deployment on the children. As stated earlier, Flake *et al.* reported that the most significant predictor of child stress during a deployment was parental stress. Similarly, Orthner and colleagues reported that parent resilience best

predicts how children will cope with deployment.¹⁰ In addition to the reaction of the nondeployed parent, we expected the bonds between the children and the parents as well as the overall strength of the family to correlate with lower levels of stress in children experiencing deployment.

Supportive Mentors.

Huebner and colleagues reported that although many adolescents were skeptical of the support offered by others because of perceived insincerity, adolescents who felt genuinely supported by others showed evidence of enhanced resiliency.¹¹ Interaction with caring people such as teachers, coaches, chapel workers, youth center personnel, friends, or relatives has often been a key method of decreasing deployment stress. The opportunity to talk through issues with someone caring and supportive allows an adolescent to express concerns, develop coping strategies, and avoid feeling alone in navigating the stresses of a deployment. Thus, this study predicted that greater use of supportive mentors would be associated with lower levels of deployment stress.

Participation in Activities.

A key recommendation in nearly every deployment guide for military families is to keep children engaged in activities to distract them from harmful deployment-related feelings.¹² Focusing on a parent's absence, dwelling on potential negative outcomes, or ruminating on problems often sends a child into a downward spiral. For this study, we hypothesized that higher levels of participation in sports, clubs, or group

activities would correspond to lower levels of stress during a deployment because such activities divert an adolescent's attention away from negative feelings.

Frequent and Deep Communication.

Communication between the war zone and the homefront has evolved from postal letters to email to cell phones to Skype webcam sessions. With technology allowing more frequent and more intimate communication between children and their deployed parents, we predicted that the quantity and quality of communication would be a significant factor in determining deployment stress. We expected to see an association between more frequent, more engaging communications and lower levels of deployment stress.

Personal Beliefs.

Many deployment guides point to the importance of a child's perceptions of the Army and the war as key factors to consider in reducing deployment stress. For example, one predeployment briefing advises the military community to "Mitigate the impact of public opinion of the war on military children."¹³ Such advice springs from the assumption that a decline in public support concerning the deployment of soldiers may increase stress levels in children experiencing deployment. Thus, this study hypothesized that adolescents who believe there is public support for the Army and the war will deal more effectively with the stresses of deployment. It was also hypothesized that children would cope better if they believed their deployed parent was making a difference in the world.

DEPENDENT VARIABLES

The first dependent variable in this monograph was measured with the Child Stress Index – a standardized scale composed of 14 questions measuring anxiety, nervousness, and worry experienced by a child during a deployment. Five of the questions in the index originate from the State-Trait Anxiety Inventory (STAI).¹⁴ Nine questions were extracted from the Screen for Child Anxiety Related Disorders (SCARED) Generalized Anxiety Disorder subscale.¹⁵ The use of abbreviated versions of the scales was critical to the construction of a short online instrument amenable to both adults and children.¹⁶

A second dependent variable was the overall ability of Army adolescents to cope with repeated deployments. This measure moved away from examining the stress of a single deployment and focused instead on an adolescent's more general ability to deal with a life of deployments.

THE SAMPLE

Through the use of personnel databases, we identified 34,500 soldiers within U.S. Army Forces Command (FORSCOM) stationed at large Army installations (at least 5,000 soldiers) and having at least one child between ages 11 and 17, inclusively. These soldiers each received an e-mail invitation in March 2009 to take part in an anonymous online survey. They also received access information for spouses to participate in a parallel version of the survey. Finally, we asked these soldiers to grant permission for up to four of their children between ages 11 and 17 to participate in a parallel child version.¹⁷

Of soldiers receiving the email invitation, 2,006 completed surveys—a response rate of 5.8 percent. This less-than-optimal response rate may be due to several factors, including a tendency of soldiers to ignore too-frequent surveys and because those in jobs with limited daily access to government computers do not routinely check their official Army email. Additionally, some deployed soldiers who did have access to computers reported that security firewalls at some forward operating bases in Iraq or Afghanistan blocked access to the online survey. As with any sample size, we took great care to verify that our sample adequately represented the relevant population by comparing the demographic information of our sample with the overall Army population.

Table 1 shows some demographic comparisons including race and gender.¹⁸ As the table illustrates, the sample racial distribution closely parallels the Army's overall racial distribution. Deployment experience was higher in the sample, but we expected that because the subject line of the e-mail invitation was "The Effects of Multiple Deployments on Army Adolescents." Subsequent analysis showed that 36.4 percent of the 2,006 soldiers who responded were deployed at the time they completed the survey.

Figure 1 compares the home-station distribution of the general population with our sample. The chart reveals that the sample largely mirrors the population and respondents were well distributed across the sampled installations.

An important indicator of representativeness is the rank distribution of the sample. Figure 2 shows that the sample has fewer E1-E5 respondents than the population, and respondents in the E7-E9 ranks are overrepresented. This is not surprising, given

	FORSCOM Population	Sample
Male	90%	91%
Female	10%	9%
Deployment experience	87%	95.5%
	Active Army Population	Sample
White	62.7%	62%
Black	19.8%	18.4%
Hispanic	10.9%	11.6%
Asian	3.4%	1.5%
Other	3.2%	6.5%

Table 1. Demographic Comparison for Gender, Deployment Experience, and Race.

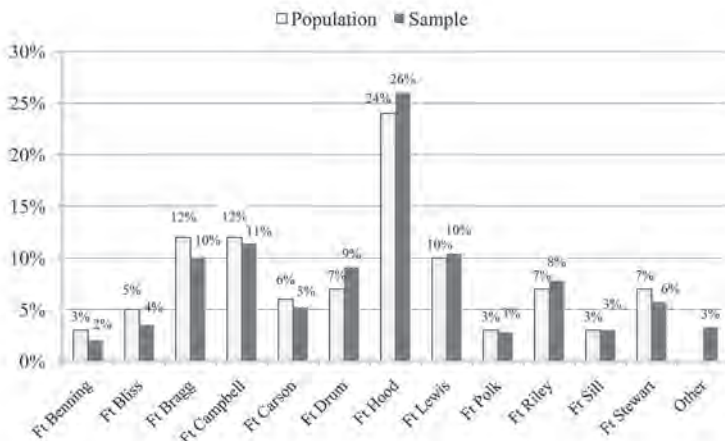


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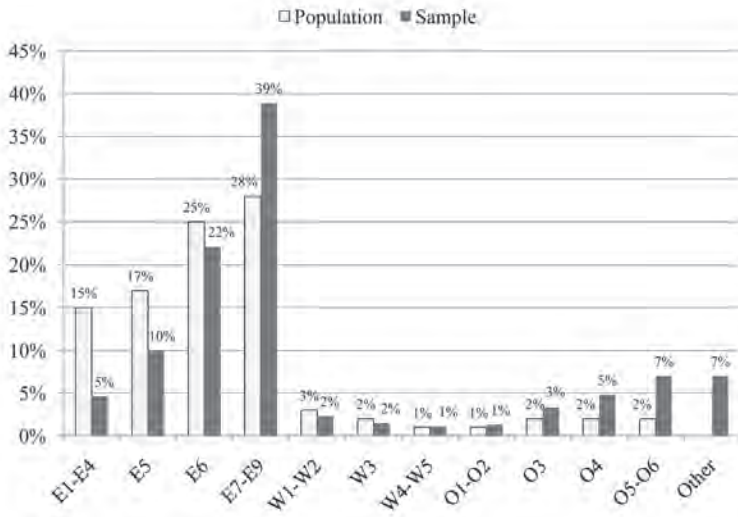


