



Getty image, Licensed to Army Public Health Center

## *What We Know, What We Don't Know, and What's Next*

*Approved for public release. Distribution unlimited.*

Released December 2021



Table of Contents

6 Introduction

10 The Holistic Health of the Army Family

12 Chapter 1: Characterizing the Army Family

20 Chapter 2: Family Life at the Home Duty Station

48 Family Health and Unique Military Events

50 Chapter 3: The Deployment Cycle

60 Chapter 4: Permanent Change of Station

74 Chapter 5: Transitions Within and Out of the Army

84 The Future Army Family

86 Chapter 6: The Incoming Generation of Soldiers

90 What’s Next

92 Chapter 7: Calls to Action: Summary and Priorities

98 Conclusions and Implications

99 Appendices

The mention of any non-federal entity and/or its products is not to be construed or interpreted, in any manner, as federal endorsement of that non-federal entity or its products.



New Jersey National Guard photo by Mark C. Olsen



U.S. Army photo by Pat Molnar

*What We Know, What We Don’t Know, and What’s Next*



**A** rmy Medicine's primary mission is to support the Total Force by enabling readiness and conserving the fighting strength while caring for our people and their families. The *Army People Strategy* shows the commitment of Army Senior Leaders to increase support for Soldiers and Families. We know the health, quality of life, and satisfaction of Army Families greatly impacts the total Army Force of tomorrow as well as the individual health and readiness of Soldiers today. Tomorrow's Soldiers are likely to come from military families, which is one of the reasons we are working daily to provide Soldiers and their Families access to high-quality healthcare and behavioral health services. This will enhance the Army's readiness over multiple generations.

I am pleased to release this inaugural *Health of the Army Family* report, brought to you by the U.S. Army Public Health Center, which also produces the annual *Health of the Force* report. The *Health of the Army Family* report synthesizes existing literature about Army Family health and features spotlights on pressing issues that affect Army Families. The report examines health holistically to provide a comprehensive understanding of the current environmental, family readiness, healthcare delivery, physical, psychological, sociodemographic, and spiritual factors impacting family health and quality of life. It is a complement to the *Health of the Force* report, which focuses exclusively on Soldier readiness at the installation level.

Today's Army Family experiences unique challenges, stressors, and systems. It is important to understand the health status of the Army Family so that we can ensure their needs are being met and address any gaps. Not only does the *Health of the Army Family* report provide a snapshot of Family health, it also offers specific actionable recommendations for multiple audiences that include Soldiers and their Families, Army leaders, researchers and evaluators, policy makers, and program proponents. It is my sincere hope that the information in this new and needed report drives action to optimize the health of the Army Family. The strength of our Soldiers is in our families.

"Army Medicine is Army Strong!"

**Lt. Gen. R. Scott Dingle**

45th U.S. Army Surgeon General and Commander, U.S. Army Medical Command



**D** ear Army Families:  
Last year the Secretary of the Army, Chief of Staff of the Army, and the Sergeant Major of the Army announced "People" as our top priority. The Army wins through its people.

As director of the Army's Quality of Life Task Force and the Army's Deputy Chief of Staff, G-9 (Installations), I am dedicated to championing and delivering to our people unmatched quality of life, which helps ensure Army readiness and our ability to fight and win on the battlefield.

COVID-19 has affected your lives as Soldiers and Family members, but we will continue working to improve your quality of life in the face of these

added challenges. Improving your quality of life is our enduring mission. Through the Quality of Life Task Force, we are focused on improving military housing, ensuring the best healthcare, expanding access to child care, improving career opportunities for spouses, and reducing the complexity of moving.

I am pleased to endorse this inaugural *Health of the Army Family* report, which synthesizes what has long been our focus. There are many impacts on quality of life; this report shows how they interact with military life through events such as relocation and deployment. The report spotlights several key quality-of-life issues, including the impact of relocation on spouse employment and Exceptional Army Families.

Finally, the report recommends actions for Soldiers, Families, Army leaders, researchers and evaluators, program proponents, and policy makers. The work to optimize Army quality of life and the health of the Army Family cannot be done by any of us alone.

Army Chief of Staff Gen. James McConville has made it clear that we will aggressively pursue the Army's priorities of readiness and modernization, but it's people who deliver them. We are guided by a philosophy of "people first" and the Army Installations Strategy to take care of Soldiers and Families. You are the Army's greatest strength.

This report helps us understand what we have already accomplished in taking care of people and where we still need to go. I urge you to use this report as a key tool in our united efforts.

**Lt. Gen. Jason T. Evans**

Deputy Chief of Staff, G-9, and Director, Army Quality of Life Task Force

# Introduction

Army leadership has long expressed interest in learning more about the health of the Army Family. While an abundance of information exists about Active Duty Soldiers, information about the Army Family is comparatively limited and de-centralized, and actionable recommendations to optimize Army Family health are sparse. Worldwide, the Coronavirus Disease 2019 (COVID-19) pandemic has highlighted the intersection of multiple domains of health, such as physical, psychological, financial, health care access, and demographic factors. These domains of health relate to a myriad of health outcomes and experiences and are specifically explored in this report on the health of the Army Family.

The launch of the *Army People Strategy* in fall 2019 further illustrates the value of focusing on the Army's people, including Soldiers and their Families, who have felt immense stress and demands in the last two decades. As General McConville, the Army's Chief of Staff, said in February 2021, "by prioritizing people first, the Army is signaling that investing resources in our people initiatives is the most effective way to accomplish our constant mission—to deploy, fight, and win our nation's wars by providing ready, prompt, and sustained land dominance by Army forces across the full spectrum of conflict as part of the Joint Force" (U.S. Army 2021).

**In this inaugural *Health of the Army Family* report, the U.S. Army Public Health Center (APHC) seeks to synthesize and communicate what is known and unknown about the health of the Army Family and the unique military events that affect, and are affected by, the Family's health status. This report speaks to the foundational need to understand, monitor, and optimize the health of the Army Family as a key building block of Soldier readiness and retention as well as a primary focus of "People First."**

## Overview

Understanding the health of the Army Family begins with a comprehensive review of available data systems and sources to determine what metrics are available and how those metrics collectively portray the health status, needs, and strengths of the Army Family. This report synthesizes findings from available data systems and sources, a review of research and evaluation literature, and primary APHC data collection efforts to identify gaps in knowledge that may inform future investigations (Appendix A provides detailed methodology). **This report is unique in its inclusion of data-driven actionable recommendations for diverse audiences, such as Soldiers and Family members, Army leaders, researchers and evaluators, and policy makers and program proponents.**

To ensure an inclusive and systematic assessment of Army Family health, this review is organized around a Military Family Lifecycle framework (see Figure 1), based in part on the Department of Defense Transition Assistance Program (DoD TAP) Military Lifecycle Model (U.S. Department of Defense (DOD) 2020). Each component represents a distinct phase in the life of Soldiers and their Families that can affect Soldier readiness. For the intents and purposes of this report, the Military Family Lifecycle includes the phases of joining the military, family life at the home duty station, deployment, relocation, Soldier career transitions, and the incoming generation of Soldiers. This report provides a current portrait of the Army Family and their experiences across this life cycle. This report also uses a holistic view of health and

includes seven critical domains: Physical Health, Psychological Health, Spiritual Health, Family Readiness, Healthcare Delivery, Environment and Housing, and Sociodemographic Factors (see Table 1). These domains offer an additional lens through which to understand the experiences of Army Families, and to indicate which areas of health are well represented

in the literature and existing data sources, and where more research is needed. These health domains and definitions originate from the Ready and Resilient Campaign Plan (U.S. Army 2020a), Total Force Fitness (Defense Health Agency 2020), and the National Prevention Strategy (National Prevention Council 2011).

Figure 1. Military Family Lifecycle Framework

### Characterizing the Army Family



Table 1. Health Domains and Definitions

Domain	Definition
Physical	Focused on aspects of an individual’s physical body, including the absence or presence of chronic and acute illness and injury, and those behaviors that affect individuals’ well-being, such as physical activity, nutrition, sleep, and substance use.
Psychological	Focused on an individual’s cognitive, emotional, and behavioral practices and their abilities to realize their own potential, cope with the normal stresses of life, work productively and fruitfully, and make a contribution to their community.
Spiritual	Elements that define the essence of a person, enable one to build inner strength, make meaning of experiences, behave ethically, persevere through challenges, and be resilient when faced with adversity.
Family Readiness	State of being prepared to effectively navigate the challenges of daily living experienced in the unique context of military service.
Healthcare Delivery	Concerned with access and quality of health care.
Environment and Housing	Concerned with all aspects of the natural and built environment affecting human health.
Sociodemographic Factors	Economic and social conditions that influence individual and group differences in health.

While Army Family health research and data exist within some of these health domains, other health domains are less understood. This report identifies the current state of knowledge, gaps in knowledge, and recommendations or “calls to action” for acting upon available data and/or filling data gaps.



Orientation

The *Health of the Army Family* report begins with a characterization and current definition of the Army Family. This is followed by a description of Army Family health at the home duty station, which summarizes data and literature across the seven domains of health. The report then details the health of the Army Family as experienced through unique military events, such as permanent changes of station (PCS), deployment, and transition out of the Army. Information on the incoming generation of Soldiers is then presented. Finally, the report contains a prioritized summary of high-level calls to action and ends with conclusions and implications.

The following are some important notes regarding the information provided in this report (additional details are available in Appendix B):

- The report focuses primarily on the health of Active Duty Army Families.
- The report describes and presents information from a variety of data sources, which may reflect different data collection and reporting time frames. The report primarily focuses on literature published between 2010 and 2020 and provides the most recent data available from relevant sources at the time it was written.
- Where feasible, military populations are compared to the civilian population. This comparison is not always possible due to factors such as different healthcare delivery and payment systems.
- Unlike other reports that are able to showcase various data points by age, gender, race and ethnicity, and installation or command, this report largely provides information on the Army Family as a whole.
- The report is very limited in its inclusion of traditional medical surveillance information for Army Family members. This is both because of the lack of a comprehensive surveillance capability for Family members within the DOD at present and because of the more holistic, quality of life lens through which this report is oriented.

In this report, the terms “Service member” or “military” refer to findings that apply to one or more branches of military service (i.e., Army, Navy, Air Force, Marine Corps, Coast Guard, and Space Force). Figures representing data from more than one Service are in shades of purple. The terms “Soldier” and “Army” refer to findings and recommendations for those who serve in the Army, with figures representing data from Army Soldiers and their spouses or children appearing in shades of green.

When possible, the report provides information on available resources to support Family members. These highlighted resources are not a comprehensive or exhaustive list of what is available to Families and instead provides a snapshot of where Army Family members can go for assistance in a particular health domain or during a particular phase of the Military Family Lifecycle. The report also provides nine spotlights on key issues or areas of interest at present, including but not limited to the impact of the COVID-19 pandemic, the impact of PCS moves on Exceptional Army Families, the challenges of retaining female Service members, and more. These spotlights are embedded throughout relevant report chapters.

The calls to action throughout and at the end of the report speak to four broad audiences: Soldiers and Family members, Army Leaders, Researchers and Evaluators, and Policy Makers/Program Proponents. Each of these groups plays a critical role in optimizing the health of the Army Family and can take specific steps to action what is known from existing research and data as well as fill critical information gaps. These audiences are not mutually exclusive and may not be comprehensive. Additionally, many other calls to action can potentially be derived from the information presented throughout this report. Thus, readers are encouraged to use the calls to action embedded throughout as an initial step toward advancing knowledge of the Army Family health status, identifying what works to improve Army Family health, and improving Army Family health across multiple health domains and throughout all phases of the Military Family Lifecycle.

