REACH

Supporting Military Families Through Research and Outreach

Deployment and Child Abuse and Neglect: Understanding the Data

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Research

Outreach

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Military REACH, a project of the DoD-USDA Partnership for Military Families, utilizes a multi-disciplinary approach integrating both Research and Outreach to support those who work with and on behalf of military families. Through our three-fold approach, we provide empirical research that identifies and addresses key issues impacting military families and the programs that serve them, offer outreach and professional development through online resources, and host a Live Learning Lab for program staff seeking constructive professional development feedback for their programs.

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Executive Summary

Child abuse and neglect are a problem globally (Krug, Dahlberg, Mercy, Zwi, & Lozano, 2002), and it is important to gain an understanding of the prevalence and the associated risk and protective factors surrounding child abuse and neglect in our own communities. In doing so, it is important to first discuss definitions of child abuse and neglect. These definitions of child abuse and neglect vary by agency and state (Child Welfare Information Gateway, 2014) as do processes for investigating reports of suspected child abuse and neglect (Heyman & Smith Slep, 2009).

In addition to occurring in civilian families, child abuse and neglect can also occur in military families who are a microcosm of society (Cozza et al., 2015). To address child abuse and neglect in the military, in 1981, Congress designated the Family Advocacy Program (FAP) within the Department of Defense (DoD) as the program responsible for the identification, reporting, and treatment of child abuse and neglect. FAP aims to promote family well-being through prevention, intervention, and the development of strong connections to communities (Travis, Heyman, & Smith Slep, 2015). FAP established its own definition of child abuse and neglect and a standardized procedure for assessing reports of suspected child abuse and neglect (U.S. Department of Defense, 2007).

There is much variability in state definitions and processes regarding child abuse and neglect in civilian families. Furthermore, FAP has separate research-based standardized abuse and neglect definitions and processes regarding child abuse and neglect in Active Duty military families. As such, it is difficult to compare rates of abuse and neglect between civilian and military families. However, keeping in mind the limitations of such a comparison, it is possible to carefully evaluate trends in rates of child abuse and neglect in civilian versus military families.

Data from the National Child Abuse and Neglect Data System (U.S. Department of Health & Human Services, 2016) and the DoD FAP Central Registry (U.S. Department of Defense, 2015a) are used in a critical analysis of trends in rates of child abuse and neglect in civilian and military families. This analysis demonstrates that, overall, rates of child abuse and neglect are much lower for military families than for civilian families. The rates of reports of suspected child abuse and neglect have been increasing over time for both military families and civilian families. The rates of confirmed cases of child abuse and neglect are increasing for military families at a slightly faster pace than they are for civilian families, but there are many factors that could account for this difference, including FAP's 2010 implementation of a standard decision tree protocol for the evaluation of reports of suspected child abuse or neglect among military families (U.S. Department of Defense, 2015a).

Even though military families have much lower rates of child abuse and neglect when compared to civilian families, deployment has been suggested as a time when children in military families may be at a higher risk of experiencing abuse or neglect (Sheppard, Malatras, & Israel, 2010).

Through an extensive literature search of multiple databases and search engines and review of over 300 documents, only six peer-reviewed, empirical studies of the direct association between deployment and child abuse and neglect in U.S. Military families were found. These six studies vary greatly in terms of sample characteristics and research methodologies. The types of samples and the methodology used influence the ability to draw firm conclusions regarding relationships between deployment and child abuse and neglect across the entire military populations. In addition, all six studies utilized archival data.

This means that all conclusions are about associations and relationships rather than causation. There is no existing research that can conclude that deployment causes increases or decreases in child abuse and neglect.

Thorough analysis of the six studies indicates that there is consensus that overall rates of child abuse and neglect tend to increase during deployment (Gibbs, Martin, Kupper, & Johnson, 2007; McCarthy et al., 2015; Rentz et al., 2007; Taylor et al., 2016) and that this increase is driven mainly by increases in child neglect (Gibbs et al., 2007; McCarthy et al., 2015). In fact, emotional abuse decreases (Gibbs et al., 2007; McCarthy et al., 2015) and physical abuse decreases (Gibbs et al., 2007) or does not change (McCarthy et al., 2015) during deployment. The discussion of the relationship between child abuse and neglect and other phases of the deployment cycle (e.g., pre-deployment and post-deployment) is less clear and more nuanced. Given that there have only been six studies directly evaluating this relationship, more research is needed to be able to truly understand these associations.

The rates of child abuse and neglect reflect one part of the understanding of the occurrence of abuse and neglect among military and civilian families; understanding the risk and protective factors provide additional insight regarding abuse and neglect. Most models of child abuse and neglect describe abuse and neglect as a result of stressful circumstances or events that are interpreted as threats, as well as caregivers' inability to cope with those threats in adaptive ways. These stressors could relate to caregiver, child, and/or environmental factors. Data suggest multiple individual-related factors (e.g., age, poor mental or physical health) and circumstances (e.g., intimate partner violence, low economic status) increase the risk for child abuse and neglect (Black, Heyman, & Smith Slep, 2001a). Moreover, there are also multiple individual-related factors (e.g., higher self-efficacy, greater satisfaction in romantic relationship) and circumstances (e.g., positive social support network) that are protective against child abuse and neglect (Li, Godinet, & Arnsberger, 2011).

Despite some patterns of findings among various studies (e.g., Brown, Cohen, Johnson, & Salzinger, 1998; Klevens & Leeb, 2010), the data are generally mixed and limit the ability to identify clear variables that consistently increase or mitigate risk. Similar to research on rates of child abuse and neglect, more research is needed to better understand the numerous factors.

The examination of rates of child abuse and neglect in military families generally and during the deployment cycle specifically as well as the exploration of general risk and protective factors have significant implications for policies, programs, and future research. Policies and programs can work to establish best practices, disseminate knowledge, and support military families when they most need it. More research is needed to establish a thorough understanding of the existence of abuse and neglect within military families at all times, including during the deployment cycle.

Deployment and Child Abuse and Neglect: Understanding the Data

Child abuse and neglect are problems with considerable consequences that demand attention. Children who experience abuse or neglect are more likely to have higher levels of depression (Harkness, Stewart, & Wynne-Edwards, 2011; Nanni, Uher, & Danese, 2012), increased behavior problems (Gilbert et al., 2009; Moylan et al., 2009), and deficiencies in social (Luke & Banerjee, 2013) and cognitive skills (Masson, Bussières, East Richard, R-Mercier, & Cellard, 2015). Even into adulthood, the experience of abuse or neglect in childhood is associated with higher levels of depression and anxiety (Lindert et al., 2014), weaker cognitive skills (Masson et al., 2015), more physical health problems (Springer, Sheridan, Kuo, & Carnes, 2007), increased hostility and emotional instability (Khaleque, 2014), and a greater likelihood of attempting suicide (Dube et al., 2001). Adults who experienced abuse or neglect as a child are also at a greater risk for committing child abuse or neglect (e.g., Crouch, Milner, & Thomsen, 2001; Merrill, Thomsen, Crouch, Gold, & Milner, 2005; Milner et al., 2010). Child abuse and neglect are a problem globally (Krug et al., 2002), but it is important to understand the prevalence and risk and protective factors surrounding this problem in our own communities. The first step in doing so is to examine what "child abuse and neglect" actually are.

Definitions of Child Abuse and Neglect

Defining child abuse and neglect (often collectively referred to as "child maltreatment" in the literature) can be difficult as each state has its own legal definitions of the term (Child Welfare Information Gateway, 2014). However, all of these definitions are based on a minimum set forth by the federal government in the Child Abuse Prevention and Treatment Act (CAPTA), which defines child abuse and neglect as:

> Any recent act or failure to act on the part of a parent or caretaker, which results in death, serious physical or emotional harm, sexual abuse, or exploitation, or an act or failure to act which presents an imminent risk of serious harm (*Child Abuse Prevention and Treatment Act*, 1974, amended 2010).

The National Child Abuse and Neglect Data System (NCANDS) is a federally-sponsored entity that collects data on child abuse and neglect from child protective services (CPS) agencies throughout the United States. Given the variability in state and local definitions of child abuse and neglect, NCANDS defines child abuse and neglect using the federal minimum definition set forth in CAPTA (U.S. Department of Health and Human Services, 2016). However, the data NCANDS collects and includes in reports are based upon state definitions since states report data to NCANDS (U.S. Department of Health & Human Services, 2016).

Military families are first and foremost families and therefore encounter many of the same challenges as civilian families, though they may experience these challenges in a different context that is replete with unique stressors and buffers to stress.

Military families are first and foremost families and therefore encounter many of the same challenges as civilian families, though they may experience these challenges in a different context that is replete with unique stressors and buffers to stress. Just as in civilian families, child abuse and neglect occurs in

military families. The Department of Defense (DoD) recognizes this fact and has worked over the course of decades to address the presence of abuse and neglect of military children. As a part of that work, the DoD has developed its own general definition of child abuse and neglect that is used as the basis for evaluating reports of suspected child abuse or neglect within military-connected families. This definition is set forth in DoD Instruction 6400.03 (2014) Family Advocacy Command Assistance Team (FACAT) and DoD Instruction number 6400.06 (2007, updated 2015) regarding Domestic Abuse Involving DoD Military and Certain Affiliated Personnel, which defines child abuse and neglect as:

> The physical or sexual abuse, emotional abuse, or neglect of a child by a parent, guardian, foster parent, or by a caregiver, whether the caregiver is intrafamilial or extrafamilial, under circumstances indicating the child's welfare is harmed or threatened. Such acts by a sibling, other family member, or other person shall be deemed to be child abuse only when the individual is providing care under express or implied agreement with the parent, guardian, or foster parent (E2.5).