Figure 2. Comparison of Rank.

that most Army surveys show a similar tendency to be underrepresented at the lower ranks. Additionally, higher ranks tend to have better access to computers for an online survey, and soldiers at higher ranks may be more prone to completing the survey because they have more children in the target range. Overall, however, the rank distribution and other demographic characteristics of the sample point to a sample that is satisfactorily representative of the larger population.¹⁹

THE SOLDIER PERSPECTIVE

To analyze the influence of the six previously described factors on the level of stress experienced by Army adolescents, we calculated the Child Stress Index for children with a parent who was currently deployed. The index was based on soldiers' perceptions of their oldest child between the ages of 11 and 17. We then

converted the stress index to a standardized value with an average score of zero and conducted a series of analyses by looking for significant differences in the Child Stress Index across the six factors.

Analysis supported all of the expected relationships. The cumulative number of deployments, the strength of Army families, the availability of supportive mentors, the degree adolescents participate in activities, the frequency and depth of communication between the child and deployed parent, and the soldier's assessment of the child's personal beliefs about the war and the Army were all associated with significant differences in the level of child stress as reported by their deployed parent. For example, Figure 3 shows from the soldiers' perspective, the more deployments a child has experienced in the past, the higher the child's stress is during a current deployment. The percentage in brackets indicates the percentage of surveyed soldiers who responded in the respective category.

Likewise, Figure 4 shows the significant difference in the Child Stress Index related to the soldier's assessment of the reaction of the nondeployed spouse. This difference corresponds with previous findings emphasizing the key role of the nondeployed spouse.

INCLUDING THE CHILD PERSPECTIVE

Interestingly, the findings to this point solidly support the conventional wisdom concerning deployments and children: that repetitive deployments have a detrimental effect on children's deployment stress, but strong families, mentors, activities, communication, and strong beliefs could serve to offset the stress. However, despite the significant findings obtained using the soldier surveys, a primary goal of

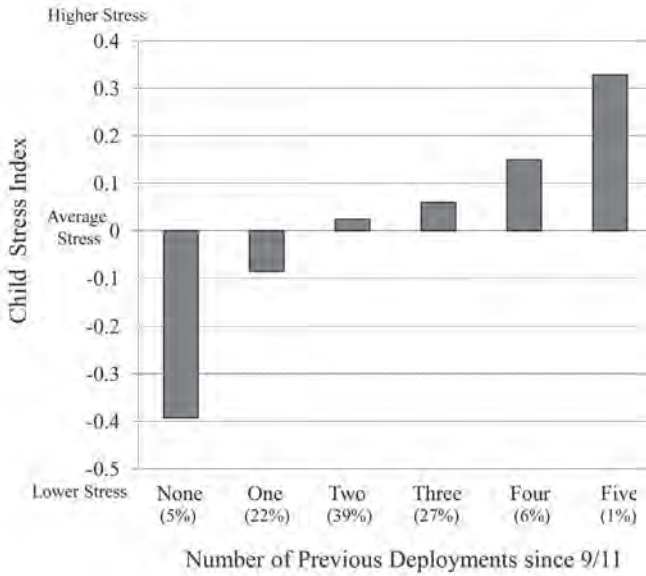


Figure 3. Deployment Stress and Number of Previous Deployments (Soldier Perspective).

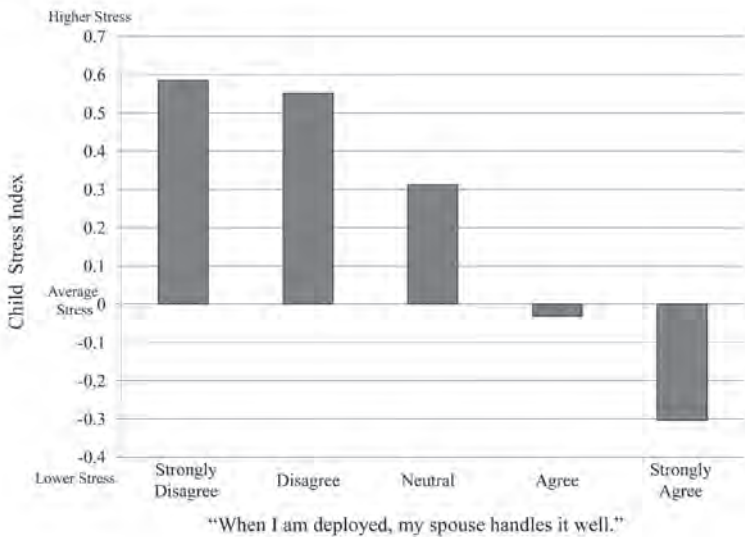


Figure 4. Deployment Stress and Spousal Reaction to Deployment (Soldier Perspective).

this study was to conduct analysis that included the perspective of the children. Fortunately, in addition to the 2,006 soldiers who completed the survey, 718 spouses and 559 adolescents also completed parallel versions of the instrument. Because soldiers, spouses, and children used a family userid to access the online survey, we were able to obtain subsamples providing combinations of child, spouse, and soldier perspectives. Figure 5 shows how the subsamples interrelated.

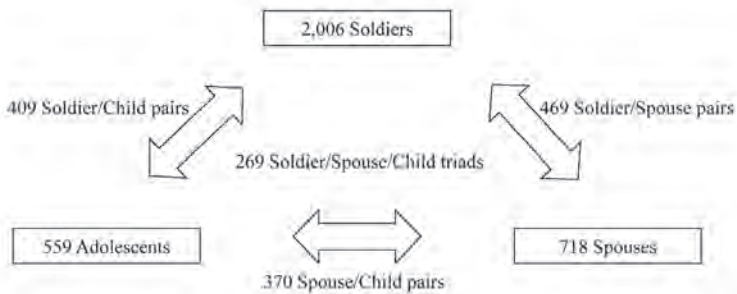


Figure 5. Survey Respondent Interrelationships.

A second phase of the study took a more qualitative approach while bringing in the children’s perspectives. During the summer of 2009, over 100 children at eight Army installations were individually interviewed concerning their experiences with deployments. Their ages ranged from 11 to 17, and the interviews were voluntary and confidential. These one-on-one sessions were recorded and followed a protocol that explored the effects of deployments and how the children coped with stress.

One interesting finding emerged early in the interviews. When we asked children how many times their parent had deployed since the attacks of September 11, 2001 (9/11), a majority replied they

did not know. While this lack of knowledge initially surprised us, upon reflection it made sense. A 13-year-old girl, for example, may be unable to recount her experience with deployments from the time she was a 5-year-old. Nor is it unreasonable for a 12-year-old boy enduring his third deployment to be unsure whether his deployed father is currently in Iraq or Afghanistan.