## *The Holistic Health of the Army Family*

### **Chapter 1: Characterizing the Army Family**



# Characterizing the Army Family



## What We Know

### The Army Family of Today

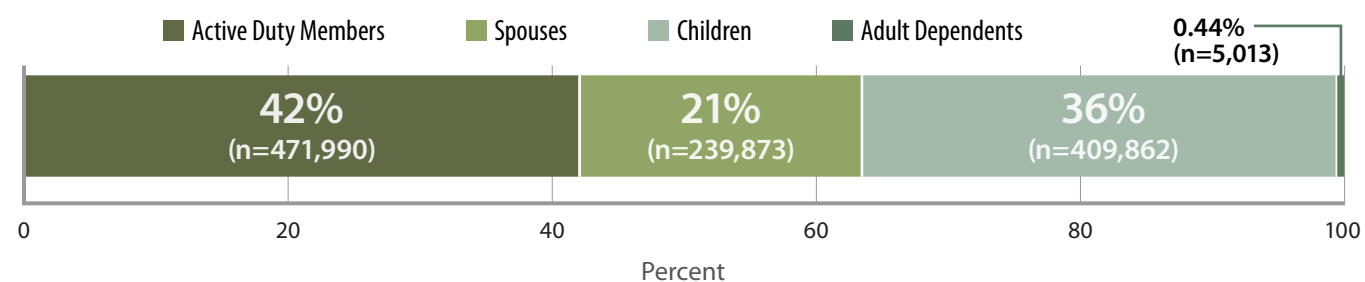
Despite the significant role the Army Family plays in Soldier readiness and retention, there is no formal definition of “family” within DOD or other government agencies (National Academies of Sciences, Engineering, and Medicine (NASEM) 2019). **For the purposes of this report and consistency with included data, the Army Family is defined as Active Duty Soldiers, their spouses, and dependents (e.g., child or adult dependents). The primary focus of this report is specifically Soldiers’ spouses and dependents; other Army-wide reports, such as the *Health of the Force*, focus on the health status of Active Duty Soldiers.**

As of 2018, there were 471,990 Active Duty Soldiers serving in United States Army. Just over one-half (57%) of these Soldiers had a spouse and/or child or adult dependents, totaling 654,748 Army Family members (U.S. Department of Defense 2018). Figure 2 indicates that Family members make up a significant portion of the Army Family.

Of Active Duty Soldiers, 54% were married and 42% had children. The largest age group (41%) of Army children was below 5 years of age and 32% were between 6 to 11 years of age. Figure 3 shows the varying make up of Army Families; the majority of single Soldiers do not have children, the majority of Soldiers with a civilian spouse have children, and just over half of dual military couples have children.

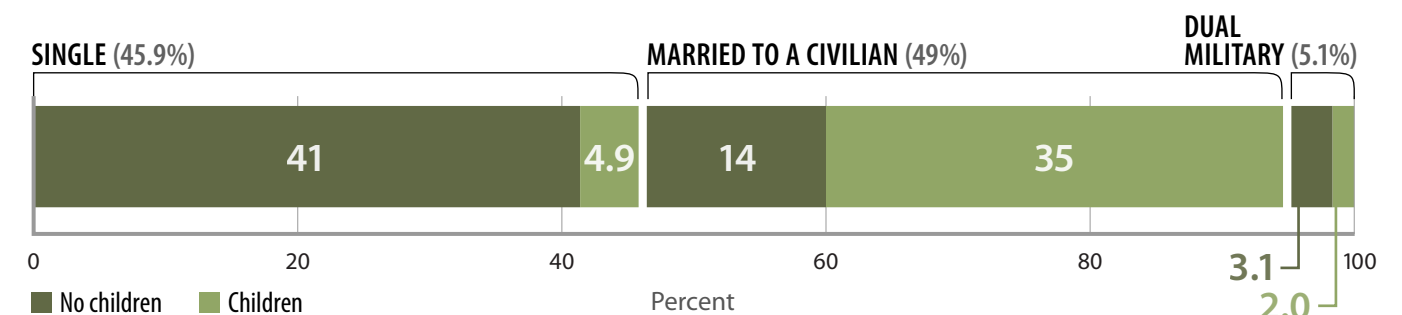
In terms of eligibility for military programs, services, and benefits, a military family includes immediate members related by blood, marriage, birth, or adoption to a current member of the U.S. Armed Forces, including one who is deceased. Individuals who do not meet these criteria (e.g., cohabiting partners) are often ineligible for benefits and overlooked by research efforts. Such limitations create a gap in current knowledge of key individuals who impact Soldier readiness and retention. Recent recommendations from the NASEM (2019) suggest a more inclusive definition of family to improve alignment between tracking of Army Family members, resource provision, and the diverse and often complex reality of military family life.

Figure 2. Composition of the Army Family Beneficiary Population, 2018



Data source: 2018 Military OneSource Demographics Profile (U.S. Department of Defense 2018). Percentages represent Army-specific data.

Figure 3. Army Soldier Marital and Dependent Status, 2018



Data source: 2018 Military OneSource Demographics Profile (U.S. Department of Defense 2018). Percentages represent Army-specific data.

### Expanding the Definition of Family

A detailed review of evidence (NASEM 2019) suggests that although many DOD policies, programs, and services address the well-being of military families, they do not fully capture the diversity of today’s military families and their unique needs. The Army of today is not only comprised of single and married Soldiers and their dependents, it is also comprised of Soldiers in committed long-term relationships, those who co-parent with former spouses or partners, and same-sex couples. Therefore, the NASEM recommended a broader definition of Family that honors Service members’ own perspectives, definitions, and realities.

Specifically, the NASEM report suggests inclusion of the following categories, some of which are already included in the definition of the military family:

- People to whom Service members are related by blood, marriage, or adoption, which may include spouses, children, parents, or siblings.
- People for whom Service members have a responsibility to provide care, which may include unmarried partners and their children, dependent adults, or others.
- People who provide critical care for Service members (i.e., caregivers).

It is important to note that the NASEM does not imply all benefits and services currently available to military beneficiaries be extended to a broader population. Rather, it is essential to recognize the evolution of family structures and to identify means by which the Army can achieve an inclusive definition of family and be innovative in how the team reaches those who collectively support our Soldiers. This issue is further explored in the spotlights, *Modern Army Families – The Unique Stressors and Needs of Lesbian, Gay, Bisexual, and Transgender Soldiers and their Families* and *Understanding the Needs of Soldiers’ Caregivers*.

## Modern Army Families – THE UNIQUE STRESSORS AND NEEDS OF LESBIAN, GAY, BISEXUAL, AND TRANSGENDER SOLDIERS AND THEIR FAMILIES

Despite the 2011 repeal of “Don’t Ask, Don’t Tell”—the policy that prohibited openly Lesbian, Gay, and Bisexual (LGB) persons from military service—the U.S. Army still lacks an understanding of the unique needs and stressors faced by LGB and Transgender (LGBT) Soldiers and their Families. Data on Active Duty Army Soldiers from the *2018 Workplace and Gender Relations Survey of Active Duty Members (WGRA)* showed that 14% of female survey respondents (Figure 4) and 3% of male survey respondents (Figure 5) identified as LGB (Office of People Analytics (OPA) 2019a)\*. It is also critical to note that 7% of female respondents and 5% of male respondents selected “prefer not to answer,” indicating **there is a subset of Soldiers on which the Army lacks visibility with regard to sexual orientation; and that up to 23% of female Soldiers and 9% of male Soldiers may be sexual minorities for whom disparity information is not available.**

Figure 4. Sexual Orientation of Active Duty Female Soldiers by Rank, 2018.

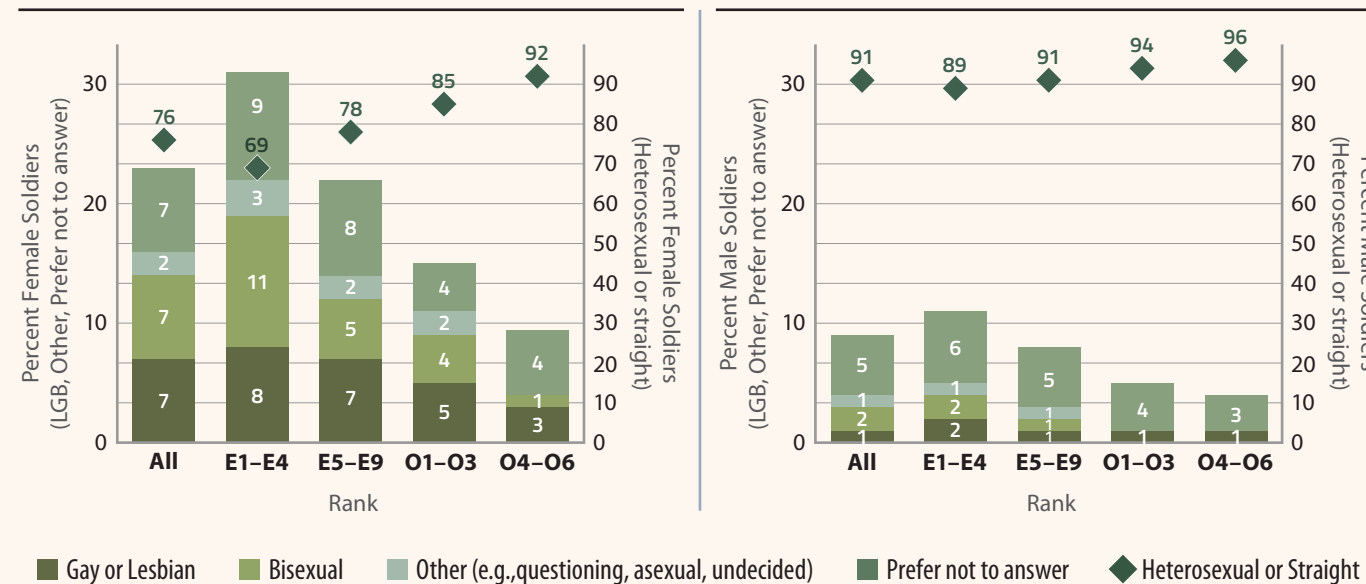
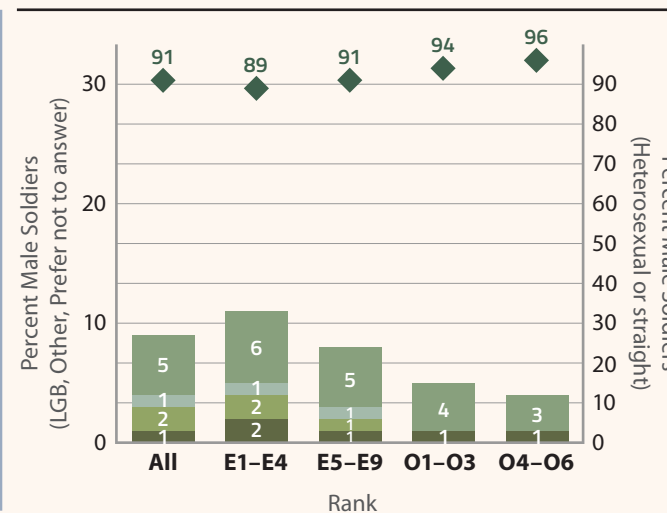


Figure 5. Sexual Orientation of Active Duty Male Soldiers by Rank, 2018.



Data source: 2018 Workplace and Gender Relations Survey of Active Duty Members (OPA 2019a).  
Percentages represent Army-specific data.

\* The 2018 Workplace and Gender Relations Survey of Active Duty Members did not include a question on the gender identity of Service members. As a result, similar demographics or outcomes for transgender Service members, who are also an underrepresented and understudied military population, cannot be reported.

LGBT people face unique stressors due to their status as sexual and gender minorities. Stressors can range from perceived stigma to sexual victimization (Meyer and Frost 2013). For example, results of the 2018 WGRA for DOD Service members showed that 0.4% of non-LGB males reported sexual assault compared to 3.7% of LGB males. Similarly, 4.8% of non-LGB females reported sexual assault compared to 9.0% of LGB females. There is no information on what the secondary effects of these traumatic experiences may be on both LGB Service members and their Families.

The 2015 DOD *Health Related Behaviors Survey of Active Duty Service Members* reported that compared with non-LGBT military personnel, LGBT Service members experience higher rates of severe depression (8.8% vs. 14%), lifetime suicide attempt (4.6% vs. 13%), and lifetime unwanted sexual contact (15% vs. 40%). The authors of this report recommended that disparities for LGBT Service members be examined further to specifically address the needs of this population (Meadows et al. 2018). While there is limited data on LGBT Service members, there is little-to-no data on their Family members or Family members who may be LGBT themselves.

The significant lack of data on LGBT Soldiers, their families, as well as sexual and gender minority Family members, means that Army leaders lack visibility on disparities and outcomes that affect the personal and professional lives of these team members. Engaging in targeted data collection for LGBT Soldiers, their Family members, and LGBT Family members of heterosexual Soldiers will allow the Army to assess the needs of these sub-groups more accurately. Based upon these needs, the Army can design programs, policies, and services to address disparities where they exist, and facilitate more equitable outcomes.