It is important to note that incidents of child abuse and neglect are typically considered to fall into four categories: physical abuse, sexual abuse, emotional abuse, and neglect. Although these categories are explicitly named in the DoD definition and not the federal minimum definition, almost all states use these categories to identify incidents of child abuse or neglect (two states reporting data did not include information regarding emotional abuse; all states reported data for all other categories of child abuse and neglect, U.S. Department of Health & Human Services, 2016). These categories are generally defined as follows:

Category	Definition
Physical abuse	acts that caused or had the potential to cause physical injury to a child, such as kicking the child or throwing objects at the child
Sexual abuse	any involvement of a child in a sexual activity to provide the offender with sexual gratification or financial benefit, such as forcing the child to engage in sexual acts or pose for child pornography
Emotional abuse	any act or omission that is not physical or sexual abuse that caused or had the potential to cause adverse effects on the child's psychological well-being, such as verbally abusive behavior or committing violent acts with the child as a witness (sometimes also called psychological abuse)
Neglect	acts or omissions that negatively affect the welfare of a child, such as abandonment, educational neglect, medical neglect, and lack of supervision among other categories depending on local definitions

The differences in defining child abuse and neglect between civilian and military agencies are not the only differences that influence investigations of child abuse and neglect. The processes agencies use to respond to reports of suspected child abuse or neglect also differ significantly between civilian CPS agencies and Family Advocacy Program (FAP) which is the agency that assesses reports of suspected child abuse or neglect in Active Duty military families (Rentz & Martin, 2006).

Process for Assessing Reports of Suspected Child Abuse and Neglect

Civilian families. It is difficult to describe a general process for assessing and investigating reports of suspected child abuse and neglect in the civilian population because the process is different for each state and even varies across municipalities within a single state (Smith Slep & Heyman, 2006). There is no standardized protocol across CPS agencies to determine whether an incident is considered a founded case of child abuse or neglect. There are, however, some general processes that underlie most investigations (DePanfilis & Salus, 2003). Typically, when there is a report of suspected child abuse or neglect, a CPS caseworker conducts interviews with a variety of individuals, including the reporter, the child, siblings, other adults in the home, and the alleged offender. The caseworker then decides whether there is a preponderance of evidence regarding the alleged maltreatment. In many states, incidents are classified as founded (substantiated) or unfounded (unsubstantiated), but some states include a third category of inconclusive or indicated (i.e., there is some evidence of abuse or neglect, but not enough to substantiate the incident; DePanfilis & Salus, 2003). These caseworker decisions regarding substantiation of an incident as child abuse or neglect are sometimes influenced by factors outside of evidence or facts about the incident. These factors can include the physical characteristics of the child, protective measures taken by the non-offending parent, or the alleged offender's experience of abuse or neglect as a child in addition to caseworker's fear of liability and workload management (English, Marshall, Coghlan, Brummel, & Orme, 2002). After the determination is made, the current and future risk to the child are assessed and a family plan for intervention is developed if it is deemed warranted (DePanfilis & Salus, 2003). CPS caseworkers then collect family information over time regarding changes in safety, risk and protective factors, and progress on the family plan and make decisions regarding next steps or closure of cases (DePanfilis & Salus, 2003).

There is no standardized protocol across CPS agencies to determine whether an incident is considered a founded case of child abuse or neglect.

Military families. The DoD has established a consistent method of assessing reports of possible child abuse or neglect in military families through FAP, which collaborates with local CPS during an investigation. FAP is a mandated reporter, and all allegations of child abuse and neglect are referred to the local CPS agency. It is the responsibility of CPS to investigate the allegations and FAP and CPS collaborate and collectively manage the case if it is determined to be maltreatment. After CAPTA was initially enacted in 1974, the Military Services developed guidelines for responses to reports of suspected child abuse or neglect in addition to programs and resources designed to decrease the risk of child abuse and neglect. In 1981, Congress issued a mandate for the DoD to address the presence of family violence in the military community and established funding for the Child Advocacy Program. In response, the DoD changed the name of the Child Advocacy Program to the Family Advocacy Program (FAP), extended it to all military branches, and broadened its reach to encompass domestic abuse as well as child abuse and neglect. FAP aims to promote family well-being through prevention, intervention, education, investigation, and

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treatment as well as the development of strong connections with communities and community agencies (Travis, Heyman, et al., 2015; U.S. Department of Defense, 2015c).

FAP has a standardized protocol for responding to reports of suspected child abuse or neglect in military families (U.S. Department of Defense, 2015b). Each installation is required to have a Family Advocacy Committee which is responsible for the implementation of FAP policy, including the development of Memoranda of Understanding with local civilian agencies (such as CPS) regarding collaboration during investigations of incidents of suspected child abuse or neglect (U.S. Department of Defense, 2015b). When a report of suspected child abuse or neglect comes to FAP, information is collected from the referral source and then military law enforcement, CPS, and Command are notified of the report. At that time, military law enforcement conducts its own criminal investigation as is appropriate and CPS simultaneously conducts its investigation which may include home visits, family court, and temporary placement as is necessary. FAP clinicians complete a clinical assessment including an examination of safety and risk, after which they make referrals to required services. A clinician from FAP presents information regarding the incident at the Incident Determination Committee (IDC)/Case Review meeting. The purpose of the IDC is to decide which reports of suspected child abuse or neglect meet the DoD definitions of abuse and neglect, which requires entry in the DoD FAP Central Registry. This multi-disciplinary committee is composed of individuals representing Command, legal, law enforcement, DoD Education Activity (as applicable), and FAP (Milner, 2015). After the FAP clinician and other committee members present information pertaining to the incident, the committee votes on each step of a computerized decision tree algorithm, entering the votes on each step of the decision tree into the program, which then determines whether an incident meets criteria for child abuse or neglect (Smith Slep & Heyman, 2006). After this decision is made, a Clinical Case Staff Meeting is held and a treatment plan is created based on the outcome of the decision tree, the FAP assessment, and the family's needs. In cases where an incident is determined to meet criteria, the IDC receives periodic case updates to determine whether the family is meeting treatment plan goals.

FAP has a standardized protocol for responding to reports of suspected child abuse or neglect in military families.

This formalized protocol in which a committee, composed of individuals from a variety of backgrounds, utilizes a computerized decision tree algorithm is quite different from the civilian CPS caseworker making a decision about substantiation based on criteria that are often loosely defined (English et al., 2002). It is important to keep these distinctions in mind when considering claims based upon data regarding rates of founded cases of child abuse and neglect in civilian and military populations.

Child Abuse and Neglect in Academic Research

The vast majority of academic research defines child abuse or neglect as incidents that have been deemed founded incidents of child abuse or neglect (Smith Slep & Heyman, 2006). Thus, studies of child abuse and neglect utilize definitions and processes for evaluation inherent to whatever state or agency collected the data and investigated the incidents, leading to heterogeneity among data cited in various studies. This heterogeneity necessitates critical evaluation of data sources and analytic methods when examining research regarding child abuse and neglect as well as data regarding overall rates of child abuse and neglect.

Rates of Child Abuse and Neglect among Civilian and Military Populations

One question that arises when examining the presence of child abuse and neglect in military families is how the rates of child abuse and neglect in military families compare to the rates in civilian families. On the surface, this seems like a relatively straightforward question, however the reality is much more complex than it seems.

Rates of child abuse and neglect in civilian families are reported annually (for each fiscal year) by NCANDS, which collects data on child abuse and neglect from CPS agencies throughout the United States yearly. As mentioned above, every state that reports data through NCANDS has its own definitions of child abuse and neglect based on minimum standards written into federal law and the process of investigating a report of possible child abuse or neglect also varies immensely state to state (and even within each state). Therefore, there is a great deal of variability within the data reported to NCANDS. In addition to this variability, NCANDS data can be incomplete as not every state reports comprehensive data every year (U.S. Department of Health and Human Services, 2016).

The DoD FAP has standardized research-based definitions for child abuse and neglect across all reporting agencies in addition to a central comprehensive database of reports and assessments of child abuse and neglect. These data are reported annually (for each fiscal year). Furthermore, incidents reported to FAP are assessed through a standard protocol (implemented in 2010, U.S. Department of Defense, 2015a) that is meant to increase consistency of judgments regarding whether incidents meet criteria of child abuse and neglect, as described above. The implementation of standard definitions and protocols for evaluating incidents leads to DoD data regarding child abuse and neglect that seems similar superficially but is fundamentally different from the data collected for the civilian population through NCANDS.

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In addition to the differences between data on child abuse and neglect in civilian and military families, there are further nuances to consider. Given that FAP implemented the use of a decision tree algorithm protocol for determining whether an incident met criteria for child abuse or neglect across the Department in 2010, the data regarding child abuse and neglect before 2010 when the decision tree was not used by every Service are different than the data collected after 2010 when the decision tree was used by every service. This is particularly true when compared to civilian data over those same time periods as CPS agencies did not make a similar change to protocol.