Recognizing that children may be unreliable sources of information concerning their parents' deployment history (or that parents can often be unreliable judges of their children's attitudes), led to the necessity of obtaining information from the most relevant source. Thus, to examine the effect of the number of previously experienced deployments on an adolescent's stress, it seemed more prudent to rely on the soldier for the actual number of past deployments. For an accurate assessment of adolescent stress, however, we questioned the adolescents themselves.

Using soldier surveys to determine the number of deployments and a Child Perspective Stress Index constructed from the *children's* surveys, Figure 6 displays a subsample of 409 such soldier/adolescent pairs. Contrary to the original prediction and unlike the findings using just the soldier subsample, there is surprisingly no relationship between child deployment stress and the number of previous deployments. The size of the circle is proportional to the number of respondents and the center of the circle is the average stress index score in that category. The figure shows that adolescents who had experienced two previous deployments actually reported lower average stress than those with only one deployment in their past. The mean deployment stress of adolescents who had experienced three deployments was even lower. The number of children experiencing four

or five deployments was too small to derive any generalizations.

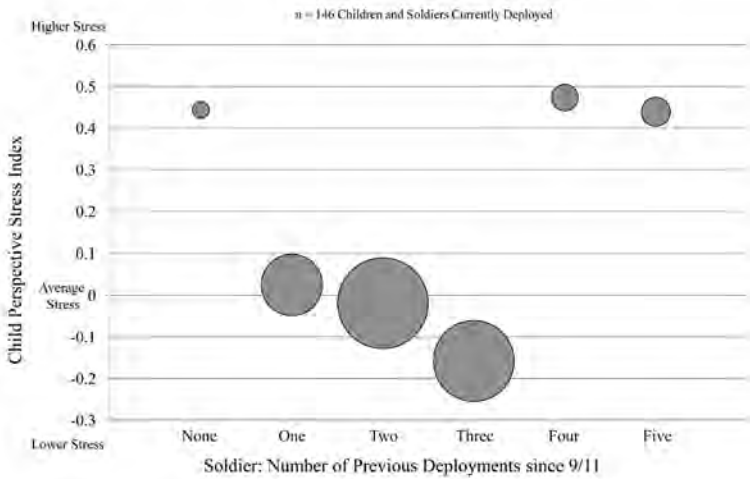


Figure 6. Deployment Stress (Child Perspective) and Number of Deployments (Soldier Perspective).

Why would soldiers perceive a cumulative effect of deployments while adolescents report a trend of decreasing stress with each deployment? Perhaps soldiers tend to keep a teary farewell or an emotional phone call as the salient memory of their child during a deployment. Parents may tend to forget or at least not realize that children often mature through hardships. Adolescents, on the other hand, may be reporting that instead of accumulating higher levels of stress with each new deployment, they have learned new coping strategies from previous experiences. In any case, the finding was unexpected, yet encouraging.

Because adolescent deployment stress was not directly related to the number of previous deployments, a child's age was thought to be acting as a possible moderating variable. Prior research on deployment

and adolescents had shown that their understanding of the deployment was often a function of their age.²⁰ As children mature, they become more aware of a parent's absence, the reasons for the deployment, and also the possible consequences of the deployment. As a result, age may moderate the stress experienced by adolescents during deployments.

Figure 7 shows stress levels for adolescents who were currently experiencing a deployment and those who were not. For those children who did not have a parent deployed, stress levels were significantly higher in older children. The upward trend in Figure 7 may reflect the relatively uncomplicated existence of pre-teens compared to the complex lives of teenagers.

For adolescents who did have a parent deployed, stress levels were expected to be parallel but higher to those adolescents who did not have a parent deployed. As expected, children from ages 11 to 13 with a parent deployed did report higher stress levels. But for ages 14 to 16, the children reported *lower* stress than those children who did not have a parent deployed.²¹ In other words, for mid-teen adolescents, stress levels are lower when their parents deploy.

While the survey data could not provide an explanation for this curious finding, subsequent interviews suggested that children between ages 14 and 16 often enjoy their new-found independence and experience less stress when their soldier parent is absent. For many teenagers in this age range, the decrease in supervision and relaxation of restrictions during deployment may lower the parental conflict common during this stage of adolescence. As one 15-year-old pointed out:

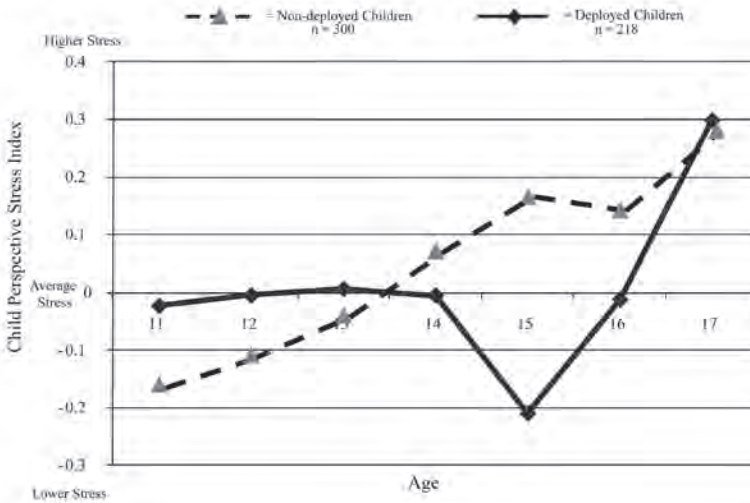


Figure 7. Child Stress and Age (Deployed and Nondeployed).

My dad—he’s the one who enforces the discipline, and my mom’s kind of lenient. When he left, I went through a phase where I got into trouble—talking back to my mom, and going out when I wanted . . . But now that he’s back—not anymore!

Interestingly, the decrease in reported child stress for 14- to 16-year-old adolescents is also found in soldier perceptions of child stress, but not in the spouse perspective.

While 14- to 16-year-olds reported lower stress when their parents deployed, 17-year-old adolescents with a parent deployed had the same mean stress levels as those with their soldier at home. The relatively higher levels of stress for 17-year-olds with a parent deployed may be explained by interview comments expressing special disappointment that their deployed parent would miss key occasions such as their high school graduation, college application process, senior

year sporting events, or the job search after high school.

One of the original hypotheses in this study was that more frequent and more in-depth communication between an adolescent and their deployed parent would correspond to lower levels of deployment stress. As the 13-year-old daughter of a sergeant first class observed:

What helps is being able to talk to the deployed parent whenever given the chance. Talking to them helps you feel close to them and helps you understand they are okay no matter what you are thinking. Talking to them helps to know that they still care about you even when they are on the other side of the world. It helps because it reminds you of all the good times and lets you know that you are in their thoughts. It is comforting to know that they are okay and that they miss you just as much as you miss them.