For instance, LGBT Soldiers and their Family members may require specific services tailored to fit their needs. The Sexual Harassment/Assault Response & Prevention (SHARP) program is available to all Soldiers and adult Family members (18 years and older) who are eligible for treatment in the Military Health System (U.S. Army 2020b) and, therefore, is a resource for LGBT Soldiers and Family members who may have experienced a sexual assault. At this time, Army resources specific to LGBT Soldiers and Family members of these Soldiers or who are LGBT themselves appear limited or non-existent. Organizations external to the U.S. Army and DOD are available as sources of information, guidance, and advocacy.



Captain Sarah Caine is the squadron chaplain for 2-6 Cavalry Squadron, 25th Combat Aviation Brigade, 25th Infantry Division at Wheeler Army Airfield, Hawaii. Caine is relaunching a chapel service that is fully LGBTQ+ affirming and celebrating! It's focused on spiritual themes but doesn't require a specific faith background or any faith background. (U.S. Army photo by Sgt. Sarah D. Sangster)

## SPOTLIGHT

# Understanding the Needs of Soldiers' Caregivers

Caregivers play a vital role in the health and well-being of Soldiers in the military. A military caregiver is defined as someone who provides unpaid assistance to a wounded, ill, or injured Service member with activities they once did on their own, but are no longer able to do for themselves; such assistance may entail help with day-to-day activities such as personal hygiene tasks, or providing supervision to ensure safety. Caregivers enhance the quality of life of their Service members by facilitating and improving their recovery, rehabilitation, and reintegration, often at the expense of their own livelihood. Research indicates that time spent providing caregiving support can lead to loss of income, employment, and/or health care—potentially resulting in substantial physical, emotional, and financial stress (Ramchand et al. 2014).

According to the 2014 RAND® Hidden Heroes report, military caregivers experience worse health outcomes, greater relationship strain, and more workplace problems compared to non-caregivers (Ramchand et al. 2014). There are numerous military, Veteran, corporate, agency, and non-profit programs and services available to meet the needs of caregivers. However, there is a significant gap in the utilization of available services and resources designed to support wounded warriors and their Families.

In an effort to connect caregivers of wounded, ill, or injured Service members with the appropriate resources, APHC conducted a needs assessment to determine the level of burden experienced by Soldiers' caregivers and to assess the services used and/or needed to provide optimal caregiver support. The APHC Caregivers Survey collected data from 106 Army caregivers across four Army installations from May 2018 to May 2019. **The survey focused on the level of burden associated with providing caregiver support, the health status of the caregiver population, the services used (or needed) to provide caregiver support, and the need for caregiver support training.**

Responses to the survey indicated that overall, caregiver burden is high, yet caregivers most commonly self-identified their health as "good," "very good," or "excellent." Caregivers are mainly spouses (71%) who provide physical and emotional support for daily living activities. The majority of caregivers (72%) indicated that their care recipient had posttraumatic stress disorder (PTSD), and 79% of caregivers

**71%**  
OF CAREGIVERS SURVEYED  
**WERE SPOUSES**

reported that they provide care 7 days per week (APHC 2021a). Caregivers spend a substantial amount of their own resources (e.g., finances and time) to provide caregiving support, and nonetheless maintain a determined sense of responsibility to continue caring for their recipients. Caregivers provide general (e.g., cooking, housework) and specific assistance related to social, economic, or emotional support (e.g., discussing stressful topics). Caregivers reported their care recipients depend on them and, despite the associated burdens, caregivers indicated "rarely" or "never" feeling animosity towards their care recipient (APHC 2021a).

Table 2. Identified Caregiver Needs, 2018–2019

Resources / Services	Education / Training Social Support
Training	Focus on emotional support Method: online webinars/tutorials

Data source: Caregivers Survey, APHC 2021a

As shown in Table 2, survey participants expressed a desire for additional training and education to become more effective at providing caregiving, general social support, assistance navigating the military or Veterans Affairs (VA) health system, and child/family support. Online webinars and tutorials were identified as the preferred method of training, with a focus on emotional support for themselves as well as a better understanding of their care recipient's condition. Many participants are interested in online or social media caregiving support group/forum discussion and exchange of information.



## What We Don't Know and What's Next

While data are routinely collected on Army Family beneficiaries, including spouses, children, and adult dependents of Active Duty Soldiers, this is not the case for non-traditional family members, such as unmarried partners and extended support systems (e.g., parents, close friends), who may also be filling critical caregiving roles. Restricting the scope of the Army Family hinders the ability to understand the needs of these Family members.

Focused efforts to understand, describe, and celebrate the diversity of Army Families today will increase awareness of these vital, yet often overlooked, members of a Soldier's support system. These efforts will also facilitate the ability to resource and develop programs, services, and policies tailored to optimize the health of these Family members and enable them to better navigate military life and support their Active Duty Soldier.



U.S. Army, APHC Photo by John Graham Snodgrass



## CALL to ACTION

and program proponents. The summary below provides concrete actions that stakeholders at all levels can take to optimize Army Family health.

The information outlined in this chapter begins to describe the composition of the Army Family based on the current scope of data sources and systems. It highlights areas for consideration for those who have a vested interest in the health of the Army Family, including Soldiers and Family members, Army leaders, researchers and evaluators, and policy makers

### SOLDIERS AND FAMILIES

- Visit an Army Community Service (ACS) Center to learn about quality of life programs. Connecting with ACS Centers may help create visibility for the diversity of Army Family realities.
- Explore quality of life programs (e.g., ACS, Army Family and Morale, Welfare, and Recreation (MWR)) online at <https://www.armymwr.com>.
- Visit the Army Community Resource Guides (CRGs) online to know what is available at an assigned installation and more at <https://crg.amedd.army.mil/>.
- Maintain awareness into changes to policies that may expand who is eligible for military services and programs.
- Discuss your family structure and the people who provide you support with your leaders and health-care team.

### ARMY LEADERS

- Communicate with Soldiers in the chain of command to better understand who constitutes family for them, and acknowledge the importance of these individuals in supporting Soldiers.
- Use inclusive language when communicating with Soldiers about their families and support systems.
- Support and encourage policy makers and program proponents to modify policy and practices from the evidence-based portrait of the Army Family.

### RESEARCHERS AND EVALUATORS

- Develop and administer data collection tools that improve understanding of who makes up the Army Family.
- Determine the extent to which restricting the scope of Army Family members to only beneficiaries impacts the health and quality of life of the broader Army Family.
- Summarize results for Army leaders and policy makers; offer recommendations to develop or expand services based on newly-revealed family demographics, or how programs and services may be modified to accommodate a variety of family structures and contexts.

### POLICY MAKERS AND PROGRAM PROPONENTS

- Enact existing recommendations to broaden the definition of Army Family.
- Examine existing policies and eliminate barriers that prevent recognition and support to the Family members who provide critical support to Soldiers.
- Develop innovative means to communicate with and support nontraditional Army Family members when feasible.
- Ensure future policies recognize and support the diversity of Army Families.



U.S. Army, APHC Photo by John Graham Snodgrass

## *The Holistic Health of the Army Family*

### **Chapter 2: Family Life at the Home Duty Station**



# Family Life at the Home Duty Station



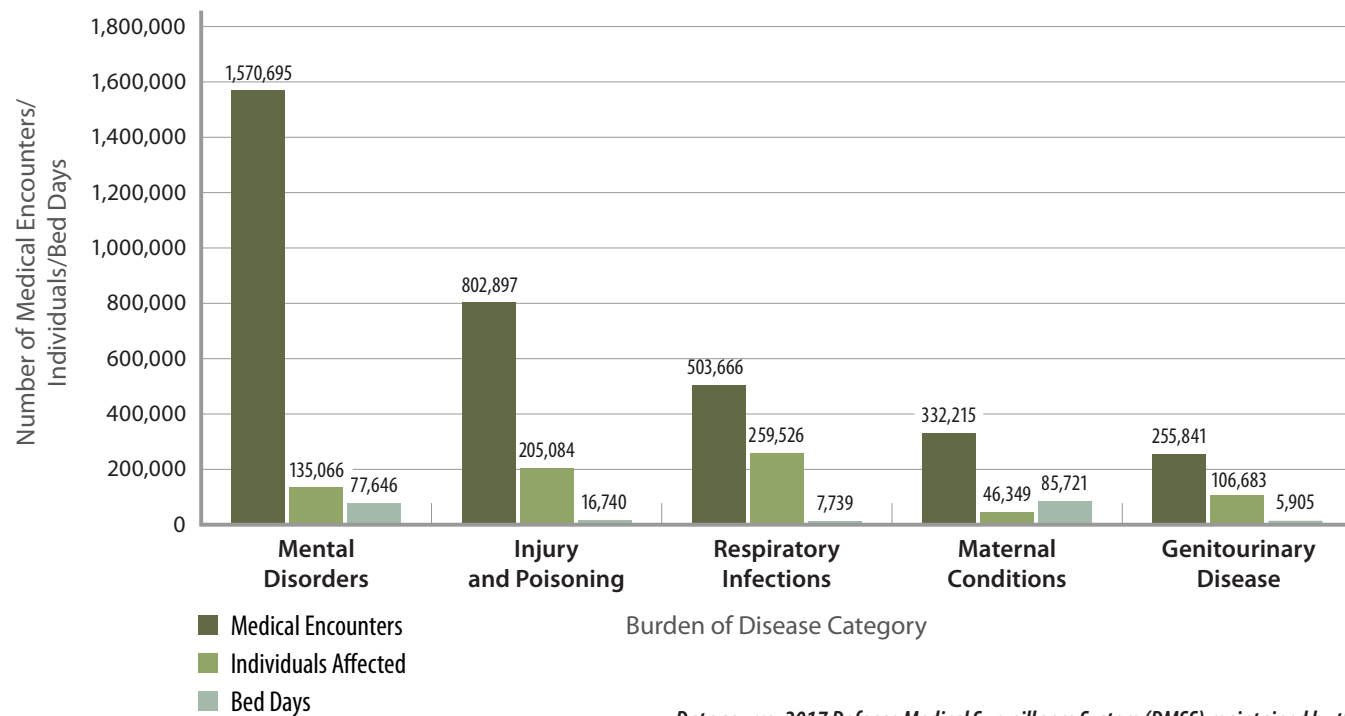
## What We Know

Army Families may face unique circumstances that can affect their health throughout the Military Family Lifecycle. This section focuses on Army Family health at the home duty station where families spend the majority of their time. The section takes a deeper dive into the seven domains of health to share what is known about Army Families in each. The information that follows is oriented around describing what we know within each of the domains of health, indicating gaps and future directions, and providing a call to action for partners across the Army.

### Physical Health

Physical health focuses on aspects of an individual's physical body, including the absence or presence of chronic and acute illness and injury, and those behaviors that affect individuals' well-being, such as physical activity, nutrition, sleep, and substance use (adapted from World Health Organization 2020 and U.S. Army 2014). According to Defense Medical Surveillance System (DMSS) data from 2017, the majority of medical encounters for Army beneficiaries overall were for mental disorders, followed by injury and poisoning, respiratory infections, maternal conditions, and genitourinary disease (Figure 6). However, an individual Army Family member is most likely to be affected by respiratory disease, followed by injury or poisoning.