Keeping those limitations and nuances in mind, rates of child abuse and neglect can be critically compared between military and civilian families. In order to do so, it is important to examine the data from numerous angles, including scrutinizing the rates of founded cases of child abuse and neglect, the rates of reports of suspected child abuse or neglect, and the percentage of reports that are deemed founded upon investigation. Each of these angles can add a deeper understanding of the data and provide information regarding the usefulness and accuracy of particular explanations of trends and patterns.

Rates of Child Abuse and Neglect

Examining overall rates of child abuse and neglect (i.e., the number of children who have experienced substantiated incidents of abuse or neglect per 1,000 children in the population) demonstrates that military rates are much lower than civilian rates across time, which is consistent with previous analyses (McCarroll, Ursano, Fan, & Newby, 2004; Rentz et al., 2008). It does appear that civilian and military rates are converging (see Figure 1) such that civilian rates have seemed to decrease over time while military rates have seemed to increase over time. However, in looking at the trend among military families, there is a noticeable point at which the rate begins to increase, namely in 2010. As noted above, that is when FAP began using the standard decision tree protocol to evaluate incidents of suspected child abuse or neglect. It is possible that the increase at that time is due in part to the implementation of that standardized protocol, an explanation that can be evaluated in part by looking at data regarding rates of reports of suspected child abuse or neglect in civilian and military families.

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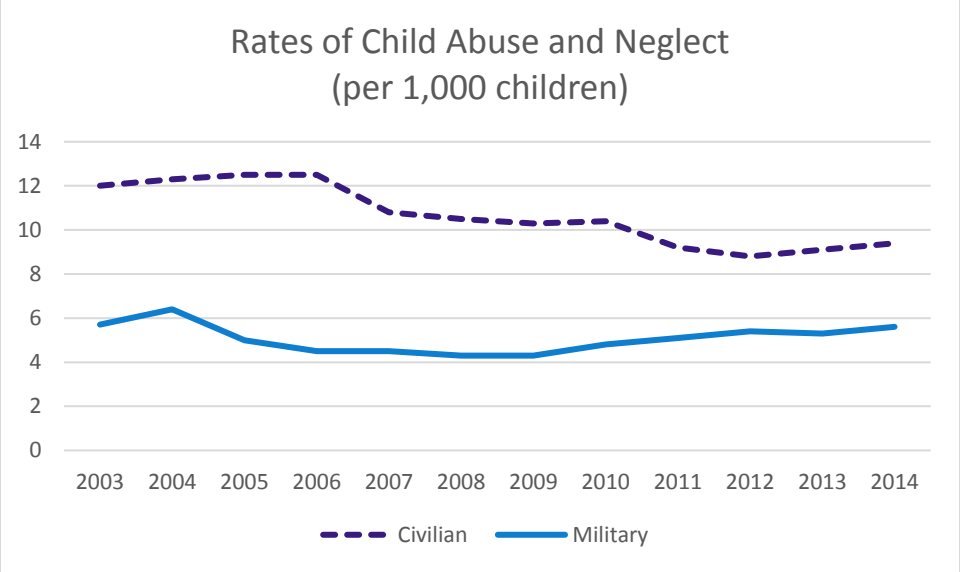

Figure 1. Rates of child abuse and neglect per 1,000 children in military and civilian families from 2003-2014. Data are from NCANDS annual report (U.S. Department of Health & Human Services, 2016) and FAP annual report (U.S. Department of Defense, 2015a)

Rates of Reports of Suspected Child Abuse or Neglect

Examining rates of reports of suspected child abuse or neglect gives more context around the increase in the rate of child abuse and neglect in military families (see Figure 2). The increase in rates of reports of suspected child abuse or neglect in military families is not as steep as the increase in founded child abuse and neglect. There is, however, an increase in reports of suspected child abuse or neglect among military families starting in 2010, which suggests that at least some portion of the rise in overall rates of child abuse and neglect is not due to the implementation of a standard protocol for evaluation. It is notable that among reports of suspected child abuse or neglect, civilian rates also increase over this time period and so the report rates among civilian and military families do not converge in the same way that the rates of founded child abuse and neglect do.

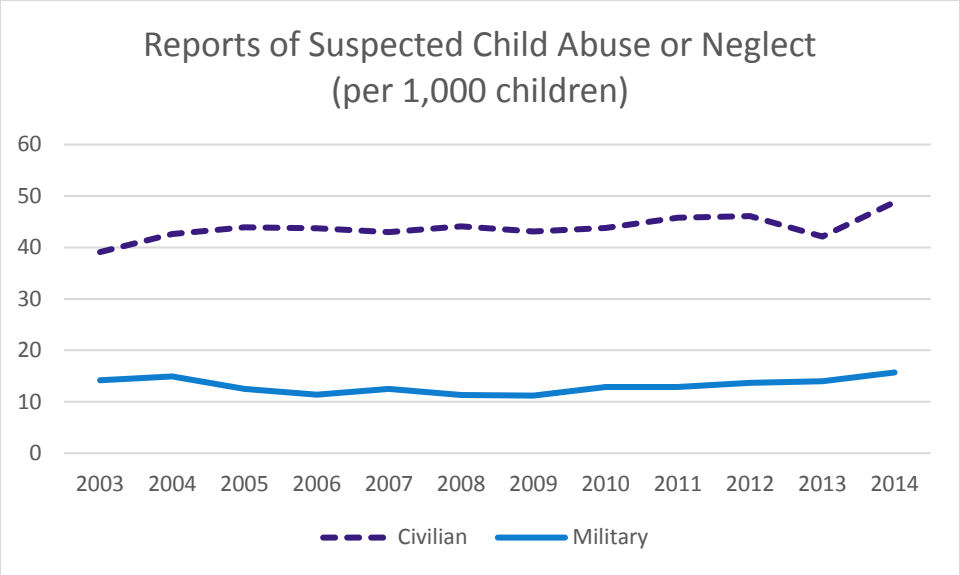

Figure 2. Rates of reports of suspected child abuse or neglect per 1,000 children in military and civilian families from 2003-2014. Data are from NCANDS annual report (U.S. Department of Health & Human Services, 2016) and FAP annual report (U.S. Department of Defense, 2015a).

One explanation of the fact that rates of child abuse and neglect seem to converge while rates of reports of suspected child abuse and neglect do not is that the different processes used to evaluate a report of suspected child abuse or neglect in civilian and military families causes more reports of suspected child abuse and neglect to be considered founded in the military population. One way to evaluate that possible explanation is to examine the percentage of reports that are founded in CPS and FAP investigations over time.

FAP is much more likely to consider an incident to be substantiated than civilian CPS agencies.

Percentage of Reports Considered Founded

In comparing the percentage of reports that are founded, it is clear that FAP is much more likely to consider an incident to be substantiated than civilian CPS agencies are (see Figure 3). Although there is no research that directly examines reasons for this, there are several possible explanations. This may be due in part to FAP's use of the standardized definition and decision tree for the evaluation of reports

that aims to remove much of the role of individual biases and personal opinions in substantiation decisions (Heyman & Smith Slep, 2009). It may also be due in part to a higher threshold for reporting incidents to FAP. Given the formal process in FAP in which all reports are assessed and reported to Command, reporting individuals may feel a need to have stronger suspicions of abuse before reporting those suspicions to FAP. Individuals who are reporting suspicions to CPS, in which about 38% of reports are screened out and not investigated (U.S. Department of Health & Human Services, 2016) and investigations are not reported to employers, may have a lower threshold for the amount of confidence they need about a suspicion before reporting.

Furthermore, the percentage of reports that are founded has been relatively steady for FAP over time, while it has been decreasing among CPS agencies over the same time period. Without a system that monitors and documents changes in processes CPS agencies use to investigate and substantiate claims, this decrease in the percentage of founded cases for CPS could be due to any number of unknown factors or combinations of factors (e.g., reduction in personnel to investigate allegations, changes in policies, etc.). Therefore, cases of child abuse and neglect may appear to be decreasing over time for civilian families due in part to this decrease in the percentage of incidents considered to be founded. Indeed, while there is an apparent convergence of rates of founded child abuse and neglect between military and civilian families, there is an apparent divergence of the percentage of reports considered founded.