Another surprising finding emerged concerning the relationship between communication and child stress; from the child's perspective, more and deeper communication between the homefront and the war zone may not always coincide with lower stress. Figure 8 shows the interesting results from the adolescents' perspective concerning the frequency of communication. While the difference in stress levels associated with monthly and weekly communications is small, stress levels are significantly higher for children who communicate several times a week with their deployed parent.

As with all the analyses in this study, we should note that the relationship between increased communication and increased deployment stress is not necessarily causal. In other words, although more frequent communication coincides with higher levels of stress in children, it may or may not be

causing the increased stress. Although more frequent communication may lead to more stress, another possible (and more probable) explanation may be that children who are experiencing higher levels of stress tend to communicate more with their parent to resolve problems.

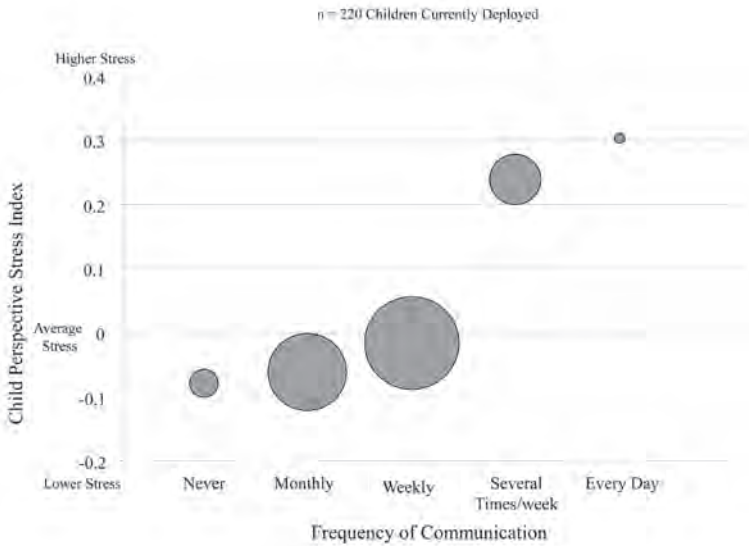


Figure 8. Child Stress and Frequency of Communication.

Figure 9 shows the relationship between stress and the depth of the communication between adolescents and their deployed parent. As expected, adolescents who reported “Engaged” communication with their parent reported lower stress levels than those who had “Shallow” or “Somewhat engaged” communication. Interestingly, adolescents who reported “Deep” communication, however, reported higher levels of stress. While more intimate communication may sound universally desirable, some adolescents may have their

emotions closer to the surface and thus prefer more distance in their interaction with the deployed parent. As the 15-year-old child of a major noted, “What helps me the most with dealing with the stresses of having my parent overseas is that I write letters or emails. It is easier for me to talk to them that way, because hearing their voice over the phone can sometimes push me past my limit.” Of course, another possible explanation may be that, similar to the increased frequency of communication, adolescents who have higher stress levels tend to communicate more deeply with their deployed parent in order to resolve issues related to the stress.

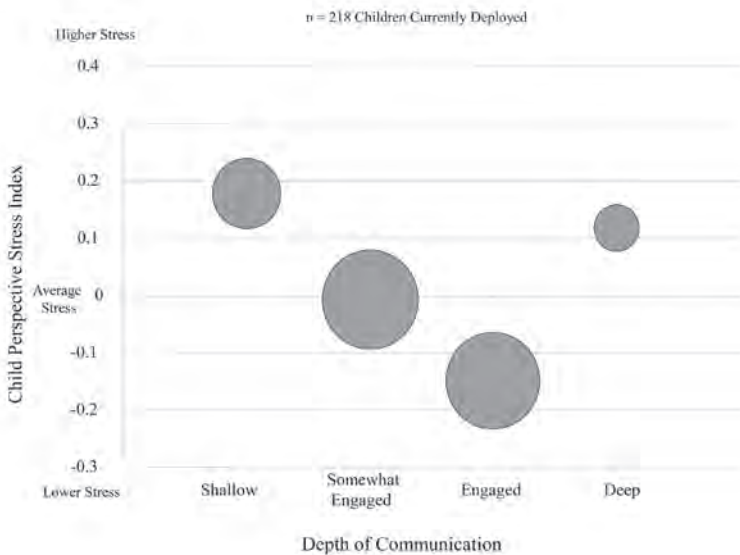


Figure 9. Child Stress and Depth of Communication.

Figure 10 illustrates the relationship between strong families and deployment stress. Note that we measured the strength of the family via the soldier’s perspective. The strong influence of robust family relationships is well-documented in previous research on military children²² and is very evident in the figure. While this relationship is intuitive, building strong families to counter the stress of a deployment begins months and years prior to the actual deployment. This factor cannot be quickly changed in the months prior to a deployment.

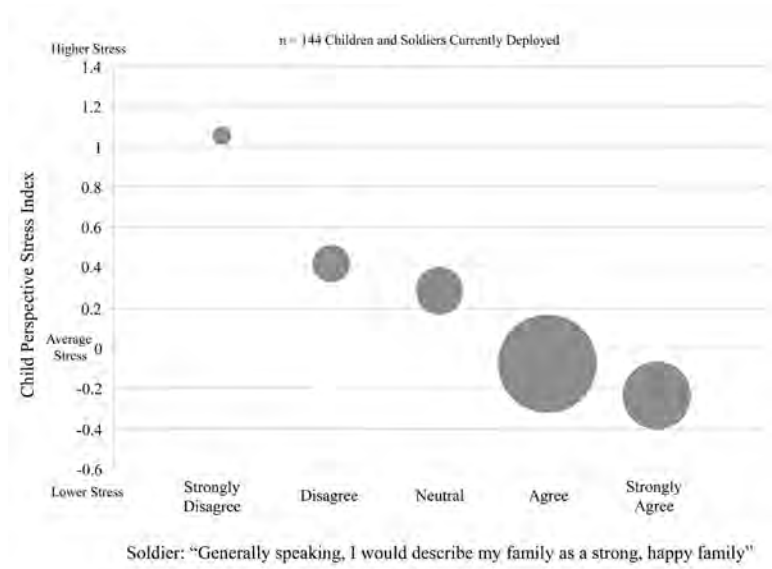


Figure 10. Deployment Stress (Child Perspective) and Strong Family (Soldier Perspective).

Figure 11 shows the significant difference in levels of child stress associated with levels of participation in sports teams. Participation in sports is critical as it provides a diversion from the stress that occurs during deployment. For example, when asked what helped the most during a deployment, one adolescent responded, “Playing sports to take [my] mind off what was going on at home when my mom was deployed or when my dad was in the Army and was also deployed.” A similar relationship also emerged between deployment stress and participation in school activities such as band or drama.

It was puzzling, however, that 30 percent of the children reported that they never participated in sports or clubs, yet they also reported lower stress levels than those who rarely participated. Interviews in the qualitative phase made clear we had neglected to assess participation in an activity used by a large percentage of children to distract themselves from the stresses of deployment—video games. We presume that many of the 30 percent of adolescents who reported that they never participate in sports, clubs, or organizations yet still reported relatively lower levels of stress were avid gamers.