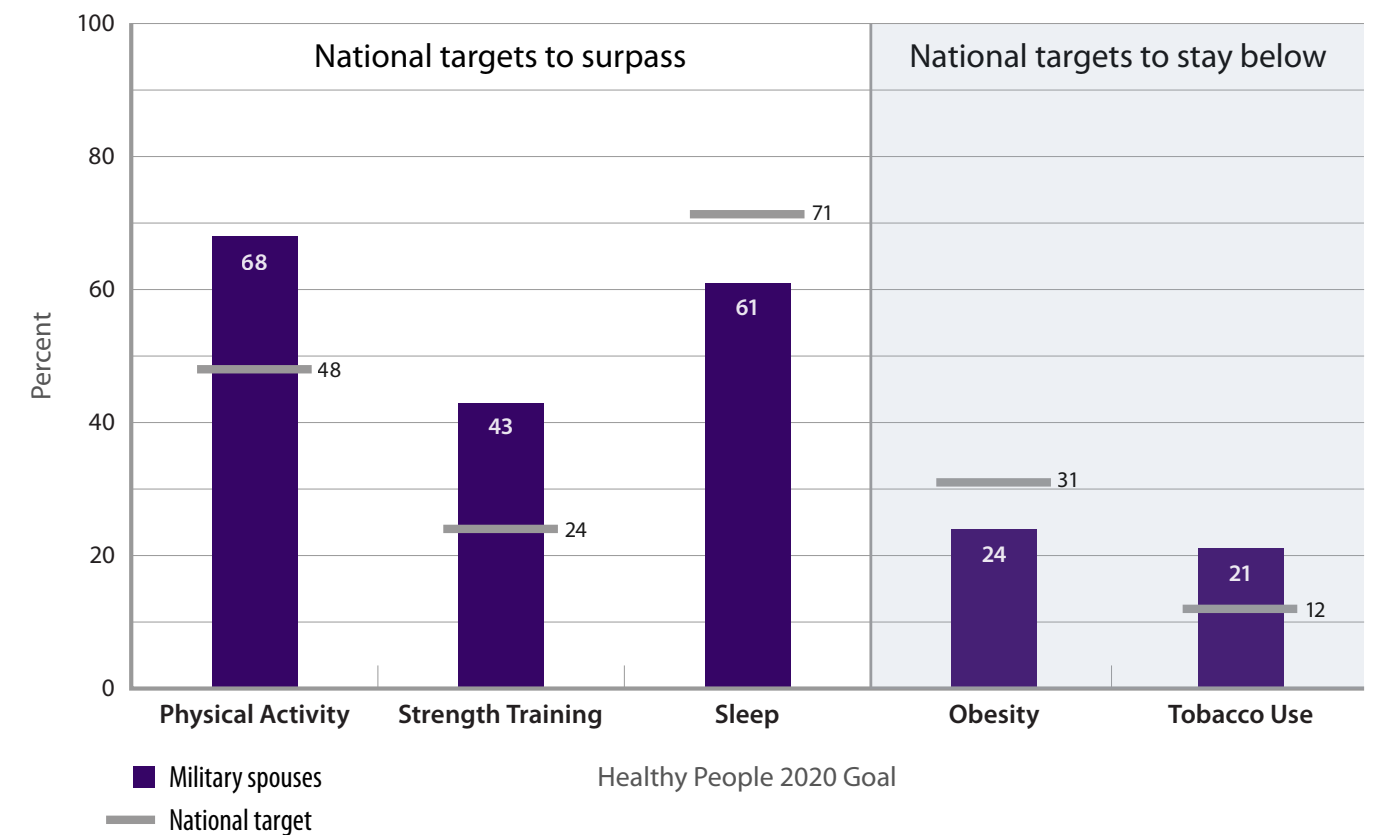
**Figure 6. Number of Medical Encounters, Individuals Affected, and Hospital Bed Days by the Top 5 Burden of Disease Categories among Army Beneficiaries, January-December 2017**



Data source: 2017 Defense Medical Surveillance System (DMSS) maintained by the Armed Forces Health Surveillance Division (AFHSD n.d.). Data represent Army beneficiaries.

Physical health can be maintained through healthy behaviors such as getting adequate sleep, physical activity, and nutrition as well as limiting substance use. There is evidence that the experiences of military life may significantly affect physical health behaviors within families. One study compared data from military spouses to national targets on a number of different health behaviors using Healthy People 2020 benchmarks (Corry et al. 2019). The Healthy People 2020 initiative sets population-level health goals such as achieving a healthy weight and getting adequate physical activity (Corry et al. 2019). The Healthy People 2020 population goals include targets to meet or exceed (e.g., physical activity, strength training, sleep) and targets to stay below (e.g., obesity, tobacco use). Figure 7 demonstrates that **when compared to Healthy People 2020 goals set for the U.S. population, military spouses met physical activity, strength training, and obesity targets, but did not meet national targets for sleep or tobacco use.**

**Figure 7. Percent of Military Spouses Meeting Healthy People 2020 Population Goals, 2012**



Data source: 2012 Millennium Cohort Family Study (Corry et al. 2019). Percentages for Spouses from all services.

Importantly, the study also found that perceiving greater family support from the military was associated with better physical health outcomes for spouses, while reporting a lack of support was associated with poorer health outcomes. These findings suggest that increased military support, which may take the form of tailored programs for military spouses, may contribute to improving the health of the Army Family.

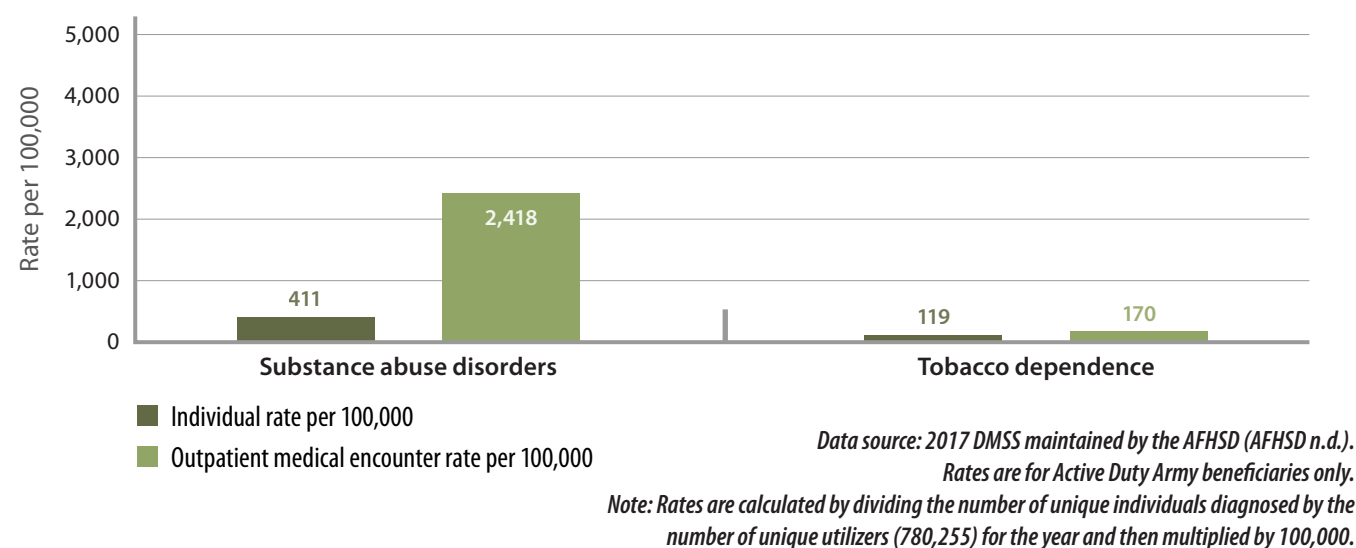
Substance use is an important physical health risk behavior to continually understand and address among military families, just as it is within the U.S. civilian population. A 2016 report from the Substance Abuse and Mental Health Administration compared rates of substance abuse among the spouses and children of U.S. military personnel based on findings from the 2015 National Survey on Drug Use and Health (Substance Abuse and Mental Health Administration 2016). Among the estimated 910,000 military wives aged 18 to 49 in 2015, 13% used illicit drugs in the past year, 5.1% used marijuana in the past year, 16% smoked cigarettes in the past 30 days, 68% drank any alcohol in the past 30 days, 32% engaged in binge drinking in the past 30 days, and 0.9% received substance use treatment in the past year. When compared with all married women aged 18 to 49, military wives aged 18 to 49 were less likely to use marijuana, more likely to use alcohol in the past 30 days, and more likely to engage in binge drinking in the past 30 days.

Among the estimated 524,000 military children aged 12 to 17 in 2015, 20% used illicit drugs in the past year, 11% used marijuana in the past year, 3.2% smoked cigarettes in the past 30 days, 9.3% used any alcohol in the past 30 days, 4.6% engaged in binge drinking during the past 30 days, and 0.8% received substance use treatment in the past year. In this report, no statistically significant differences existed between military children and all children aged 12 to 17 for any of these estimates related to substance use and substance use treatment.

Further studies provide mixed results with respect to whether military affiliation is a risk or protective factor for substance use. For example, while one study from a normative population survey found that military-connected youth had greater odds of substance use than nonmilitary-connected peers, another study found that children in military families were less likely to engage in marijuana, alcohol, and cigarette use than nonmilitary children (Hutchinson 2006). Further work in this area is required to explore these associations.

Figure 8 provides a summary of medical encounter data for substance abuse disorders and tobacco dependence specific to Army beneficiaries.

Figure 8. Medical Encounters for Substance Abuse Disorders and Tobacco Dependence among Army Beneficiaries, 2017



## Psychological Health

Psychological health is focused on an individual's cognitive, emotional, and behavioral practices and their abilities to realize their own potential, cope with the normal stresses of life, work productively and fruitfully, and make a contribution to their community (adapted from Defense Health Agency 2020 and World Health Organization 2004). To align with current military framing, this report discusses psychological or "behavioral health."

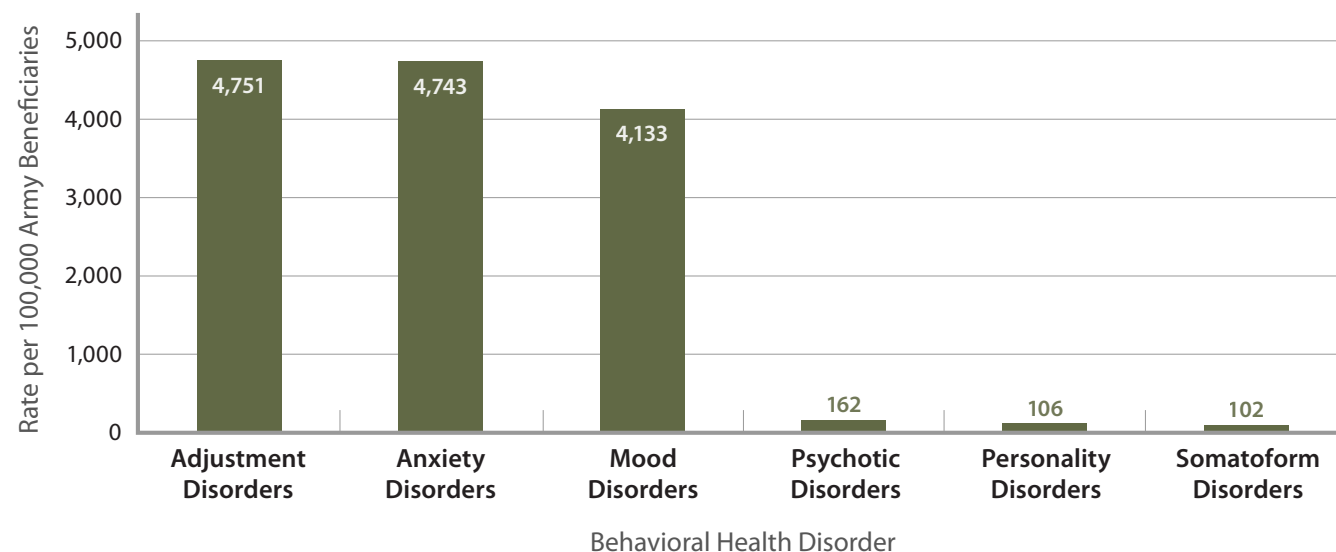
**Military spouses currently or recently affected by their Active Duty Service member's deployment may be at increased risk for behavioral health symptoms and diagnoses.** For example, in a small sample (n=161), spouses of Army and Marine Corps Service members who were recently affected by deployments presented higher levels of distress, anxiety, and depression compared to civilian counterparts (Lester et al. 2010). Multiple studies have replicated this finding and indicate military spouses currently or recently affected by deployments exhibit greater behavioral health symptoms and problems than their counterparts who are not military spouses. Military spouses who are younger and report less support from their work and family environments may be at a particularly greater risk for behavioral health issues (Hawkins et al. 2018). Further, feelings of helplessness and lack of support among military spouses were significantly associated with depression symptoms (Kees et al. 2015). **Importantly, the experience of behavioral health issues among military spouses may be intertwined with that of their Service members** (Hawkins et al. 2018) and have direct effects on their children (Lester et al. 2010). Therefore, further understanding, monitoring, and supporting the behavioral health of spouses recently affected by deployment will not only contribute to the well-being of Army Family members, but may influence that of Soldiers and children.

**Understanding the state of Army Family members' behavioral health is a matter of both family readiness and resource utilization.** Behavioral health disorders account for a large proportion of medical care utilization among Army beneficiaries, with adjustment disorders\*, anxiety disorders, and mood disorders ranking highest among other behavioral health disorders (Figure 9).



\*To continue to be seen by a behavioral health provider, utilizers of military behavioral health services are provided a diagnosis during their first visit. This diagnosis is typically an "adjustment disorder" until another, more specific, diagnosis can be determined.