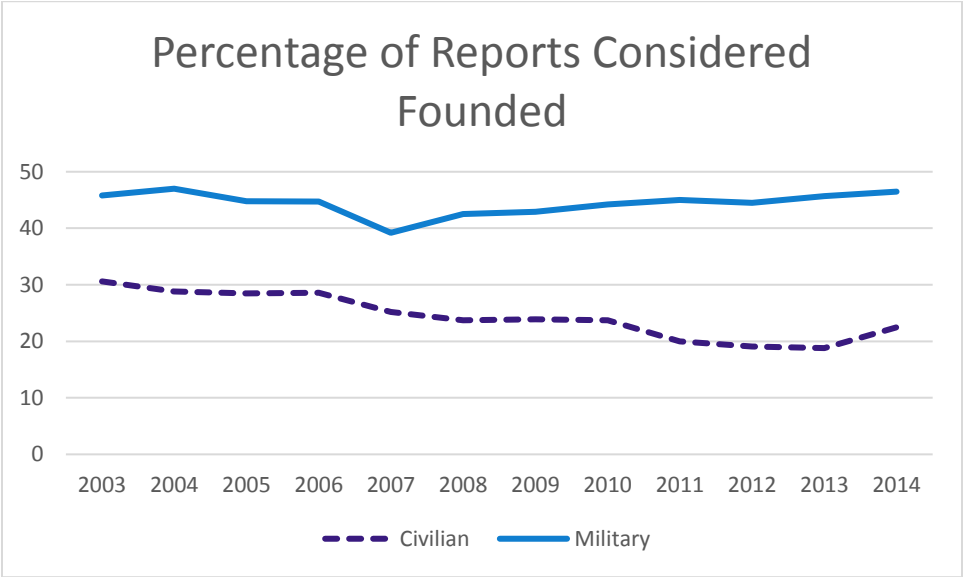

Figure 3. Percentage of reports of suspected child abuse or neglect considered founded per 1,000 children in military and civilian families from 2003-2014. Data are from NCANDS annual report (U.S. Department of Health & Human Services, 2016) and FAP annual report (U.S. Department of Defense, 2015a).

Comparison of Military and Civilian Rates

Taken together, these investigations indicate that rates of reports of suspected child abuse and neglect are increasing over time for both military families and civilian families. The rates of founded cases of child abuse and neglect are increasing for military families at a slightly faster pace than they are for civilian families, but there are many factors that could account for this difference, including the 2010

implementation of the standard decision tree protocol in FAP's evaluation of reports of suspected child abuse or neglect among military families and the non-centralized nature of civilian CPS agencies. The standardization of FAP definitions and protocol compared to the wide variations in definitions and protocol for CPS agencies from state to state and within states is a significant factor that must always be considered when examining these trends.

Even though the military has much lower rates of child abuse and neglect when compared to civilians, it is still worthwhile to examine the unique experience of military families to determine whether there are certain military-specific experiences or factors associated with a higher risk of child abuse or neglect that may be mitigated by prevention and intervention programs. Military families experience life in a unique context that includes certain stressors and buffers to stress not experienced by the civilian community. One experience that is particular to military families is that of parental deployment. Deployment has been suggested as a time when children in military families may be at a higher risk of experiencing abuse or neglect (Sheppard et al., 2010) as an exploration of long-term trends of child abuse and neglect suggest the possibility of increased rates of child abuse and neglect during periods of increased deployment (McCarroll, Fan, Newby, & Ursano, 2008). Therefore, it can be useful to examine what data exists regarding that potential association.

The standardization of FAP definitions and protocol compared to the wide variations in definitions and protocol for CPS agencies from state to state and within states is a significant factor that must always be considered when examining these trends.

Rates of Child Abuse and Neglect during the Deployment Cycle

Deployment is often discussed as a cycle that is composed of three distinct periods: pre-deployment, deployment, and post-deployment (U.S. Department of Defense, 2013). Pre-deployment is a time of preparation for the departure of the Service member parent. The deployment phase begins the day the Service member leaves home and ends when the Service member returns home. During longer deployments, Service members may receive leave to return home for a short period of time during deployment (Gibbs et al., 2007). Post-deployment begins on the day the Service member returns home. This is a time of adjustment for the family, reorganizing responsibilities and reintegrating the Service member into daily family life (Knobloch, Pusateri, Ebata, & McGlaughlin, 2014). When a Service member experiences multiple deployments, the post-deployment aspect of one cycle can run into the pre-deployment aspect of the next cycle, starting the process over again. It is important to note that some researchers combine pre- and post-deployment into one category called non-deployment (e.g., Gibbs et al., 2007).

Often, these different phases of the deployment cycle can come with an increase in stressors (Flake, Davis, Johnson, & Middleton, 2009; Lester et al., 2010; Sheppard et al., 2010; Trautmann, Alhusen, & Gross, 2015), and there is evidence that increased stress is related to increases in child abuse and neglect (e.g., Crouch & Behl, 2001). Therefore it may be useful to start to develop an understanding of how rates of child abuse and neglect may vary over the different phases of the deployment cycle. Doing so can begin to guide the development of policies and programs to support families during parts of the deployment cycle that may be associated with increased rates of child abuse and neglect.

Studies of the Association between Deployment and Child Abuse and Neglect

Through an extensive literature search of multiple databases and search engines and review of over 300 documents, only six peer-reviewed, empirical studies published in peer reviewed journals of the direct association between deployment and child abuse and neglect in U.S. Military families were found. All six studies use the FAP definition of child abuse and neglect as data are from FAP databases, while one of the six (Taylor et al., 2016) uses additional data regarding medical diagnoses of child abuse or neglect. These six studies use a variety of research methods to reach conclusions regarding the relationship between deployment and child abuse and neglect. One (Rentz et al., 2007) examined the number of reports of child abuse and neglect in military families and compared that to the proportion of Service members deploying or returning from deployment in a given month, offering a population view of the association between deployment and child abuse and neglect. In examining this association on the level of a family or individual child, some (e.g., Gibbs, Martin, Kupper, & Johnson, 2007; Taylor et al., 2016) examine the association only in Army families, while others (McCarthy et al., 2015; Rabenhorst et al., 2015; Thomsen et al., 2014) examine the association only in Air Force families. Researchers sometimes restrict the age range of the children (Taylor et al., 2016) or only include incidents of child abuse or neglect by a civilian parent (McCarthy et al., 2015). Furthermore, many of these studies (Gibbs et al., 2007; McCarthy et al., 2015; Taylor et al., 2016; Thomsen et al., 2014) only include families who have experienced a founded incident of abuse or neglect in their sample, which limits the extent to which conclusions can be made about all families. Only one of the six studies includes all deploying Active Duty Airmen in its sample (Rabenhorst et al., 2015).

Through an extensive literature search of multiple databases and search engines and review of over 300 documents, only six peer reviewed, empirical studies of the direct association between deployment and child abuse and neglect in U.S. Military families were found.

The restriction of the sample used for an empirical study limits the extent to which the results of the study can be generalized. Findings from studies of Army families cannot be extended to Marine families because there are a variety of factors that differ in the two populations that may alter the relationship between deployment and child abuse and neglect. Similarly, results from a study of children under two years old cannot support conclusions about the experience of all children because older children may differ from younger children in important ways, such as overall risk for experiencing abuse or neglect (U.S. Department of Health & Human Services, 2016), which also could influence the relationship between deployment and child abuse or neglect. Any conclusions regarding increased or decreased risk of abuse and neglect in studies of families with an experience of founded abuse or neglect cannot be extended to families without founded abuse or neglect as those families may also differ in important ways that alters their experience of deployment and thus changes in risk during that time.

The restriction of the sample used for an empirical study limits the extent to which the results of the study can be generalized.

There is no existing research that can conclude that deployment causes increases or decreases in child abuse and neglect.

In addition to paying careful attention to the type of sample used in each study, it is also important to note the type of data analyzed for each study. In all six studies, data were archival and correlational. This means that all conclusions of the study are conclusions about associations and relationships rather than conclusions about causation. There is no existing research that can conclude that deployment causes increases or decreases in child abuse and neglect. With this understanding, the conclusions of these six studies can be broadly examined to determine what information can be gleaned regarding the possible relationship between the different phases of the deployment cycle and child abuse and neglect (for in-depth analyses of each individual study, see Appendix A).

Pre-deployment

Of the six studies, none focused on the pre-deployment phase of the deployment cycle. Primarily, pre-deployment is used as a reference point and researchers have defined it as any time before deployment rather than defining it as the time between a Service member receiving orders and when he or she deploys (e.g., Thomsen et al., 2014). Future research could examine the rates of child abuse and neglect during the actual pre-deployment phase compared to a time before the Service member receives orders regarding deployment.

Deployment

Four of the identified six studies (Gibbs et al., 2007; McCarthy et al., 2015; Rentz et al., 2007; Taylor et al., 2016) directly report rates of child abuse and neglect during deployment. These studies give a general idea of the ways in which rates of child abuse and neglect are associated with deployment.

Overall rates. All four studies provided support for the existence of an association between deployment and increased overall rates of child abuse and neglect (Gibbs et al., 2007; McCarthy et al., 2015; Rentz et al., 2007; Taylor et al., 2016). Increases in the proportion of deployed Active Duty Service members have been associated with increases in rates of founded child abuse and neglect in military families (Rentz et al., 2007). Furthermore, among families with founded incidents of child abuse or neglect, rates have been found to be higher during deployment when compared to non-deployment (Gibbs et al., 2007) and to pre-deployment (McCarthy et al., 2015; Taylor et al., 2016) in Army (Gibbs et al., 2007; Taylor et al., 2016) and Air Force (McCarthy et al., 2015) samples.

These increases in overall rates of child abuse and neglect seem to be most pronounced for female civilian parent offenders (Gibbs et al., 2007; McCarthy et al., 2015), for children between the ages of two and twelve years old (Gibbs et al., 2007), and for child abuse or neglect classified as moderate or severe (Gibbs et al., 2007). In addition, for Soldiers who experienced two deployments, rates of founded reports of child abuse or neglect were found to be significantly higher during the second deployment compared to rates during the first deployment (Taylor et al 2016).