Figure 12 shows the relationship between child stress and their belief that America supports the war. Although the magnitude of the effect is not as strong as variables such as the strength of the family or level of participation in sports or clubs, the relationship is significant.²³ Although public support for the war and military are often discussed as key factors in a soldier’s morale, this finding extends the impact of public opinion to the children of those in uniform.

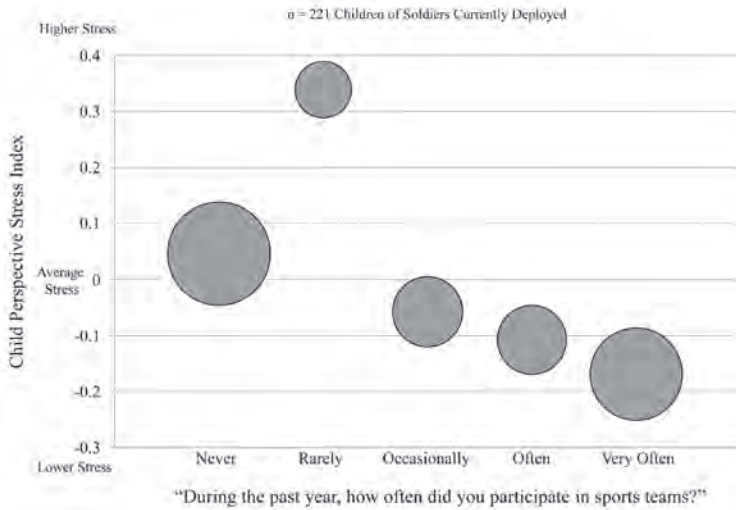


Figure 11. Deployment Stress (Child Perspective) and Activities (Sports).

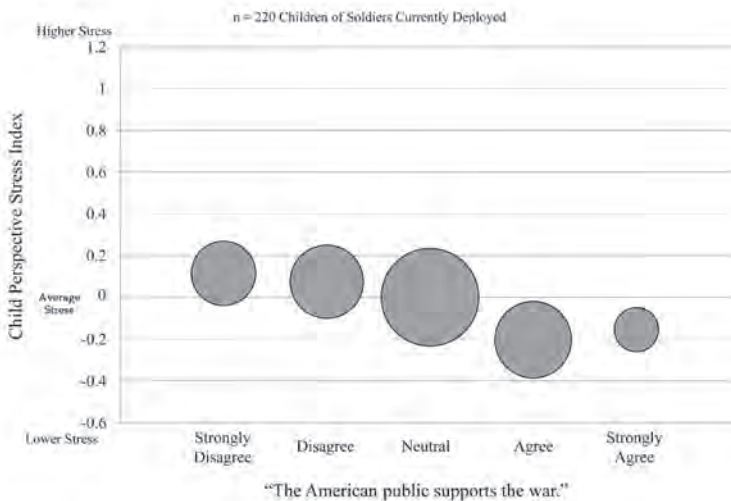


Figure 12. Deployment Stress and Belief that the Public Supports the War.

To assess the impact of supportive mentors on deployment stress, we asked adolescents how likely they were to seek advice from teachers, youth center personnel, coaches, relatives, place of worship workers, friends, or parents if they had a problem. Surprisingly, the only source of supportive mentorship that coincided with a significant difference in adolescent stress levels was the parents. Despite the intuitive value of close friends, understanding teachers, or even a sympathetic coach, the importance of the family again emerged as a central theme in the adolescent perspective of deployment stress.

Interestingly, from the deployed soldier's perspective, *all* of the categories of mentors were associated with significant differences in child stress levels. In contrast to their adolescent children at home, deployed soldiers appear to give greater weight to sources of support other than parents. The difference in perceptions may reflect the wishful thinking of absent parents that the *village* has a significant influence in raising their child. For deployed soldiers, to believe otherwise implies a substantially increased burden on the nondeployed spouse.

Up to this point, the study has focused on *bivariate* analyses—testing whether two variables (e.g., communication and deployment stress) are related to each other. By applying *multivariate* analysis, we can simultaneously examine many variables to determine the strongest predictors. By allowing each hypothesized factor to enter the analysis separately, we can estimate the effect of each factor. For example, although we know a student's test grade depends on the amount of time he or she studies, the amount of sleep they get the night before, and how healthy a breakfast they eat on the morning of the exam, multivariate analysis reveals

that study time best predicts a student's test grade (much to the chagrin of many well-fed, well-rested, yet unprepared students).

In this case, multivariate analysis—specifically multiple regression analysis—explores which factors explain the most change in the levels of stress experienced by children during a parent's deployment. Identifying which variables best predict stress allows a prioritization of efforts when attempting to influence the factors associated with deployments.

Multivariate analysis reveals that the strongest indicators of adolescent deployment stress, in order, are: (a) participation in activities—specifically sports, (b) the strength of the family, and (c) the adolescent's belief that the American public supports the war.²⁴ In other words, adolescents who are active in sports, have strong families, and believe that the American public supports the war are more likely to have lower stress levels when their parent deploys.

COPING WITH DEPLOYMENTS

Thus far, we have explored factors that may be associated with the stress experienced by a child while his or her parent is deployed. A related but somewhat broader question asks how an adolescent copes with a life of deployments. Beyond identifying methods that may alleviate stress during a single deployment, we attempted to isolate factors that strongly predict how well Army adolescents handle multiple deployments overall. This inquiry moved away from a focus on day-to-day stresses and instead examined strategies for dealing with the difficult role of a son or daughter of a soldier during a long war.

Before attempting to identify the various factors that may be associated with the ability of adolescents to cope with deployments, we compiled a baseline assessment based on previous research. Figure 13 shows assessments from various studies and various perspectives of how Army adolescents are faring with lives involving multiple deployments. The first bar in Figure 13 shows that according to spouse responses in the 2005 Survey of Army Families, 49 percent of the adolescents were coping well or very well with deployments. The 2008 DoD Spouse survey showed nearly identical results. The spouse perspective in the current 2009 study also shows almost identical results—which at first appears unremarkable, but the similarities in the spouse responses reinforce the representativeness of the sample in the current study.

Overall, how (is your child) (are you) dealing with deployments?

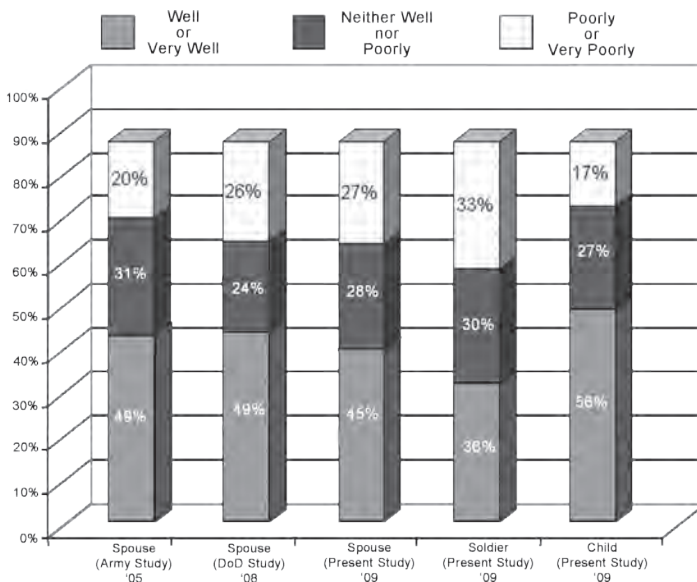


Figure 13. Coping with Deployments.