Figure 9. Behavioral Health Disorders among Active Duty Army Beneficiaries, 2017



Data source: 2017 DMSS maintained by the AFHSD (AFHSD n.d.).

Rates are for Active Duty Army beneficiaries only.

Note: Rates are calculated by dividing the number of unique individuals diagnosed by the number of unique utilizers (780,255) for the year and then multiplied by 100,000.

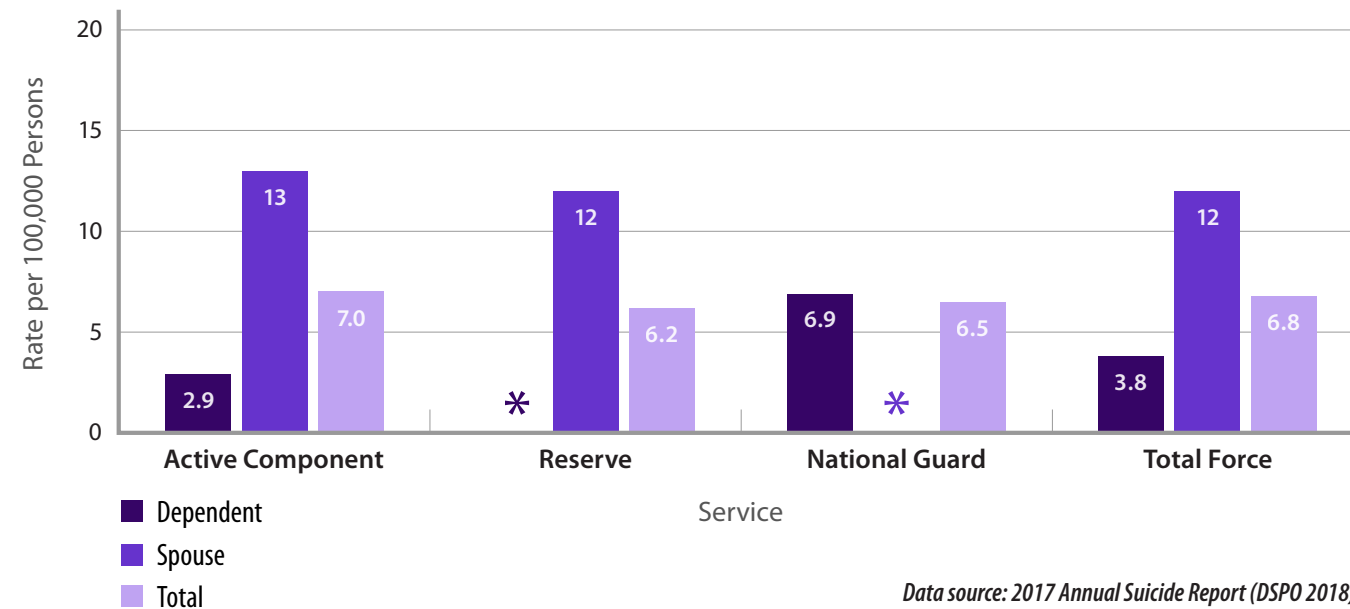
Suicide continues to be an important issue among Army Family members. In 2017, 13 per 100,000 Active Duty spouses and 2.9 per 100,000 dependents died by suicide (Figure 10; Defense Suicide Prevention Office (DSPO) 2018). According to the 2018 Annual Suicide Report, there were 186 reported deaths by suicide among military spouses and dependents across services in 2017, in which 123 decedents were spouses and 63 decedents were dependents. The majority of military spouses who died by suicide were female (69%) and under 40 years of age (82%), which is consistent with demographics of the overall military spouse population. The majority of military dependents who died by suicide were male (70%), and while the ages ranged from 12 to 23 years old, almost 50% of dependent deaths were among those who were 18 years of age or older. Of those younger than 18 years old, the majority of deaths (62%) occurred between the ages of 15 and 17. For both male and female military spouses and dependents, firearm was the most common method of death by suicide. This finding appears to deviate from the U.S. general population, in which the leading methods of suicide for females in calendar year (CY 2017) were poisoning/drug overdose (31%) and firearm (31%), closely followed by hanging/asphyxiation (28%) (DSPO 2018).



#### RESOURCES:

**Confidential Military Crisis Support:** 800-273-8255

Figure 10. Suicide Rates among Military Family Members, 2017



Data source: 2017 Annual Suicide Report (DSPO 2018).

Rates are for Family members from all services.

Note: A Family Member is defined as a spouse or dependent child (both minor and non-minor) who are eligible to receive military benefits.

\*Data suppressed due to regulation standards.

A study using 2015 National Survey of Drug Use and Health explored how behavioral health diagnoses and healthcare utilization among military beneficiaries compared to the U.S. population. Military wives were more likely to have experienced a past-year mental illness (29%) compared to all married women (20%). However, the proportion of military wives who received mental health services in the past year (23%) was comparable to all married women (Substance Abuse and Mental Health Administration 2016). Rates of behavioral health diagnoses and healthcare utilization among military children were also comparable to all U.S. children; among military children, 17% had a past-year major depressive episode, 18% received specialty (inpatient and outpatient) mental health services, 15% received non-specialty (education-focused) mental health services, and 5.2% received non-specialty (general) mental health services (Substance Abuse and Mental Health Administration 2016).

It is also important to note that many studies found in the literature regarding the psychological health of Army Family members focus on the time periods during or recently following deployments. More studies and routine surveillance are needed to better capture the psychological health status and needs of Army Families during dwell times.

Spiritual Health

Spiritual health refers to elements that define the essence of a person, enable one to build inner strength, make meaning of experiences, behave ethically, persevere through challenges, and be resilient when faced with adversity (U.S. Army 2014). Research on the experiences of military spouses points to the importance of personal meaning-making (i.e., the process of finding purpose and pride in one’s role as a military spouse) and overall sense of purpose as effective coping mechanisms to draw on during adversity (Hawkins et al. 2018). There is limited information and evidence surrounding spiritual health of Army Family members when compared to other health domains. Family readiness researchers recommend expanding what is known about how military families experience elements of spiritual health, such as meaning, pride, and personal strength. A useful source on what is known about spiritual health among military families is aptly summarized in *What We Know about Military Family Readiness, 2007-2017* (Hawkins et al. 2018).

A sense of community can be an indicator of family well-being. For example, one study found that military community connections are related to coping with military culture and its demands, and perceptions of military community connections influenced civilian spouses’ satisfaction with military life (O’Neal et al. 2020). Interviews with spouses revealed that **embracing a sense of independence and celebrating the competence required to manage matters on the home front were significant sources of pride and meaning** (Aducci et al. 2011, as cited in Hawkins et al. 2018). Patriotism and sense of freedom due to their Service members’ roles were also mentioned as sources of pride (Aducci et al. 2011, as cited in Hawkins et al. 2018). Providing care and support for one’s Service member spouse, both emotionally and instrumentally due to deployment or injury, was also a cited source of personal strength and esteem among military spouses (Buchanan et al. 2011, as cited in Hawkins et al. 2018). Although personal meaning-making is a positive coping mechanism for military spouses, more research is warranted to understand the relationship between spiritual health factors and health outcomes for spouses and other Family members.

Family Readiness

Family readiness refers to the state of being prepared to effectively navigate the challenges of daily living experienced in the unique context of military service (Hawkins et al. 2018). This includes spouse and couple functioning, child functioning, adjustment to military life, financial circumstances, and general military life experiences. These experiences can significantly affect spousal satisfaction with military life. **For the purpose of this report, this section will focus on financial health, spouse employment, and family satisfaction with military life**, rather than all of the family readiness factors. Hawkins et al. (2018) provides deeper explorations of military family readiness.

**Financial health is an especially critical component of family readiness.** Financial strain can be felt by both military and civilian families alike. However, military families may routinely face experiences throughout the military lifecycle that may increase financial stressors, such as frequent PCS moves, deployment, or recovering from injury. Therefore, monitoring and improving the experience of financial strain among military families is a critical piece of the overall picture of family health and well-being. Financial strain has been shown to affect parenting quality and efficacy, and it is a risk factor for intimate partner violence (Hawkins et al. 2018), partner aggression (Kimerling et al. 2016), and divorce among military couples (Teachman and Tedrow 2008). Specifically, lower income and indebtedness were found to predict intimate partner violence in military couples (Foran et al. 2013). Financial strain is most common among lower ranking and enlisted Service members and single parent families, and the perception of financial strain is a stronger predictor of stress than pay grade or income (Allen et al. 2012). Financial readiness is also one of the most commonly cited issues to discuss among Army Families in preparation for deployment (Hawkins et al. 2018).

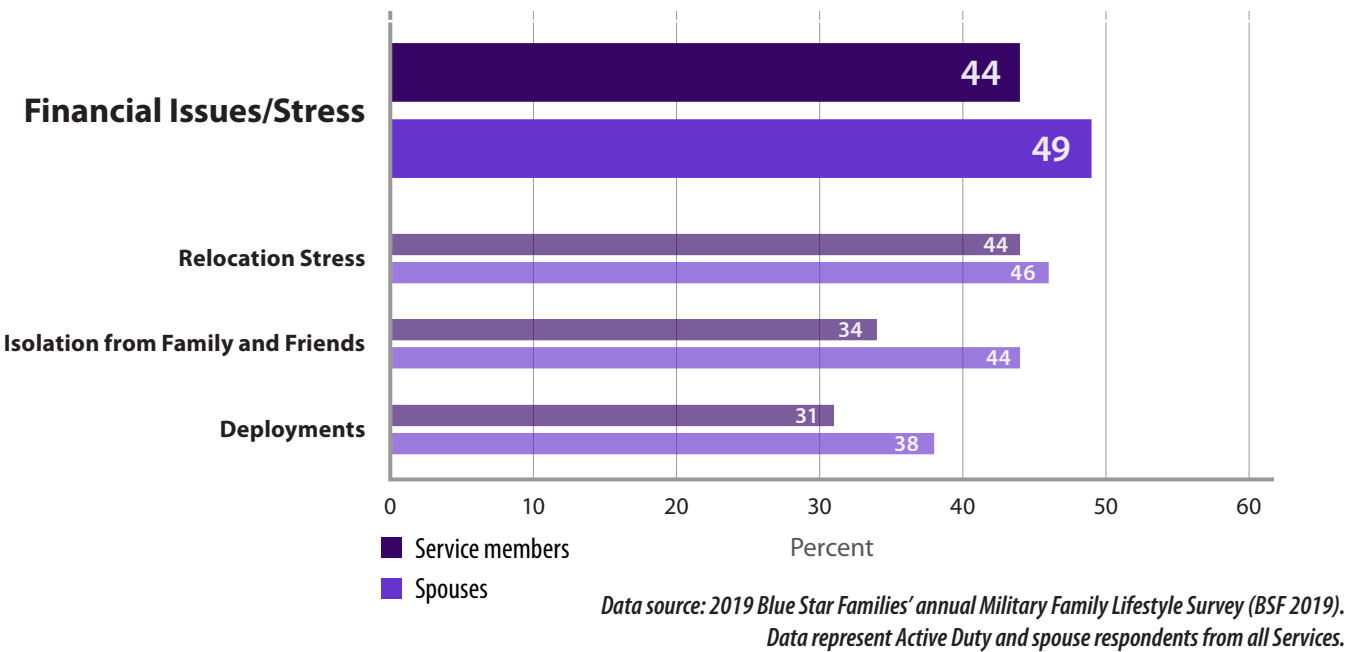


RESOURCES:

ACS programs such as the **Employment Readiness Program** and **Financial Readiness Program** equip Soldiers and Families with skills and resources to improve their financial health.