In addition to the analysis of overall rates, two of these four studies also examine the relationship between deployment and different types of abuse or neglect. These further examinations present a

more nuanced view of this relationship and enable a deeper understanding of what may be driving the changes in rates during deployment.

Physical Abuse. Rates of physical abuse during deployment have been found to be lower when compared to non-deployment times (Gibbs et al., 2007) or unchanged when compared to pre-deployment times (McCarthy et al., 2015). There is mixed evidence regarding whether rates of physical abuse perpetrated by female civilian parents during deployment increases (Gibbs et al., 2007) or not (McCarthy et al., 2015).

Sexual Abuse. Across both studies, rates of sexual abuse remained unchanged during deployment compared to pre-deployment (McCarthy et al., 2015) and compared to non-deployment times (Gibbs et al., 2007).

Emotional Abuse. Rates of emotional abuse were 69% lower during deployment compared to during non-deployment (Gibbs et al., 2007) and 64% lower during deployment when compared to pre-deployment rates (McCarthy et al., 2015).

Neglect. Neglect, on the other hand, has been shown to increase during deployment. The rate of neglect during deployment was almost twice the rate during non-deployment and almost four times higher when restricting analysis to only female civilian parents (Gibbs et al., 2007). Furthermore, rates of severe neglect were almost twice as high during deployment as they were during pre-deployment (McCarthy et al., 2015).

Overall, these four studies indicate that there does seem to be an increase in overall rates of child abuse and neglect during deployment and that it is driven by the increase in neglect. All other forms of child abuse seem to decrease or remain unchanged during deployment.

These four studies indicate that there does seem to be an increase in overall rates of child abuse and neglect during deployment and that it is driven by the increase in neglect.

Post-deployment

Of the six identified studies, five reported changes in rates of child abuse and neglect during post-deployment (McCarthy et al., 2015; Rabenhorst et al., 2015; Rentz et al., 2007; Taylor et al., 2016; Thomsen et al., 2014). These studies use a variety of samples and types of analysis, resulting in findings regarding the rates of child abuse and neglect during the post-deployment period which vary quite a bit. Therefore, it can be difficult to understand the relationship between post-deployment and child abuse and neglect.

Overall Rates. The findings of these studies include support for the post-deployment period being associated with an increase (Rentz et al., 2007; Taylor et al., 2016), decrease (McCarthy et al., 2015; Thomsen et al., 2014), or no change (Rabenhorst et al., 2015) in overall rates of child abuse and neglect. The contradiction of these findings can be difficult to understand, but they may be in part due to differences in definitions of post-deployment, offenders included (e.g., civilian parent versus Service member), or other sampling or methodological differences.

Within this group of studies, post-deployment is defined as the six months after deployment (Taylor et al., 2016), any time after a Service member's first deployment (McCarthy et al., 2015; Rabenhorst et al.,

2015; Thomsen et al., 2014), or the proportion of Service members entering the post-deployment phase in a given month (Rentz et al., 2007). These studies focused on child abuse or neglect perpetrated by the civilian parent (McCarthy et al., 2015), the Active Duty parent (Rabenhorst et al., 2015; Thomsen et al., 2014), or either parent (Rentz et al., 2007; Taylor et al., 2016). Samples included families affiliated with the Army (Taylor et al., 2016), Air Force (McCarthy et al., 2015; Rabenhorst et al., 2015; Thomsen et al., 2014), or multiple branches (Rentz et al., 2007). Different definitions, sampling, and methodology may contribute to the mixed, contradicting findings regarding changes in the rates of child abuse and neglect during the post-deployment period. However, three of these five studies (McCarthy et al., 2015; Rabenhorst et al., 2015; Thomsen et al., 2014) examined changes in rates of each type of child abuse or neglect, which may also give a better understanding of what is happening during the post-deployment period.

Physical Abuse. The evidence suggests that rates of physical abuse do not change during the post-deployment period for civilian parent offenders (McCarthy et al., 2015) or Active Duty parent offenders (Rabenhorst et al., 2015; Thomsen et al., 2014) compared to rates during pre-deployment or deployment.

Sexual Abuse. Rates of sexual abuse perpetrated by Service members may rise during post-deployment, though given the very small number of cases (about 2% of all substantiated incidents of child abuse and neglect), it is difficult to determine whether this is a robust association (Rabenhorst et al., 2015; Thomsen et al., 2014). There is also evidence to suggest that there is no change in rates of sexual abuse perpetrated by civilian parents during post-deployment compared to pre-deployment or deployment, although, again, the very small number of cases (less than 1% of all founded incidents of child abuse and neglect) makes firm conclusions regarding this lack of association difficult (McCarthy et al., 2015).

Emotional Abuse. Rates of emotional abuse seem to decrease during post-deployment compared to pre-deployment or during deployment, both for civilian parent offenders (McCarthy et al., 2015) and Active Duty parent offenders (Rabenhorst et al., 2015; Thomsen et al., 2014).

Neglect. Neglect by civilian parents was found to decrease by 62% post-deployment compared to rates during deployment (McCarthy et al., 2015). For neglect by Active Duty parents, results are more nuanced. Compared to pre-deployment, post-deployment rates of mild neglect (neglectful behavior that is not chronic) fell by 25% while rates of moderate or severe neglect (repeated exposure to neglectful behavior) rose by 47%. When examined further, results indicated that rates of neglect that were classified as moderate or severe that also included perpetrator alcohol use were almost six times higher post-deployment compared to pre-deployment (Thomsen et al., 2014).

Taken together, these studies indicate that deployment seems to be a time of increased risk for child neglect. There is much less clarity regarding other phases of the deployment cycle and results for other forms of child abuse are more nuanced. Again, it is important to remember that all conclusions reached in this investigation of existing research are describing associations between deployment and child abuse and neglect. These conclusions do not support claims regarding causation. Furthermore, the conclusions are limited to the samples studied and cannot be extended to other military branches or other types of families. It is essential to pay careful attention to details regarding research design,

sample characteristics, and method of analysis so as not to extend conclusions and make claims that are not supported by the research.

Given that there have only been six studies directly evaluating this relationship that have varying definitions of deployment phases and methods of analysis, more research is needed to be able to truly understand the association between deployment and child abuse and neglect. Future research could utilize a prospective study of families (with and without founded cases of child abuse or neglect) from multiple branches, following them over the course of deployment cycles in order to grant a better view of the ways in which the deployment cycle interacts with the risk of child abuse and neglect.

Critical analyses of data and existing research demonstrate that overall rates of child abuse and neglect are much lower among military families than civilian families and that there are some associations between deployment and child abuse and neglect.

Critical analyses of data and existing research demonstrate that overall rates of child abuse and neglect are much lower among military families than civilian families and that there are some associations between deployment and child abuse and neglect. Even though children of military families seem to be at lower risk for experiencing child abuse and neglect, it is essential to take note of factors that may increase or decrease that risk. This enables professionals who work with military families to identify those children and families who would benefit most from prevention efforts and to utilize strategies that have the greatest likelihood of decreasing the risk of child abuse and neglect. These factors may be specific to military families during the deployment cycle, specific to military families at all times, or generally applicable to all families. It is important to take note of all three types of factors to create a versatile understanding that will allow professionals to work best with military families to continue to decrease the risk of child abuse and neglect.

Risk Factors for Child Abuse and Neglect

Although the rates of child abuse and neglect are lower in military families than civilian families, the presence of child abuse and neglect in military families reflects some military families managing certain stressors in maladaptive ways. As a result, there is a need to explore factors that may increase or mitigate the risk of child abuse and neglect for military families, generally, as well as specifically around the deployment cycle. These factors can be directly or indirectly related to occurrences of child abuse and neglect. There is a limited amount of research on risk and protective factors for child abuse and neglect related to the deployment cycle, but research regarding risk and protective factors in military families generally and in civilian families can give an understanding of important factors to consider during prevention and intervention efforts. Several models of child abuse and neglect and multiple factors exist, however, an examination of risk and protective factors relevant to perpetrators (i.e., not child-related factors) is most relevant.

Risk Factors

There are numerous models that present theories as to why child abuse and neglect occur in families (e.g., Begle, Dumas, & Hanson, 2010; Hillson & Kuiper, 1994; Milner, 2003). In most models, there are factors that are believed to heighten children's risk of abuse and neglect that include caregiver factors

(e.g., personality characteristics; Crouch et al., 2015; Schaeffer, Alexander, Bethke, & Kretz, 2005), child factors (e.g., child health problems; Slack et al., 2011), and environmental factors (e.g., socioeconomic level; Slack et al., 2011). These risk factors can be understood as stressors that may increase caregivers' abusive or neglectful behaviors.

Hillson and Kuiper (1994) present a Stress and Coping Model of Child Maltreatment (i.e., child abuse and neglect) that proposes that when caregivers encounter stressors, they engage in primary and secondary appraisals of the situation. The appraisals can trigger caregivers' maladaptive coping style or behaviors. If the primary appraisal is that the stressor is a threat and the secondary appraisal is that the caregiver does not have sufficient internal or external resources to adequately address the threat, then unhealthy coping behaviors can occur. Depending on the behaviors caregivers utilize to deal with the stress, they are categorized as a non-maltreating caregiver (e.g., positively engages with their social network, actively plans solutions), a neglectful caregiver (e.g., mentally and physically disengages from parenting and the environment), or an abusive caregiver (e.g., engages in violent or aggressive behavior to release negative emotions related to stressors; Hillson & Kuiper, 1994).