However, shifting to the soldier perspective introduces an interesting finding. Soldiers appear to be more pessimistic with estimates that a third of their children are coping poorly or very poorly with deployments. A possible explanation for the pessimism of soldiers could be that they feel responsible for subjecting their families to deployment separations in the first place and therefore tend to heighten negative perceptions because of guilt. Soldiers may also be less apt to believe that, despite their repeated absences, their children can fare well without them.

From the adolescent perspective, the contrast is even greater, yet in the opposite direction. When asked how they handled deployments overall, a surprising 56 percent of Army adolescents responded that they coped well or very well, while a much lower 17 percent said they coped poorly or very poorly.²⁵ In other words, adolescents are significantly more optimistic about their overall ability to handle deployments than either spouses or soldiers.

Before celebrating the unexpectedly high percentage of adolescents who claimed they handled deployments well, we must remember that the results can be extrapolated to imply that over 20,000 adolescent children in active duty Army families alone are not coping well with deployments.²⁶ Soldiers have long known that wars inevitably result in casualties. To believe otherwise would be naïve and foolhardy. Today's Army adolescents realize that they too are inextricably linked to the warfight, and that they too will suffer casualties. If one out of every six Army adolescents reports doing poorly with repeated deployments, the situation can hardly be considered acceptable. Yet, the findings illustrate an unanticipated and remarkable resiliency in most Army adolescents in

dealing with lives marked by multiple deployments.²⁷

What factors best determine an adolescent's overall ability to handle deployments? We analyzed the relationship between an adolescent's coping ability and the original six factors—multiple deployments, a strong family, supportive mentors, activities, communication, and personal beliefs. As expected, the strength of the family had a significant influence on an adolescent's ability to cope with deployments. Figure 14 shows the tendency of children whose soldier parents assessed their families as strong to report a better ability to cope with deployments. To minimize single-rater bias, we again assessed family strength from the soldier's perspective.

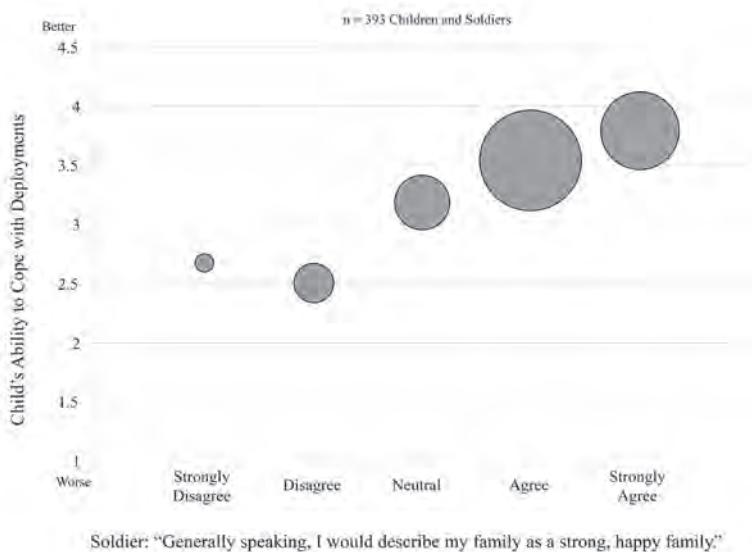


Figure 14. Deployment Stress (Child Perspective) and Strong Family (Soldier Perspective).

Figure 15 shows a similar significant relationship concerning the spouse's reaction to deployments. Again, to eliminate bias coming from a single perspective, the assessment of the spouse's reaction came from the spouse while the assessment of the child's ability to handle deployments was provided by the adolescent. The figure illustrates that, for many children, a key factor in how well they cope with deployments is the at-home parent's handling of the deployment. For example, when asked what enables him to deal with deployments, the 13-year-old son of a specialist attributed it to, "My mom . . . for everything she has gone through since my dad left. She has stayed strong for us." A sergeant's 14-year-old daughter was a bit more to the point when she ascribed her ability to cope with his absence to "the other parent not acting like a drama queen."

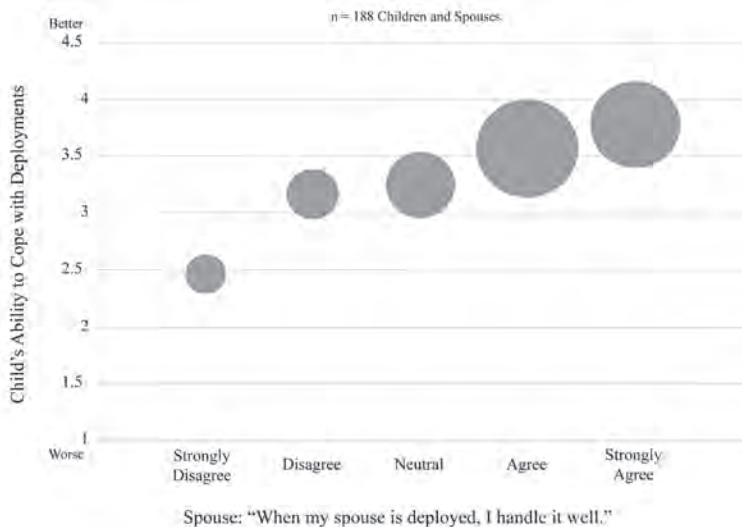
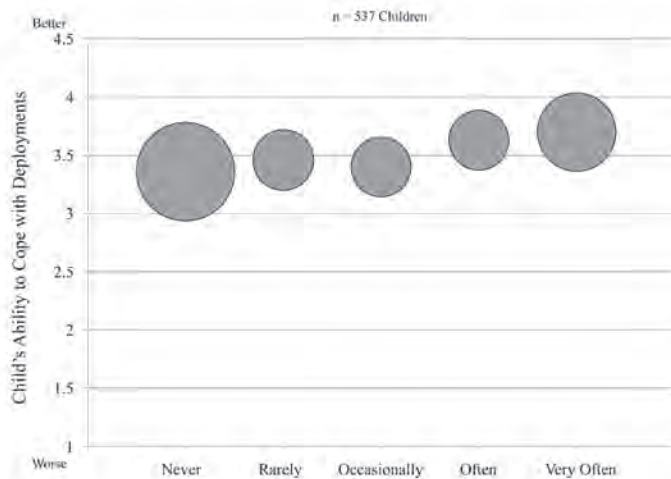


Figure 15. Ability to Cope and Spouse Reaction.

While adolescent involvement in sports or clubs was correlated with lower stress during a deployment, these same activities were not associated with higher levels of adolescent coping ability. Instead, increased ability to cope with a life of deployments tended to be associated with higher participation in religious (chapel, church, or place of worship) activities. Similarly, survey results also showed that those children involved in youth organizations such as Boy Scouts or Girl Scouts reported higher overall ability to handle a long period of repeated deployments.