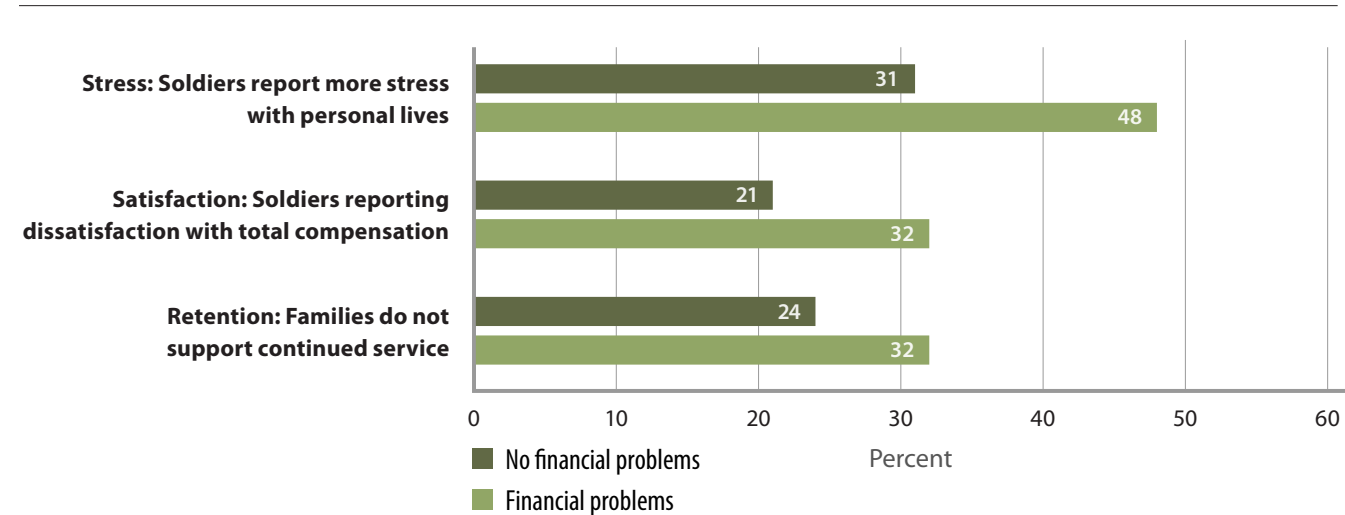
Over 25% of Soldiers report they occasionally have difficulty earning enough income to provide for basic needs; financial stress is the number one stressor among Army spouses. Further, 44% of Service members and 49% of spouses rate financial issues as a top stressor (Figure 11; Blue Star Families (BSF) 2019).

Figure 11. Top Stressors among Service Members and Spouses, 2019



Financial burdens linked to Active Duty service include accruing debt to pay for moving expenses, inability to find child care, unwillingness to move forward in education, foregoing health care, and feeling the mental and physical effects of financial stress (Military Family Advisory Network (MFAN) 2018). Results of the 2018 Status of Forces Survey, shown in Figure 12, indicate financial problems in the past 12 months predict key components of family readiness (OPA 2018a). Soldiers who reported financial problems also reported greater stress, less satisfaction with the military, and lower retention intentions compared to those who did not report financial problems. Spouses with better financial status are more satisfied with military life compared to those with worse financial status (Defense Manpower Data Center (DMDC) 2015a). DOD OPA analyses of Status of Forces Survey data (Rock 2017) also show associations between financial strain and Service member perceptions of their individual and unit readiness. When compared to Service members who do not report financial problems, Service members who report financial problems are more likely to report that they were poorly prepared for their wartime job (11% and 7%, respectively) and their unit was poorly prepared for their wartime mission (23% and 15%, respectively). **These results suggest that addressing financial health among Soldiers and Families may positively contribute to Soldier readiness and retention.**

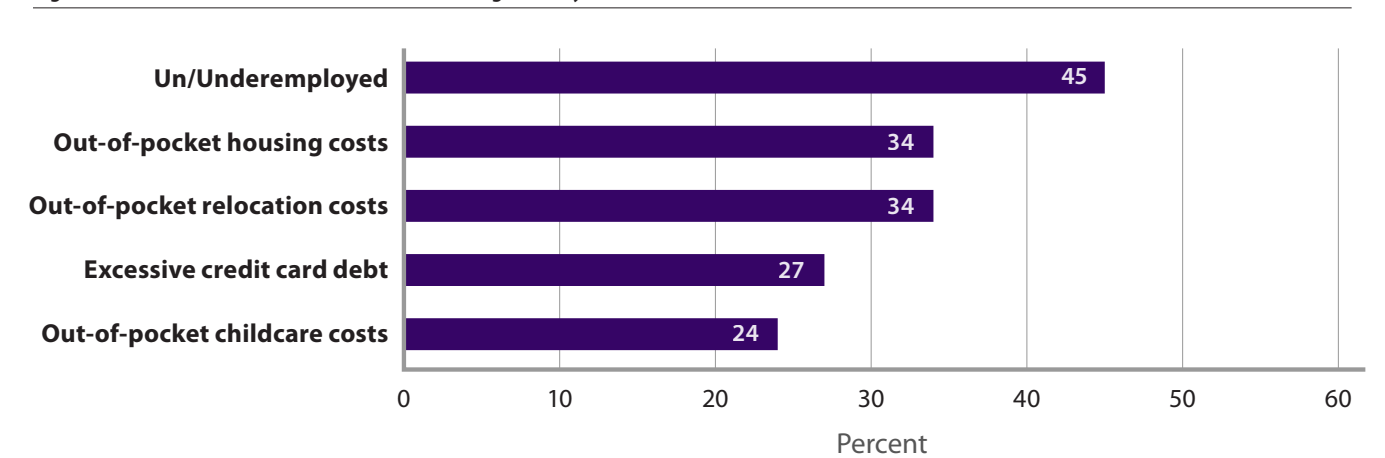
Figure 12. Impact of Financial Problems on Soldier Stress, Satisfaction, and Retention, 2018



Data source: 2018 Status of Forces Survey (OPA 2018a).  
Percentages represent Army Soldiers only.

**Spousal employment opportunities are a notable factor in Soldier retention and relate to financial stress.** Though not identified as a top five stressor, spouse employment was rated as a top concern of Army Families (BSF 2019). When asked to think about factors that influence their Service member staying versus leaving the military, 43% of military spouses sampled reported “availability of career opportunities for both Spouses” as a very important factor (OPA 2019b). A 2019 Blue Star Family report (Figure 13) found that 24% of military spouses are unemployed and seeking employment. In 2017, the report examined spouse earnings and, of those who were employed, the majority (51%) earned less than \$20,000 in 2016 while 39% earned less than \$10,000 (BSF 2019). Spouses who were unemployed but looking for work also experienced more stress than those who were unemployed but not looking for work or those who were employed full-time (Trail et al. 2019). Further, a longitudinal analysis of spouses from 2010 to 2012 showed that spouses who became unemployed reported greater depression, anxiety, stress, and lower satisfaction with military life than those who remained employed during the course of the study (DMDC 2015a). A spotlight on the importance of spousal employment can be found in the *Unique Military Events: Permanent Change of Station* chapter of this report (Chapter 4).

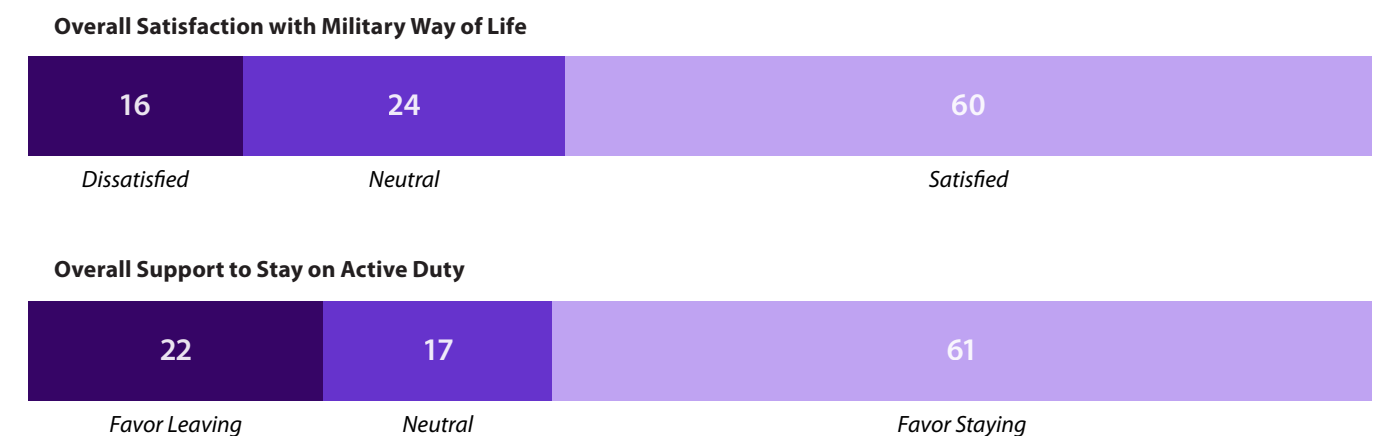
Figure 13. Contributors of Financial Stress among Military Families, 2019



Data source: 2019 Blue Star Families' annual Military Family Lifestyle Survey (BSF 2019).  
Percentages represent Service members, spouses, and Veterans from all Services.

**The majority (60%) of spouses is satisfied with military life; however, 22% do not support their Service member staying on Active Duty (Figure 14; OPA 2017a).** Further research shows that spouses who are more satisfied with the military way of life are more likely to support their Soldier staying on Active Duty (DMDC 2015b). **Therefore, spousal support is a reliable predictor of Service member's intentions for staying on Active Duty (OPA 2017b).** Importantly, the OPA also found that spousal support for retention significantly predicts Service members' actual retention behavior two years later. As spousal support for retention increased, the percent of Service members who stayed on Active Duty 2 years later also increased (OPA, 2017b).

Figure 14. Spouse Satisfaction with Military Life and Support to Stay on Active Duty, 2017



Data source: 2017 Survey of Active Duty Spouses (OPA 2017a).  
Percentages represent spouses from all Services.

# The Health of the Army Family during the COVID-19 Pandemic

The Coronavirus Disease 2019 (COVID-19) pandemic has directly impacted families throughout the United States, including members of the Army Family. The Walter Reed Army Institute of Research (WRAIR) and the APHC developed the *Behavioral Health Advisory Team (BHAT) – COVID-19 Assessment* to evaluate the Army community's behavioral health response to the pandemic. The WRAIR and the APHC administered phase 1 of the multi-phase assessment to Active Duty Soldiers in three units (U.S. Army Europe, I Corps, and 8<sup>th</sup> Army Korea) in May 2020. Over 21,000 Soldiers participated and answered questions about the impact of the COVID-19 pandemic—several of these questions specifically asked about family-related impacts.

The Army Family is diverse, and marital and parental status vary among Soldiers. The top two percentages of Soldiers who completed the assessment were married and living with a spouse (43%) or never married (42%). The majority of the Soldiers who were single (68%) reported that they were not in a committed relationship. Nearly 1-in-3 Soldiers had at least one child under 18 years of age in their household (31%) (WRAIR and APHC 2020).

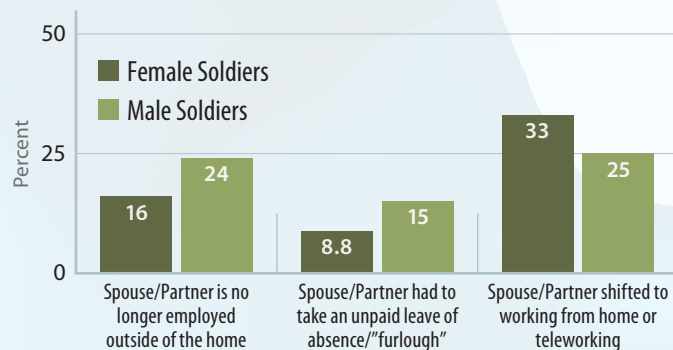
## FINANCIAL IMPACT AND WORK STATUS

**Half of Soldiers (51%) reported a financial impact because of the COVID-19 pandemic**, with most of these Soldiers reporting a minimal or moderate impact on their household. Among married Soldiers, financial impact was greater if their spouse/partner was no longer employed outside of the home, their spouse/partner experienced reduced work hours, or their spouse/partner had to take an unpaid leave of absence/"furlough" (WRAIR and APHC 2020). The data suggested that the work status of the spouse/partner varied between female and male Soldiers. As shown in Figure 15, a greater percentage of male Soldiers reported that their spouse/partner was no longer employed outside the home (24%) or had to take an unpaid leave of absence/"furlough" (15%); a greater percentage of female Soldiers reported that their spouse/partner had shifted to working from home or teleworking part- or full-time (33%) (WRAIR and APHC 2020).

## RESOURCES

ACS programs such as the **Employment Readiness Program** and **Financial Readiness Program** equip Soldiers and families with skills and resources to improve their financial health.