For military families who are in different stages of the deployment cycle, it is possible that the risks of child abuse and neglect may be related to the multiple stressors that increase during the deployment cycle

This model of child abuse and neglect is widely applicable because it focuses on the relationships between common characteristics of caregivers and children as well as environmental experiences that are shared by most families. For military families, these stressors could be specific to experiences in the military (e.g., permanent change of station) or general life stressors (e.g., financial difficulties). For military families who are in different stages of the deployment cycle, it is possible that the risks of child abuse and neglect may be related to the multiple stressors that increase during the deployment cycle for both deployed and non-deployed caregivers.

Risk factors related to stress. All families experience periods of increased stress due to issues such as financial difficulties, mental or physical health concerns, relationship and parenting stressors, or occupational stressors. As previously mentioned, these periods of increased stress, along with limited or decreased resources to manage stress, can lead to maladaptive coping behaviors and responses that may include child abuse and neglect (Hillson & Kuiper, 1994). For example, increased parental depressive symptoms, more parental health problems, and more parenting stress have been found to increase the odds of having an investigated CPS report of neglect (e.g., Lee, 2013; Slack et al., 2011). Parental separation and divorce in families, an experience that typically is associated with significant stress, have been found to co-occur with incidents of child abuse and neglect (Narayan, Cicchetti, Rogosch, & Toth, 2014). Also, indicators of financial stress (e.g., asking family members for financial assistance), which can be related or unrelated to the aforementioned stressors, are associated with increased odds of child neglect (Slack et al., 2011; Warren & Font, 2015) and experiences of financial

stress, independent of income, are related to higher neglect and abuse potential (Cadzow, Armstrong, & Fraser, 1999).

Dealing with these stressors can be distracting for caregivers, and, as such, can impact the amount of attention caregivers give their children. In fact, inadequate caregiver supervision can ensue, which has been found to be its own risk factor of child neglect in that it increases the possibilities of bodily injury or death (Damashek, Drass, & Bonner, 2014; Palusci & Covington, 2014). As is commonly known, not all stress is considered "negative" or bad stress. However, even the occurrence of positive or neutral events can result in maladaptive reactions. For example, family relocation or birth within the last 12 months increased the risk of an investigation of child abuse and neglect, irrespective of parenting stress or economic hardship (Dubanoski & McIntosh, 1984; McDaniel & Slack, 2005).

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Risk factors related to intimate partner violence and substance abuse. Intimate partner violence and substance abuse are often researched along with child abuse and neglect. There are data to support that intimate partner violence (by mother or father) is a risk factor for child abuse and neglect (e.g., Duffy, Hughes, Asnes, & Leventhal, 2015; Nicklas & Mackenzie, 2013), based on high rates of co-occurrence of child abuse and neglect in families with intimate partner violence. Substance abuse has been associated with increased risks of child abuse and neglect (Dubowitz et al., 2011; Haller & Miles, 2003), however, there is a relatively small incidence rate and correlational link between the co-occurrence of child abuse and neglect and substance abuse (e.g., Gibbs et al., 2011; Walsh, MacMillan, & Jamieson, 2003).

Risk factors related to demographic variables. Demographic risk factors that are most researched are gender, age, and race and/or ethnicity; however, there are mixed findings regarding demographic factors that increase risk for child abuse and neglect (Black et al., 2001a; Black, Heyman, & Smith Slep, 2001b). For example, most studies have found a link between gender and the likelihood of an individual being an offender or victim of child abuse and neglect (e.g., Travis, Collins, McCarthy, Rabenhorst, & Milner, 2014); however, there are some data that suggest child neglect and abuse that result in fatalities are more likely for male children (e.g., Welch & Bonner, 2013) as well as more likely committed by male perpetrators (e.g., Whitt-Woosley, Sprang, & Gustman, 2014).

Some data suggest Black and Latino children experience higher rates of reported cases of child abuse and neglect (Raissian, Dierkhising, Geiger, & Schelbe, 2014), which may not necessarily be related to true differences in child abuse and neglect rates due to cultural factors, but rather to a higher amount of cases that are reported and investigated involving racial and ethnic minority families. Further, there are findings that indicate more robust risk factors (e.g., low income levels and single parent households) better explain the risk factors than race or ethnicity (Lanier, Maguire-Jack, Walsh, Drake, & Hubel, 2014). Moreover, more consistent associations between demographic factors related to economic status, such as low income, and child abuse and neglect have been found (e.g., Brown, Cohen, Johnson, & Salzinger, 1998; Slack et al., 2011).

Single-parent status has been associated with increased stress and risk of child abuse and neglect in civilian families, which may also be confounded by economic factors (e.g., Li, Godinet, & Arnsberger,

2011). Many military families may experience the shift to a single-parent household, especially around deployment (e.g., Vaughn-Coaxum, Smith, Iverson, & Voght, 2015). Despite these mixed findings regarding most demographic variables, one pattern has emerged. Overall, there is a negative relationship between caregiver's age and the risk of child abuse and neglect (Brown et al., 1998; Chaffin, Kelleher, & Hollenberg, 1996; Raiha & Soma, 1997) such that, the younger the caregiver, the greater the risk of perpetrating child abuse and neglect. Younger children may also experience more severe outcomes (e.g., death) from abuse or neglect (e.g., Klevens & Leeb, 2010; Lucas et al., 2002; Welch & Bonner, 2013).

Military-related risk factors. Aside from stages in the deployment cycle, a review of the literature yielded no studies that examine military-specific risk factors for child abuse and neglect. As mentioned in earlier sections of this document, the limited data on child abuse and neglect and the deployment cycle has yielded mixed findings. In addition to the deployment cycle, there are other aspects of military life that need further research to explore any links to child abuse and neglect. For example, frequent moves, extended separations, and feeling isolated from family and other support networks are common experiences for many military families. Theoretically, it has been proposed that any military-related experience that significantly increases the stress of caregivers (Service members and civilians), changes household structure, and impairs caregiving practices may become a risk factor for child abuse and neglect (Saltzman et al., 2011); however, not including studies on the deployment cycle, this theory has yet to be empirically supported.

As with the civilian population, lower economic status is associated with increased risk of child abuse and neglect in military families, although, it is indirect, usually defined by the Service members' rank in the research (e.g., junior enlisted Service members versus officers; Chamberlain, Stander, & Merrill, 2003). Substance abuse is associated with an increased risk of child abuse and neglect, although the strength of this link has varied across different studies (Gibbs et al., 2011; Travis et al., 2014). There is some evidence that suggests there may be a relatively high incidence rate of domestic violence in military families (e.g., Rentz, 2006), though it is important to note that this is only one study from which generalized conclusions cannot be made as other data suggest the incidence is lower in military families than civilian families (Black & Merrick, 2013). However, observation of intimate partner violence by children is sometimes viewed as a form of emotional abuse (Jellen, McCarroll, & Thayer, 2001). Further, several studies found positive links between intimate partner violence and child abuse and neglect (e.g., Merrill, Crouch, Thomsen, & Guimond, 2004; Rumm, Cummings, Krauss, Bell, & Rivara, 2000), suggesting intimate partner violence may be associated with an increased risk of child abuse and neglect. Injuries or combat exposure during deployment may be another risk factor of child abuse and neglect (Davis, Hanson, Zamir, Gewirtz, & DeGarmo, 2015; Hisle-Gorman et al., 2015).

Protective Factors

Among the research on child abuse and neglect, there appears to be a focus on examining the factors that increase, rather than reduce, the risk of abuse and neglect (e.g., Stith et al., 2009). Although identifying risk factors is vital, there is a need to discuss the modifiable and non-modifiable factors that protect children from the experience of abuse or neglect as well. However, due to the tendency to focus on risk factors in the literature, there is limited data on protective factors related to child abuse and neglect.

Relational protective factors. Data on general protective factors in the civilian and military populations are limited. As mentioned in the previously discussed model of child abuse and neglect, caregivers' ability to access and utilize resources is an important factor in how they respond to stress. Social support is a common resource caregivers use to help reduce their stress as they manage responses to stressful events. Further, caregivers' social support is often cited as a protective factor of child abuse and neglect (e.g., Li et al., 2011) and caregivers' reports of social support were negatively related to occurrences of child abuse and neglect (e.g., Coohey, 2000; Sidebotham & Heron, 2006). Having two parents in a household is a protective factor (Travis, Walker, et al., 2015) against abuse and neglect. Further, caregivers' report of satisfaction with their romantic relationship and with parenthood was negatively related with child abuse and neglect (Thornberry et al., 2013). When caregivers' have a greater awareness of the availability of neighborhood social services (e.g., domestic violence resources, mental health services), there tends to be lower levels of child physical abuse and perceived accessibility of those services is associated with lower levels of child neglect (Maguire-Jack & Negash, 2016).