These findings may reflect how different types of activities might relate to different outcomes. For activities that require daily attendance and focus—like sports teams, band practice, or play rehearsals—the main effect may be a diversion from thinking about the negative aspects of a deployment. Thus, participation in these types of activities coincides with lower levels of stress during a deployment.

Participation in church or chapel activities and involvement in organizations such as Scouting, on the other hand, may provide less frequent distractions and are therefore not related to deployment stress. Participation in religious activities and Scouting, though, may work in a more abstract manner as adolescents' thoughts are redirected to spiritual or service-oriented concepts such as selflessness and sacrifice. Involvement in such activities, while not significantly related to the stress of a single deployment, may help adolescents to cope more broadly with a life of repeated deployments. Figure 16 shows how involvement in religious activities is related to the overall ability to cope. The magnitude of the effect is not as large as factors involving the strength of the family or spousal reaction to a deployment, but the trend is still significant.



“During the past year, how often did you participate in chapel, church or place of worship activities?”

Figure 16. Ability to Cope and Participation in Religious Activities.

Earlier, we established that adolescent attitudes, such as the perception of America’s support for the war, could significantly influence perceptions of deployment stress. The degree to which adolescents believe American society supports the war also significantly relates to their overall ability to cope with deployments. A surprising finding concerning the attitudes of adolescents, however, was the strength of the relationship between their ability to cope with deployments and their belief that deployed soldiers are making a difference in the world. Figure 17 shows the clear pattern. The greater their belief that deployed soldiers are making a difference, the more likely adolescents are to report that they are coping well with a life of deployments. While that belief may not be a significant predictor of the stress experienced during an individual deployment, it is strongly related to their ability to better cope with multiple deployments.

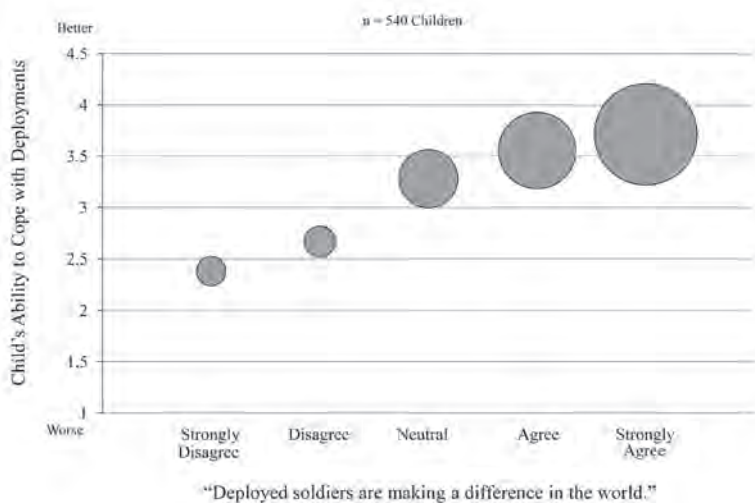


Figure 17. Ability to Cope and Belief that Soldiers are Making a Difference.

Surprisingly, multivariate analysis shows that the best predictor of a child's overall ability to cope with deployments is their belief that deployed soldiers make a difference. In order, the next best predictors of an adolescent's ability to cope are a strong family, followed by the child's belief that America supports the war, then a strong nondeployed spouse.²⁸ A finding that the strength of a child's family is strongly related to his or her ability to cope with deployments is predictable. But it is neither obvious nor expected that the best predictor of an Army adolescent's ability to cope with multiple deployments would be their conviction that deployed soldiers are making a difference.

And yet, the finding is very intuitive. Army adolescents grow up in an environment laden with lofty notions such as sacrifice, duty, and selfless service. They are accustomed to hearing common

Army aphorisms such as “I know my soldiers and I will always place their needs above my own,” and “I will always place the mission first.”²⁹ They understand that the Army is a “greedy” institution that demands all of their parent’s time, energy, and focus.³⁰ They also understand from firsthand experience that the family is another greedy institution requiring constant attention and care. They see deployed soldiers caught in the middle—struggling to maintain balance in the pull of both noble institutions.

Some Army adolescents contend poorly in this dilemma; others—many more than soldiers or Army spouses would indicate—say they are doing amazingly well in these trying times. They still suffer from stress and anxiety during each deployment, but they can handle the life of an Army adolescent if they remain confident that the repeated absences of their parent are not in vain. The maturity of today’s Army adolescents is exemplified by the comments of the very discerning 16-year-old daughter of a sergeant major who stated:

My daddy always being gone makes me stress out the most. He is in charge of a lot of soldiers and he always has to do what they do. “Set the example,” he says, “Don’t ask a soldier to do something you can’t or won’t do.” I get scared that sometimes he will forget to be careful and he will get hurt. He has deployed so many times already, but he tells me to not worry. “Somebody has to do the job and take care of the younger soldiers.”

I just wish that sometimes he would forget about soldiers and remember me and my sisters. We need him too. I just wish the fighting would stop, then he would be able to stay home with us. I love my daddy to death, but he will never give up on taking care of his soldiers.

THE EFFECTS OF MULTIPLE DEPLOYMENTS ON ARMY ADOLESCENTS

This study examined the effects of multiple deployments through the perspectives of soldiers, spouses, and children. The study sought to identify the factors that predict the level of stress experienced by Army adolescents during a deployment and also to determine the key indicators of the overall ability of Army adolescents to cope with a life of frequent deployments.

The analysis showed that the factors that best predict lower levels of stress in adolescents during a deployment are high participation levels in activities—specifically sports—a strong family, and the adolescents' belief that America supports the war. Interestingly, the cumulative number of previous deployments is not significantly related with adolescent levels of deployment stress.

The study also showed that the best predictors of an adolescent's overall ability to cope with a life of deployments are a strong nondeployed parent, the child's belief that America supports the war, a strong family, and the adolescent's belief that the deployed soldier is making a difference. Of note, the strongest predictor of an adolescent's ability to cope with a life of deployments is the child's perception that their deployed parent is making a difference.

Overall, the study reinforces the necessity of having a strong family and the value of keeping kids busy to mitigate the negative outcomes of an individual deployment. However, the study also highlights the impact of attitudinal factors such as the influence of public opinion concerning the war and the importance—in a life marked by multiple

deployments—of an adolescent’s confidence that their parent’s call to duty is worth the sacrifice.

Despite the findings of this monograph, there are still many unknowns concerning the effects of deployments. We cannot predict how these children will negotiate the often difficult transition to adulthood. Nor do we know how an adolescence spent in the turbulence of a deployed Army will affect these young people when they eventually become parents. But we must applaud this generation of children—often questioned for its lack of resolve—for answering uncertainty with patience, hardship with perseverance, and difficulty with resilience.