Figure 15. Changes in Spouse/Partner Employment as a Result of the COVID-19 Pandemic, 2020

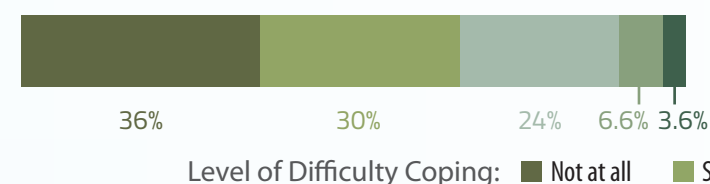


Data source: 2020 Behavioral Health Advisory Team – COVID-19 Survey Phase I (WRAIR and APHC 2020).  
Data represent Active Duty Army respondents.

## COPING

The majority (64%) of Soldiers who were married or in a relationship reported that they or their spouse/partner experienced difficulty coping with the impact of the COVID-19 pandemic (Figure 16). Half of Soldiers with at least one child under 18 years of age in their household (51%) reported that their child(ren) appeared to experience emotional, behavioral, or other difficulties since the start of the COVID-19 pandemic (Figure 17). Responses indicated the most common level of difficulty coping was either slight or moderate. **The more Soldiers reported difficulty coping among self/partner or difficulties among children, the more likely Soldiers were to screen positive for depression and anxiety (WRAIR and APHC 2020).**

Figure 16. Soldiers' and Spouses/Partners' Level of Difficulty Coping during the COVID-19 Pandemic, 2020

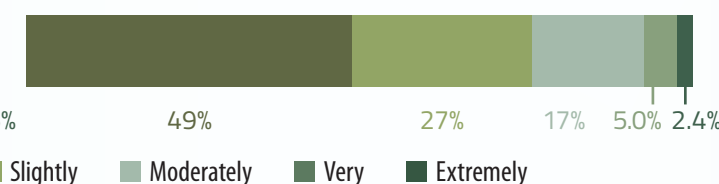


Data source: 2020 Behavioral Health Advisory Team – COVID-19 Survey Phase I (WRAIR and APHC 2020).  
Data represent Active Duty Army respondents.

## RESOURCES

The Army Family Advocacy Program (FAP) offers classes in stress management, anger management, communication skills, and referrals for behavioral health resources.

Figure 17. Children's Level of Difficulty Coping during the COVID-19 Pandemic, 2020

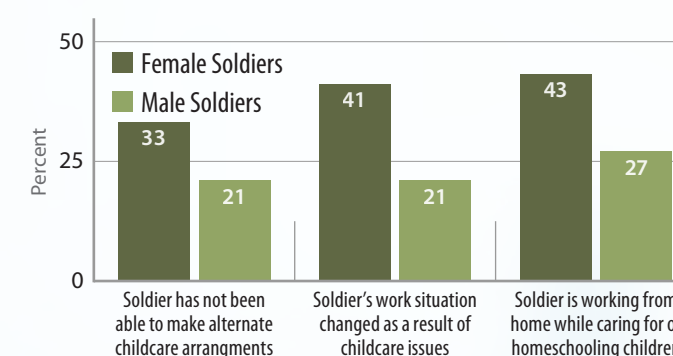


## CHILDCARE

More than half of Soldiers with children in their household (59%) reported that their child(ren)'s daycare/school was either closed or operating with reduced hours because of the COVID-19 pandemic. As shown in Figure 18, the data suggested that **female Soldiers experienced the greatest impact of daycare/school closures or reduced hours**. A greater percentage of female Soldiers, relative to male Soldiers, reported that they were unable to make alternate childcare arrangements, their work situation changed as a result of childcare issues, or they were working from home while caring for or homeschooling their child(ren) (WRAIR and APHC 2020).

Many of the stressors experienced during the pandemic are comparable to those stressors experienced in the civilian U.S. population (for example, financial stressors and childcare). The pandemic highlights the need for Army Family supportive services during the COVID-19 pandemic.

Figure 18. Changes in Childcare during the COVID-19 Pandemic, 2020



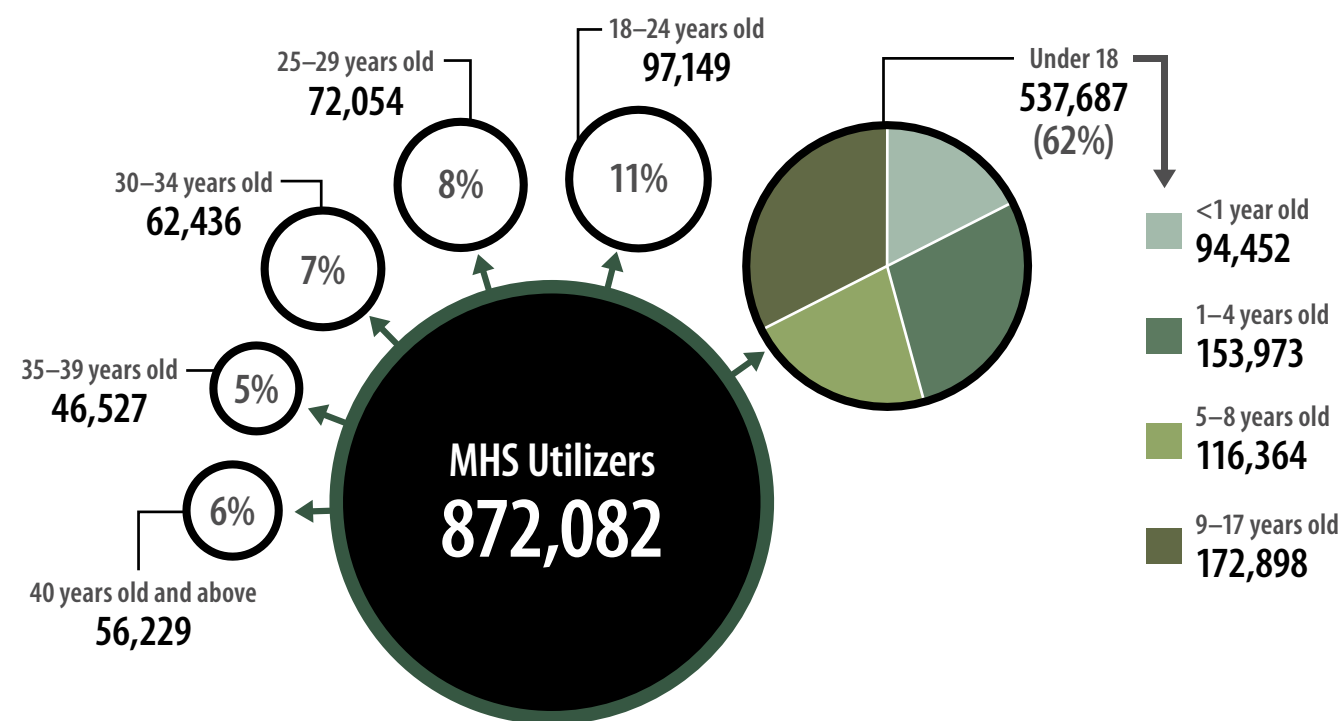
Data source: 2020 Behavioral Health Advisory Team – COVID-19 Survey Phase I (WRAIR and APHC 2020).  
Data represent Active Duty Army respondents.

Financial stress and spouse employment are just two of many factors that fall in the Family Readiness domain. This domain integrates multiple factors that enable Army Families to weather a variety of challenges and unique military events, such as deployment or PCS, which will be discussed in the three Unique Military Events chapters of this report. The NASEM calls for increased efforts to “strengthen” the military family readiness system to achieve a well-coordinated, integrated system of family support resources and services (NASEM 2019).

## Healthcare Delivery

Access to efficient and quality health care is vital to ensure the health of the Army Family. The Military Health System (MHS) serves about 870,000 Army beneficiaries per year, with almost two-thirds of utilizers under the age of 18 (Figure 19).

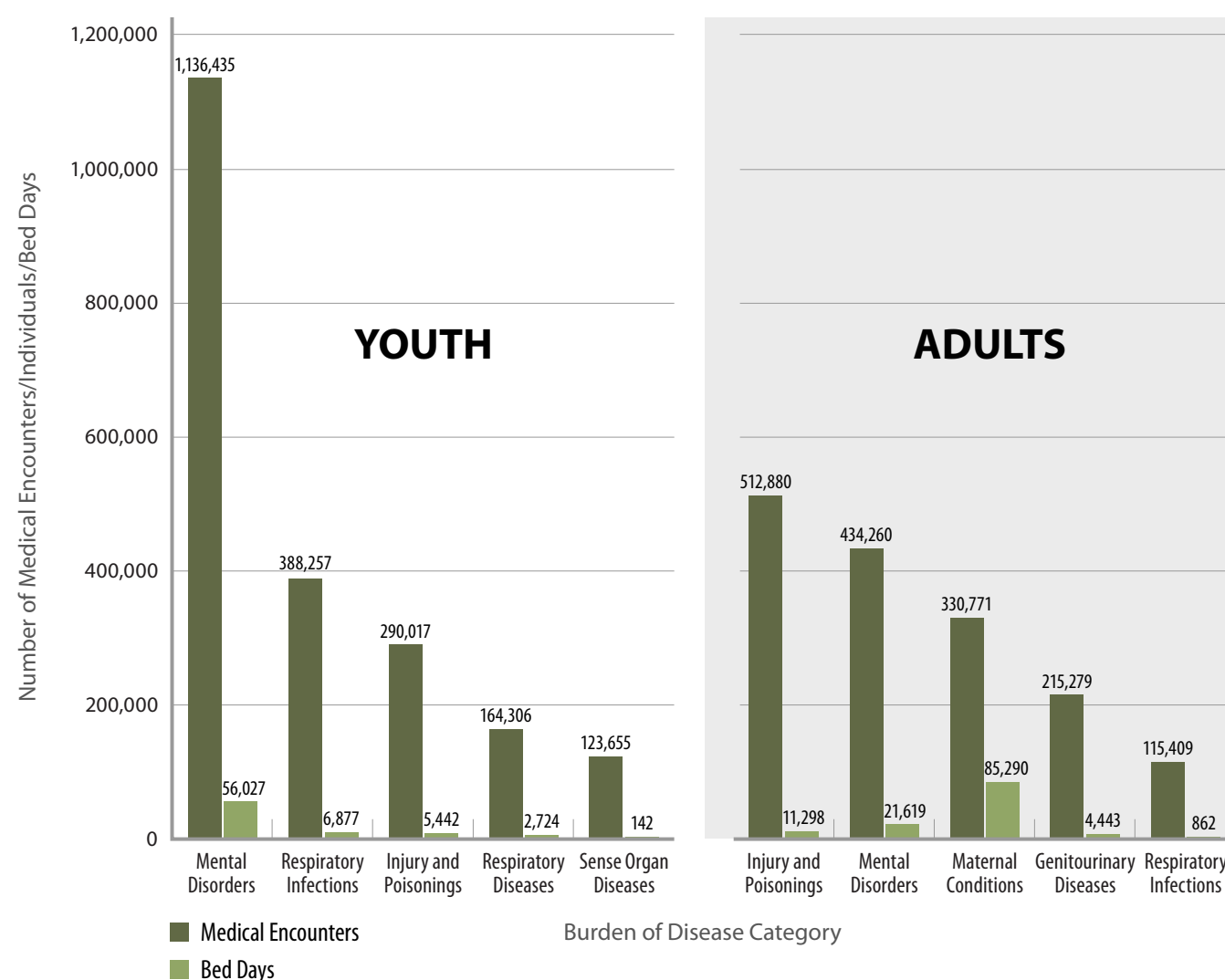
Figure 19. Age Composition of Military Health System Utilizers, 2017



Data source: 2017 DMSS maintained by the AFHSD (AFHSD n.d.).  
Data represent Army beneficiaries.

According to data from the AFHSD (Figure 20), injury and poisonings account for the majority of “bed days,” or days of hospitalization for adults, and mental disorders account for the majority of bed days for children under age 18. Mental disorders also place a heavy burden on the MHS, making up the majority of medical encounters for both youth and adults.