Caregivers' ability to access and utilize resources is an important factor in how they respond to stress

Individual protective factors. Higher self-efficacy among caregivers and increased involvement in their children's activities were related to reduced odds of a CPS investigation of child neglect (Slack et al., 2011). Also, data suggest that maternal education of 12 years or more (Li et al., 2011) is a protective factor against child abuse and neglect. Positive father involvement in children's lives was linked to reduced risk of child neglect (Lee, 2013).

Military-related protective factors. General military protective factors include at least one employed parent (which indicates a reliable source of income), higher rates of two-parent households (which is related to lower rates of child abuse and neglect), and military-related programs and policies that support families during relocations as well as with each stage of the deployment cycle (Gibbs et al., 2011). Further, there are military programs and services that specifically support families and children, such as the Army New Parent Support Program (Schaeffer, Alexander, Bethke, & Kretz, 2005), which is particularly important as that program is a DoD-wide program that provides intensive home visitation and aims its early intervention services toward Service members who have been identified as being at higher risk since they tend to be younger and, as a result, less financially stable. For all Service members' and their families, there is FAP, which is an important protective factor against child abuse and neglect (Chamberlain et al., 2003).

For all Service members' and their families, there is FAP, which is an important protective factor against child abuse and neglect (Chamberlain et al., 2003).

The goal of this review was to complement the discussion on outcomes and rates in the previous sections by discussing additional components, risk and protective factors, that influence abuse and neglect of children. Risk factors related to caregivers' abuse and neglect are often interrelated and it can be difficult to determine which factors pose the greatest risk. Similarly, protective factors are often interconnected and identifying which aspects are most protective can be difficult as well. Moreover, understanding the types and degrees of risk and protective factors present challenges not only for

continued research in the field, but also for ways to translate this knowledge in applied settings for professionals who work with at-risk families. Despite the complexity inherent in the study of child abuse and neglect, in both military and civilian families, several patterns and trends emerge based on these data that are helpful in applied settings. Further, also based on the data, several recommendations are presented related to how to decrease risk factors and increase protective factors.

Conclusion and Recommendations

Child abuse and neglect can have long-lasting, significant consequences (e.g., Dube et al., 2001; Khaleque, 2014). Military families are at risk for child abuse and neglect just like any other family, though rates of abuse and neglect among military families are lower than rates for civilian families (McCarroll, Ursano, Fan, & Newby, 2004; Rentz et al., 2008). Even so, military families exist in a context that includes unique stressors and buffers to stress that may be associated with changes in risk for child abuse and neglect (e.g., Crouch & Behl, 2001). One such stressor is the experience of parental deployment, which appears to be related to an increased risk for child neglect (Gibbs et al., 2007; McCarthy et al., 2015). More research is needed regarding other phases of the deployment cycle and other types of child abuse as findings are more nuanced in those areas. Outside of the deployment cycle, there are known risk and protective factors surrounding child abuse and neglect which may allow for targeted programming and policies to mitigate potential increased risk. These findings have actionable implications for policies, programs, and future research.

Policies could:

- Continue to support FAP and its work in prevention, identification, intervention, and treatment for all military families
- Encourage training for professionals who work with military families regarding the unique stressors these families encounter, including during deployment and separation
- Promote further research and investigation of risk and protective factors surrounding child abuse and neglect in military families, generally and during the deployment cycle
- Recommend screening for child abuse and neglect for those families who are most at risk
- Endorse the development of programs for military families who are in crisis or caregivers who feel they are at imminent risk for perpetrating child abuse and neglect

Programs could:

- Focus on families who are most at risk for child abuse and neglect, including single-parent households, families with younger caregivers and/or younger children, junior enlisted Service members, and families with other stressors (such as financial difficulties, recent moves, and caring for family members with illnesses or special needs)
- Investigate possible barriers to resources faced by caregivers during parental deployment to make sure resources are as readily available and accessible as possible
- Develop spaces for caregivers to engage with each other to create systems of social support that can remain intact during parental deployment

- Talk with caregivers to determine what their highest needs are during deployment and how best to support them throughout the whole deployment cycle
- Develop curricula to disseminate during parenting programs regarding neglect and what caregivers can do if they feel like they are at high risk for neglecting their children

Future research could:

- Utilize a prospective design, following families from multiple branches across deployment cycles to gain a better understanding of the relationship between deployment and changes in risk of child abuse or neglect
- Investigate factors that increase the risk of child abuse and neglect in military families, both during the deployment cycle and during other times
- Evaluate the efficacy of prevention and intervention programs
- Examine the experience of families of Service members in the Reserve Component with regard to risk of child abuse and neglect during the deployment cycle

Critical analysis of quantitative data and the cultivating of connections with military families in an effort to understand their qualitative experiences are needed to grasp the experiences of military families, especially around the deployment cycle. With this continued research deepening the understanding of child abuse and neglect in military families, programs and policies will be able to be continually evaluated and modified to meet the needs of families and protect children.

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Appendix A - In-Depth Analysis of Studies of the Association between Deployment and Child Abuse and Neglect

Taylor, C. M., Ross, M. E., Wood, J. N., Griffis, H. M., Harb, G. C., Mi, L., ... Rubin, D. M. (2016). Differential child maltreatment risk across deployment periods of US Army soldiers. *American Journal of Public Health, 106*(1), 153-158. http://doi.org/10.2105/AJPH.2015.302874	
Sample:	Children under 2 years old who experienced a founded incident of child abuse or neglect with one parent serving in the U.S. Army who had served at least 3 consecutive years and had experienced one or two deployments.
Key findings:	• Founded incidents and medical diagnoses of child abuse and neglect occurred at a significantly higher rate in the first six months after deployment compared to the last six months before deployment. • Rates of founded incidents of child abuse and neglect were significantly higher during deployment compared to the last six months before deployment. • For Soldiers who experienced two deployments, rates of founded incidents of child abuse and neglect were significantly higher during the second deployment compared to rates during the first deployment. This does not extend to medical diagnoses of child abuse and neglect.
Limitations:	• This study only included Army families, so results cannot be generalized to other military branches. • Analyses were restricted to children under 2 years old. This age group has a higher risk for experiencing abuse and neglect in the general population, therefore results may not be able to be extended to other age groups. • Researchers only included Soldiers who had experienced one or two deployments. The relationship between deployment and child abuse and neglect may differ for Soldiers who have experienced more than two deployments. • Families in which both parents are Service members were excluded because of the difficulty defining the deployment cycle with multiple Active Duty parents. Those families may experience deployment differently than the families included in this study. • Data were analyzed only from families in which the Service member had served at least three consecutive years in the Army. The relationship between deployment and child abuse and neglect may be different for families of newer Service members. • This study uses archival data, which do not allow for claims about causation. The key findings describe relationships and associations but cannot be considered causational.
Notes:	• Pre-deployment was defined as 0-6 months before a Soldier's first deployment. • Post-deployment was defined as 0-6 months after a Soldier's deployment if the Soldier only experienced one deployment or 0-6 months after a Soldier's second deployment if the Soldier experienced two deployments. • For Soldiers included in the study who experienced two deployments, the time between the first and second deployment was called inter-deployment. • Authors noted that many of the perpetrators of child abuse and neglect were not Soldiers, so interventions or programs directed at only Soldiers may not be enough to prevent the increased rates of abuse and neglect.

In-Depth Analysis of Studies of the Association between Deployment and Child Abuse and Neglect

McCarthy, R. J., Rabenhorst, M. M., Thomsen, C. J., Milner, J. S., Travis, W. J., Copeland, C. W., & Foster, R. E. (2015). Child maltreatment among civilian parents before, during, and after deployment in United States Air Force families. *Psychology of Violence, 5*(1), 26.	
Sample:	Children of an Active Duty Air Force parent with a combat-related deployment who experienced founded incidents of child abuse or neglect perpetrated by their civilian parent during the study period.
Key Findings:	• Rates of child abuse and neglect perpetrated by civilian parents decreased during post-deployment compared to pre-deployment rates (by 15%). This is particularly true for children of Airmen who experienced multiple deployments or deployments that were longest in length. This decrease was limited to incidents in which there was no alcohol use by the civilian parent and incidents not classified as "moderate or severe." • Rates of child abuse and neglect perpetrated by civilian parents increased significantly (by 52%) during deployment (when compared to pre-deployment). During this time, rates of physical and sexual abuse were unchanged, while rates of emotional abuse decreased by 64% and rates of neglect increased by 124%. Notably, rates of severe neglect increased 202% during deployment compared to pre-deployment. • The rate of child abuse and neglect by civilian parents during post-deployment decreased 56% compared to rates during deployment. During this time, neglect decreased by 62% while emotional abuse increased by 89%. • Rates of child abuse and neglect by civilian parents was highest during deployment. These increases only occurred for female civilian parents, not for male civilian parents.
Limitations:	• Rates of child abuse and neglect included in the study only include those perpetrated by a civilian parent, so findings from this study cannot be extended to child abuse or neglect perpetrated by Service members. • The sample from this study comes from the Air Force which limits the ability to extend the findings to other military branches. • The definitions of pre-deployment and post-deployment are different than the normative definitions, which does not allow conclusions to be extended to the periods typically called pre-deployment and post-deployment. • The sample was limited to families in which there was at least one founded incident of child abuse or neglect. Findings regarding changes in risk during deployment cannot be extended to all families as families who do not have a founded incident of abuse or neglect may differ from families who do in important ways that may influence these findings. • Data are archival and therefore cannot be used to make any conclusions regarding causal relationships.
Notes:	• Pre-deployment was defined as any time before the Active Duty parent's first deployment. • Deployment was defined as any time during which the Active Duty parent was deployed. • Post-deployment was defined as any time after the Active Duty parent's first deployment when the Active Duty parent was not subsequently deployed. • The average child was in the sample for 1.9 years before the Active Duty parent first deployed, 0.6 years while the Active Duty parent was deployed, and 3.2 years after the first deployment.