ENDNOTES

1. Peter S. Jensen, David Martin, and Henry K. Watanabe, “Children’s Response to Parental Separation during Operation Desert Storm,” *Journal of the American Academy of Child and Adolescent Psychiatry*, Vol. 35, No. 4, 1996, pp. 433-441; Peter S. Jensen, Henry K. Watanabe, John E. Richters, Rosa Cortes, Margaret Roper, and Sharon Liu, “Prevalence of Mental Disorder in Military Children and Adolescents: Findings from a Two-Stage Community Survey,” *Journal of the American Academy of Child and Adolescent Psychiatry*, Vol. 34, No. 11, 1995, pp. 1514-1524; and Leora N. Rosen, Joel M. Teitelbaum, David J. Westhuis, “Children’s Reactions to the Desert Storm Deployment: Initial Findings from a Survey of Army Families,” *Military Medicine*, Vol. 158, No. 7, 1993, pp. 465-469.

2. Angela Huebner, Jay Mancini, Ryan Wilcox, Saralyn Grass, and Gabriel Grass, “Parental Deployment and Youth in Military Families: Exploring Uncertainty and Ambiguous Loss,” *Family Relations*, Vol. 56, 2007, pp. 112-122.

3. Anita Chandra, Rachel M. Burns, Terri Tanielian, Lisa H. Jaycox, and Molly M. Scott, *Understanding the Impact of Deployment on Children and Families: Findings from a Pilot Study of Operation Purple Camp Participants*, RAND working paper, 2008.

4. Anita Chandra, Sandraluz Lara-Cinisomo, Lisa H. Jaycox, Terri Tanielian, Rachel M. Burns, Teague Ruder, and Bing Han, "Children on the Homefront: The Experience of Children From Military Families," *Pediatrics*, Vol. 125, No. 1, 2010, pp. 13-22. The cumulative number of previous deployments (as opposed to the length of deployment) was not associated with a significant difference in child difficulties.

5. Dennis K. Orthner, and Roderick Rose, *SAF V Survey Report, Adjustment of Army Children to Deployment Separations*, Chapel Hill: University of North Carolina at Chapel Hill, 2005.

6. Office of the Under Secretary of Defense for Personnel and Readiness (OUSD[P&R]), *2008 Survey of Active Duty Spouses: Tabulations of Responses*, Washington, DC: U.S. Government Printing Office, February 2009.

7. Eric Flake, Beth Ellen Davis, Patti L Johnson, and Laura S. Middleton, "The Psychosocial Effects of Deployment on Military Children," *Journal of Developmental & Behavioral Pediatrics*, Vol. 30, 2009, pp. 271-278.

8. Samantha L. Quigley, "DoD Works to Lessen Impact of Deployments on Children," American Forces Press Service, June 22, 2009.

9. *Ibid.*

10. Orthner *et. al.*, p. 1.

11. Angela J. Huebner and Jay A. Mancini, *Adjustments Among Adolescents in Military Families When a Parent is Deployed*, Final Report to the Military Family Research Institute and Department of Defense Quality of Life Office, 2005, p. 4.

12. For example, see the e-book by Sara Horn, *The Busy Book: 99 Ways to Stay Busy During Deployment*, available from Sara Horn, *Lulu.com*, 2009.

13. For example, see briefing by Keith Lemmon, George Patrin, and Kris Peterson, *Promoting Psychological Well Being in Military Children and Teens During Family Deployment: A Critical Role for the Primary Care and Behavioral Health Care Professional*, slide 10, available from www.aap.org/sections/uniformedservices/deployment/FHP2008_1.ppt.

14. Charles D. Spielberger, *Manual for the State-Trait Anxiety Inventory (STAI)*. Palo Alto, CA: Consulting Psychologists Press, 1983.

15. B. Birmaher, S. Khetarpal, D. Brent, M. Cully, L. Balach, J. Kaufman, and S. McKenzie Neers, "The Screen for Child Anxiety Related Emotional Disorders (SCARED): Scale Construction and Psychometric Characteristics," *Journal of the American Academy of Child and Adolescent Psychiatry*, Vol. 36, No. 4, 1997, pp. 545-553.

16. The items from the STAI assessed whether the child felt pleasant, nervous and restless, happy, had disturbing thoughts, or had trouble sleeping at night. The items from SCARED assessed whether the child worried about concerns such as other people liking them, being as good as other kids, things working out for them, what would happen in the future, how well they did things, or what had already happened in the past. The Cronbach's Alpha test for reliability for the 14 items was .863.

17. All aspects of this study obtained institutional review board approval from the U.S. Army Human Subjects Research Review Board. Additionally, the study was executed with the approval of the Commanding General, U.S. Army Forces Command.

18. Department of the Army, *Army Profile (FY08)*, available from www.armyg1.army.mil/HR/docs/demographics/FY08%20Army%20Profile.pdf.

19. It is important, however, to temper any study findings with the recognition that lower enlisted families—who may have less developed coping skills, less mature family relationships, and less access to resources—are underrepresented in the sample.

20. Huebner and Mancini, p. 19.

21. A more accurate depiction of this relationship would be a bar or bubble graph such as those used earlier in the paper. A line graph was used in this instance to facilitate comparisons of subsamples while highlighting any trends.

22. See Lisa B. Finkel, Michelle L. Kelley, and Jayne Ashby, Geographic Mobility, Family, and Maternal Variables as Related to the Psychosocial Adjustment of Military Children. *Military Medicine*, Vol. 168, 2003, pp. 1-6.

23. “Significant” in this monograph refers to “statistically significant” and implies a p-value of less than .05.

24. Regression analysis showed an adjusted R^2 of .290. Participation in sports, a strong family, and belief that America supports the war produced changes in R^2 of .141, .101, and .076 respectively.

25. The questions across the surveys differed slightly. The Survey on Army Families (SAF) phrased the question as, “In general, how well does your oldest child between 11 and 17 cope with your spouse being deployed and away from home?” The DoD Spouse Survey asked, “For the child most impacted, how well has your child coped with your spouse’s deployment?” The current study used the SAF wording for parents, but “Overall, how do you think you handle deployments?” for adolescents. The wording was adjusted in the adolescent version to accommodate children and deployed soldiers who did not live together (and thus “away from home” made no sense) and to substitute “handle” instead of “cope” to be more understandable for younger respondents.

26. Based on 17 percent of the 11- to 17-year-old population according to the Department of Defense, *Demographics 2007: Profile of the Military Community*, Washington, DC: U.S. Government Printing Office, 2007.

27. The disparity in perceptions of the ability to cope with deployments among spouses, soldiers, and children was statistically significant across all study subsamples.

28. Regression analysis showed an adjusted R^2 of .237. The adolescent’s belief that the deployed soldier is making a difference, a strong family, the child’s belief that America supports the war, and a strong nondeployed parent produced changes in R^2 of .162, .041, .026, and .020 respectively.

29. From the NCO Creed and Soldier’s Creed respectively.

30. See Mady Wechsler Segal, “The Military and the Family as Greedy Institutions,” *Armed Forces & Society*, Vol. 13, No. 1, 1986, p. 9, based on the work by Lewis A. Coser, *Greedy Institutions: Patterns of Undivided Commitment*, New York: Free Press, 1974.

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