In-Depth Analysis of Studies of the Association between Deployment and Child Abuse and Neglect

	Rabenhorst, M. M., McCarthy, R. J., Thomsen, C. J., Milner, J. S., Travis, W. J., & Colasanti, M. P. (2015). Child maltreatment among U.S. Air Force parents deployed in support of Operation Iraqi Freedom/Operation Enduring Freedom. *Child Maltreatment, 20*, 61–71. http://doi.org/10.1177/1077559514560625
Sample:	All Active Duty Air Force personnel who were deployed for at least 31 days and had least one child under the age of 18 during the study period.
Key findings:	• No overall changes in rates of child abuse and neglect were found between pre- and post-deployment. • More specifically, rates for neglect and physical abuse were unchanged from pre-deployment to post-deployment, and the rate for emotional abuse decreased after deployment. • Rates of abuse and neglect considered mild or not involving child injury decreased post-deployment relative to pre-deployment, but moderate or severe abuse and neglect and abuse and neglect involving child injury increased post-deployment relative to pre-deployment. • Rates of abuse and neglect involving offender alcohol use increased from pre-deployment to post-deployment. • About 2% of deploying parents perpetrated child abuse and neglect in the study, and most of the incidents were conducted by deploying fathers. Deploying parents who were unmarried/divorced, having lower socioeconomic status, and less education were more likely to abuse or neglect their children.
Limitations:	• Researchers only examined child abuse and neglect incidents perpetrated by the Active Duty parent, so results cannot be extended to civilian parents or other caregivers. • Conclusions cannot be made about the deployment phase of the deployment cycle given data that only includes incidents perpetrated by Service members. • The results were based on Air Force data only, so they cannot be generalized to other military branches. • The definitions of pre-deployment and post-deployment are different than the normative definitions, which does not allow conclusions to be extended to the periods typically called pre-deployment and post-deployment. • Data are archival and therefore cannot be used to make any conclusions regarding causal relationships.
Notes:	• Pre-deployment was defined as any time before the Service member's first deployment, which was on average just under 2 years. • Post-deployment was defined as any time after the Service member's first deployment, which was on average just over 3 years. • Researchers included all Active Duty Service members who had deployed and had children under 18 years old, which allows for conclusions to be extended to Service members whose families do not have founded incidents of child abuse or neglect.

In-Depth Analysis of Studies of the Association between Deployment and Child Abuse and Neglect

	Thomsen, C. J., Rabenhorst, M. M., McCarthy, R. J., Milner, J. S., Travis, W. J., Foster, R. E., & Copeland, C. W. (2014). Child maltreatment before and after combat-related deployment among active-duty United States Air Force maltreating parents. *Psychology of Violence, 4*(2), 143–155. http://doi.org/10.1037/a0031766
Sample:	Children who had experienced founded child abuse or neglect perpetrated by an Active Duty Air Force parent during the study period.
Key Findings:	• The overall rate of child abuse and neglect by the Active Duty parent was 13% lower post-deployment than pre-deployment. • This relationship held for fathers (but not mothers), enlisted Airmen (but not officers), and parents whose longest deployment lasted 3 to 6 months (but not for parents whose deployment was shorter or longer). • The decreases in child abuse and neglect were seen in overall rates of abuse and neglect, but this decrease only occurred for emotional abuse (which decreased by 47%) and incidents in which the parent did not use alcohol (which decreased by 20%; rates of incidents involving alcohol use did not change). • Rates of neglect were more nuanced. Rates of mild neglect fell by 25% while rates of moderate or severe neglect rose by 47% and rates of neglect that were classified as moderate or severe which also included perpetrator alcohol use were almost six times higher post-deployment compared to pre-deployment. • Rates of sexual abuse rose post-deployment to ten times what they were pre-deployment. This analysis includes a very small number of cases, particularly pre-deployment, which makes it difficult to make conclusions around this finding.
Limitations:	• This study only looks at the incidents of child abuse and neglect among the Active Duty parent, so findings cannot be extended to civilian parents. • This study only includes data from the Air Force which limits what can be said about other military branches in terms of the relationship between deployment and child neglect and abuse by the Active Duty parent. • Data are archival and therefore cannot be used to make any conclusions regarding causal relationships. • The sample was limited to families in which there was at least one founded incident of child abuse or neglect perpetrated by an Active Duty parent. Findings regarding changes in risk during deployment cannot be extended to families with no incidents of child abuse or neglect or to families with incidents of child abuse and neglect perpetrated by the civilian parent.
Notes:	• Pre-deployment was defined as any time before the Active Duty parent's first deployment. • Deployment was defined as any time during which the Active Duty parent was deployed. • Post-deployment was defined as any time after the Active Duty parent's first deployment when the Active Duty parent was not subsequently deployed.

In-Depth Analysis of Studies of the Association between Deployment and Child Abuse and Neglect

Gibbs, D. A., Martin, S. L., Kupper, L. L., & Johnson, R. E. (2007). Child maltreatment in enlisted soldiers' families during combat-related deployments. *JAMA, 298*(5), 528–535. http://doi.org/10.1001/jama.298.5.528	
Sample:	Families of enlisted Army Soldiers who had experienced at least one combat-related deployment during the study period, and had experienced founded incidents of child abuse or neglect by a parent.
Key findings:	• The rate of child abuse and neglect was 42% higher during deployment compared to non-deployment for families with at least one founded incident of child abuse or neglect. • During deployment, the rate of child neglect was twice the rate during non-deployment, whereas rates of emotional abuse and physical abuse were much lower during deployment compared to non-deployment. • Rates of abuse and neglect perpetrated by a female civilian parent during spousal deployment were over three times greater than rates not during spousal deployment. This is particularly true for neglect, for which rates are almost four times higher during deployment than during non-deployment. • Rates of abuse and neglect were significantly greater for children ages 2-12 years old during deployment compared to non-deployment, but rates did not differ for children under 2 years old or over 12 years old.
Limitations:	• Researchers combined the pre- and post-deployment rates into one "non-deployment" category, so differences between pre- and post-deployment are lost, which may influence the examination of rates during deployment. • The sample was limited to families in which there was at least one founded incident of child abuse or neglect. Findings regarding changes in risk during deployment cannot be extended to all families as families who do not have a founded incident of abuse or neglect may differ from families who do in important ways that may influence these findings. • The sample only included Army families, therefore findings may not be applicable to other military branches. • The analysis did not include officer families because of the small number of founded child abuse and neglect incidents in those families. Results cannot be extended to officers' families because the relationship between deployment and child abuse and neglect may differ in those families. • The study was limited to combat-related deployments, so results cannot be generalized to non-combat-related deployments.
Notes:	• Deployment was defined as the time between when a Soldier left for deployment and when he or she returned home at the end of the deployment. It included leave periods (when the Soldier returned home) during longer deployments. • Non-deployment included all times when the Soldier was not deployed.

	Rentz, E. D., Marshall, S. W., Loomis, D., Casteel, C., Martin, S. L., & Gibbs, D. A. (2007). Effect of deployment on the occurrence of child maltreatment in military and nonmilitary families. *American Journal of Epidemiology, 165*(10), 1199–1206. http://doi.org/10.1093/aje/kwm008
Sample:	This is a population-level time-series study, including rates of child abuse and neglect for all Texas children from military or civilian families.
Key findings:	• The rate of occurrence of founded child abuse and neglect was slightly higher in civilian families compared to military families. • Rates of founded child abuse and neglect were relatively stable over the study period for civilian families, but among military families, the rate began to increase in the last six months of 2002 and then substantially increased in January of 2003, which coincided with a higher percentage of deployments of Texas Service members. • The rate of founded child abuse and neglect after October 2002 was double the rate before 2002, while the rates for civilian families remained stable, which again was associated with an increase in deployments. • Among military families, for each 1% increase in the proportion of Active Duty Service members departing for deployment, there was a 28% increase in founded child abuse and neglect rates (analyzed by month). • Similarly, for each 1% increase in the proportion of Active Duty Service members returning from deployment, there was a 31% increase in founded child abuse and neglect rates.
Limitations:	• The study was based on Texas data only, so results cannot be extended to other locations. • The research used aggregate data, therefore it could not provide individual-level information, including whether the families in which child abuse and neglect occurred were also the families with a deploying Service member. • Families of Service members in the Reserve Component, who may not have as many social support services as Active Duty military families do, were not included in the study, so results cannot be generalized to those families. • This is a time-series analysis which does not allow for conclusions about causation.
Notes:	• Deployment was defined as the percentage of Active Duty Service members deploying each month. • Post-deployment was defined as the percentage of Active Duty Service members returning home from deployment each month. • The outcome variable was the rate of founded child abuse and neglect incidents, calculated on a monthly basis.

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