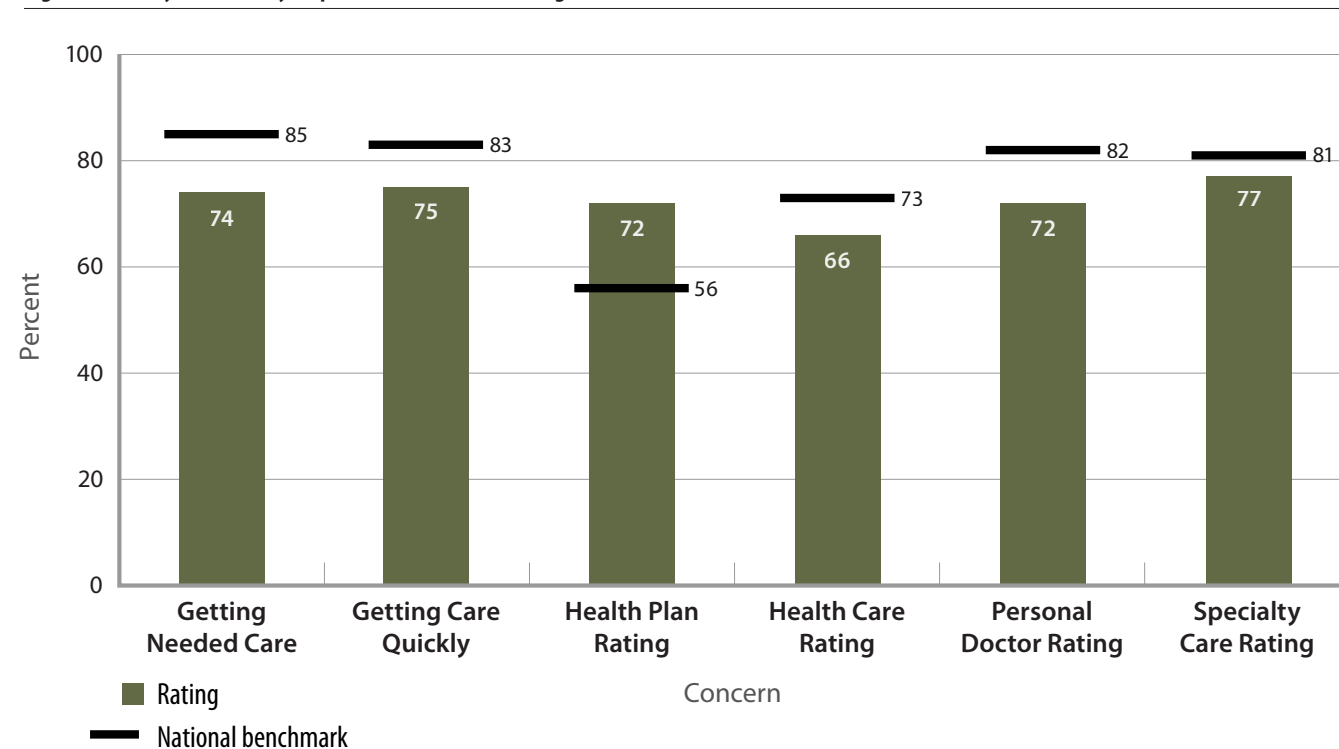
Figure 20. Medical Encounters and Bed Days among Military Health System Beneficiaries, 2017



Data source: 2017 DMSS maintained by the AFHSD (AFHSD n.d.).  
Data represent Army beneficiaries.

When comparing Army Family perceptions of access and satisfaction with the overall U.S. population, Active Duty dependents rate their health plan, TRICARE®, better than the national benchmark for insurance plans. However, TRICARE ratings do not meet national benchmarks in any other area (Figure 21).

Figure 21. Army Active Duty Dependents' TRICARE Ratings, 2018

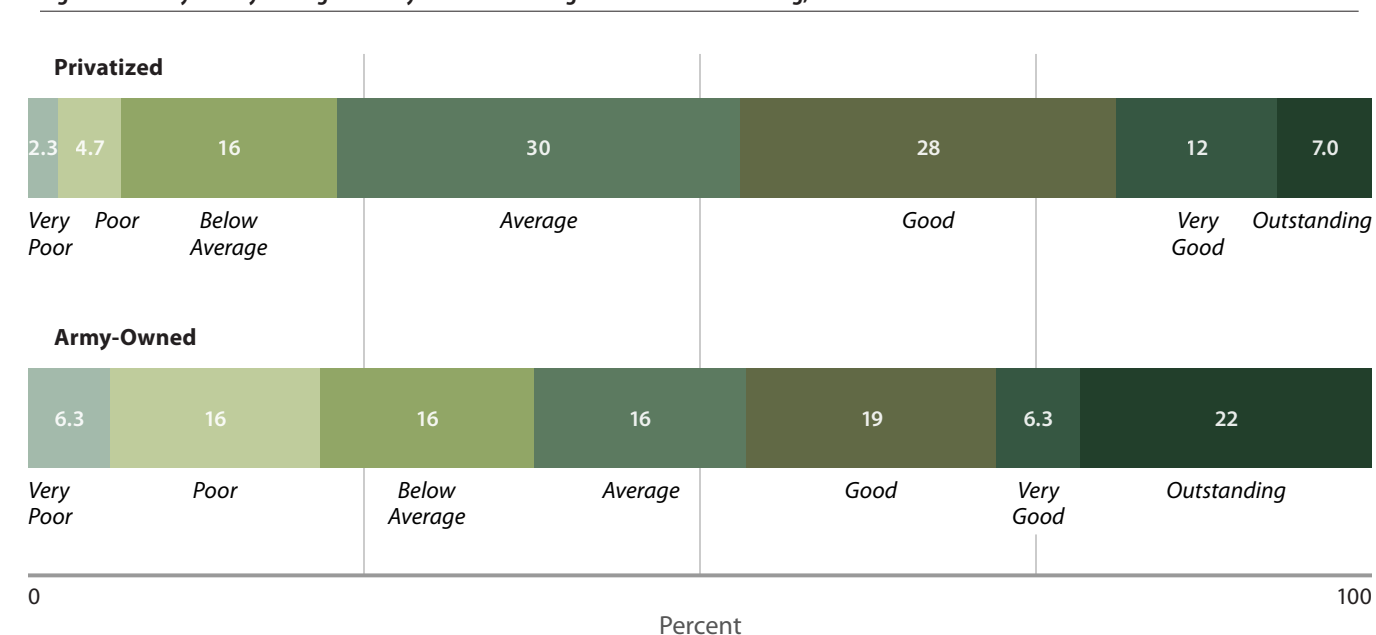


Data source: Health Care Survey of DOD Beneficiaries, Fiscal Year 2018. [https://www.tricare.mil/survey/hcsdbsurvey/home/z\\_abr\\_form.cfm](https://www.tricare.mil/survey/hcsdbsurvey/home/z_abr_form.cfm)  
Data represent Army beneficiaries.

## Environment and Housing

Physical and psychological health of Army Families can be significantly affected by environment and housing conditions, which includes all aspects of the natural and built environment. The built environment includes the structures (e.g., buildings), features (e.g., walking paths), and facilities (e.g., fitness centers, food options) where Army Families live, work, and play. The built environment can particularly affect risk for an array of chronic diseases, which can be reduced through an active lifestyle, proper nutrition, and reduced exposure to toxic conditions. However, not all environments are designed to facilitate healthy behaviors or create these adequate conditions (Perdue et al. 2003). Many environmental factors can affect the health and perceived health of Army Families, to include but not limited to air and water quality and exposure to hazardous substances. This is of significant interest as Army Families live both on- and off-post. The geographic radius of where families live, work, use services, and receive their health care varies widely across the Army.

Figure 22. Army Family Ratings of Army-Owned Housing and Privatized Housing, 2019



Data sources: 2019 Summary of the Headquarters Department of the Army Residential Communities Initiative Resident Survey (On-Base) (CEL & Associates Inc. 2019a) and 2019 Executive Summary of the Headquarters Department of the Army FH Resident Survey (Owned and Leased) Housing (CEL & Associates Inc. 2019b).

Data represent Family Housing Residents living in Army Owned and Leased housing and Residents living in privatized Family and Unaccompanied On-Base Housing.

As shown in Figure 22, a notable portion of Army Families rated their housing as below average or lower for both Army-owned and privatized housing (CEL & Associates Inc. 2019a, CEL & Associates Inc. 2019b). Among the approximately 84% of Army Families who live in housing owned by privatized contractors, the top concern regarding housing was maintenance, repairs, or remediation (Figure 24), followed by mold and filth in homes (MFAN 2019). Despite these concerns, Army children tested for lead exposure at military medical treatment facilities (MTFs) had lower blood lead levels than the national average (see *Army Campaign to Prevent and Control Childhood Lead Exposure* spotlight on the next page).

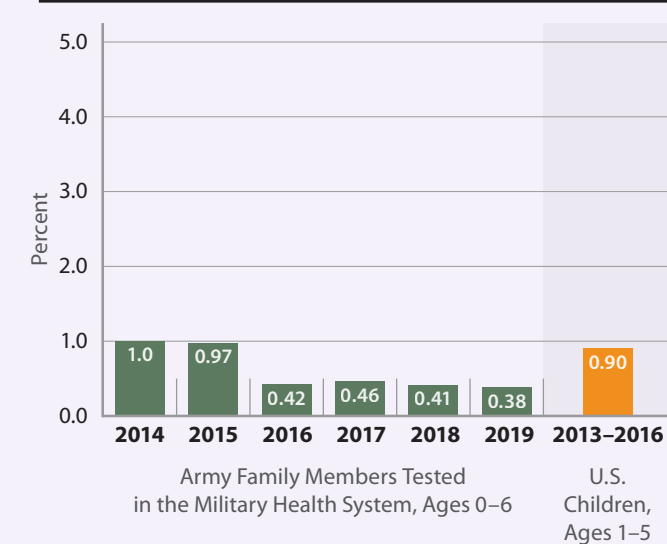
# The Army Campaign to Prevent and Control Childhood Lead Exposure

With increased attention on the safety of military housing in recent years, one area of focus for the Army has been to increase its efforts to assess and mitigate lead exposure. Although lead is a naturally occurring metal, it can pose a hazard to health if it contaminates air, water, soil, or dust and is subsequently inhaled or ingested. Children aged 1–5 years are particularly vulnerable to lead exposure because they more frequently explore their surroundings while exhibiting hand-to-mouth behavior. At the same time, they are more susceptible to the harmful biological effects of lead, since their brains are still in a period of rapid development through early childhood. The most common routes of lead exposure come from inhalation or accidental ingestion of contaminated household dust (indoors) or soil (outdoors) due to flaking or deteriorated lead-based paint. Although lead-based paint was phased out of use on houses constructed after 1978, older homes may still have lead-contaminated paint, thus posing a health risk to families.



In response to housing concerns in 2018, the U.S. Army Medical Command (MEDCOM) directed that elevated Blood Lead Level (eBLL) be managed as a reportable medical event for children 6 years of age and younger (Office of the Surgeon General 2021). Although no safe level of lead has been identified for children, the Centers for Disease Control and Prevention (CDC) established a Blood Lead Level (BLL) of 5 micrograms per deciliter ( $\mu\text{g}/\text{dL}$ ) as a threshold to trigger additional medical monitoring (CDC 2012). Army Medicine tracks pediatric eBLL cases through the Defense Reporting System-internet (DRSi) and monitors clinical laboratory data systems for additional cases that may not have been reported. Figure 23 shows the most recent estimates for the prevalence of eBLL in young Army Family members and U.S. children overall.

Figure 23. Percentage of Children with Elevated Blood Lead Levels ( $\geq 5\mu\text{g}/\text{dL}$ ) in Army and U.S. Pediatric Populations, 2013–2019



At first glance, the data seem to suggest that the prevalence of eBLL in Army children is declining and lower than that of the prevalence for children in the U.S. overall. However, this information must be interpreted with caution, as currently eBLL is tracked only for Army pediatric patients who are tested and received care at Army MTFs or other DOD facilities and not those who may receive care or testing within civilian healthcare facilities. Further, due to differences in reporting, it is difficult to draw conclusions about how Army children fare with respect to eBLL compared to other U.S. pediatric populations. The data for Army children and those in the U.S. are reported for different age groupings, and often not for the same timeframes. Specifically, data for Army children reflect a wider age group (ages 0 to 6 years in the military; ages 1–5 years in the U.S. pediatric population) and wider reporting interval (2014 to 2019) than data for U.S. children (2013 to 2016) tested for eBLL. Despite these differences, the data are still useful to understand trends over time and to understand the general context of this important issue.

Although some limitations in comparing the Army/MHS-specific data exist, the Army has emphasized the importance of managing and controlling lead exposures to protect the health of its Soldiers and the Army's youngest and most vulnerable Family members. To further track and control lead hazards at the enterprise level, MEDCOM established the Lead Hazard Management and Control Plan in January 2019 and reiterated it in January 2021 (MEDCOM 2021). This order defines and enacts Army Medicine responsibilities to prevent childhood lead exposure through comprehensive oversight, monitoring, and reporting.

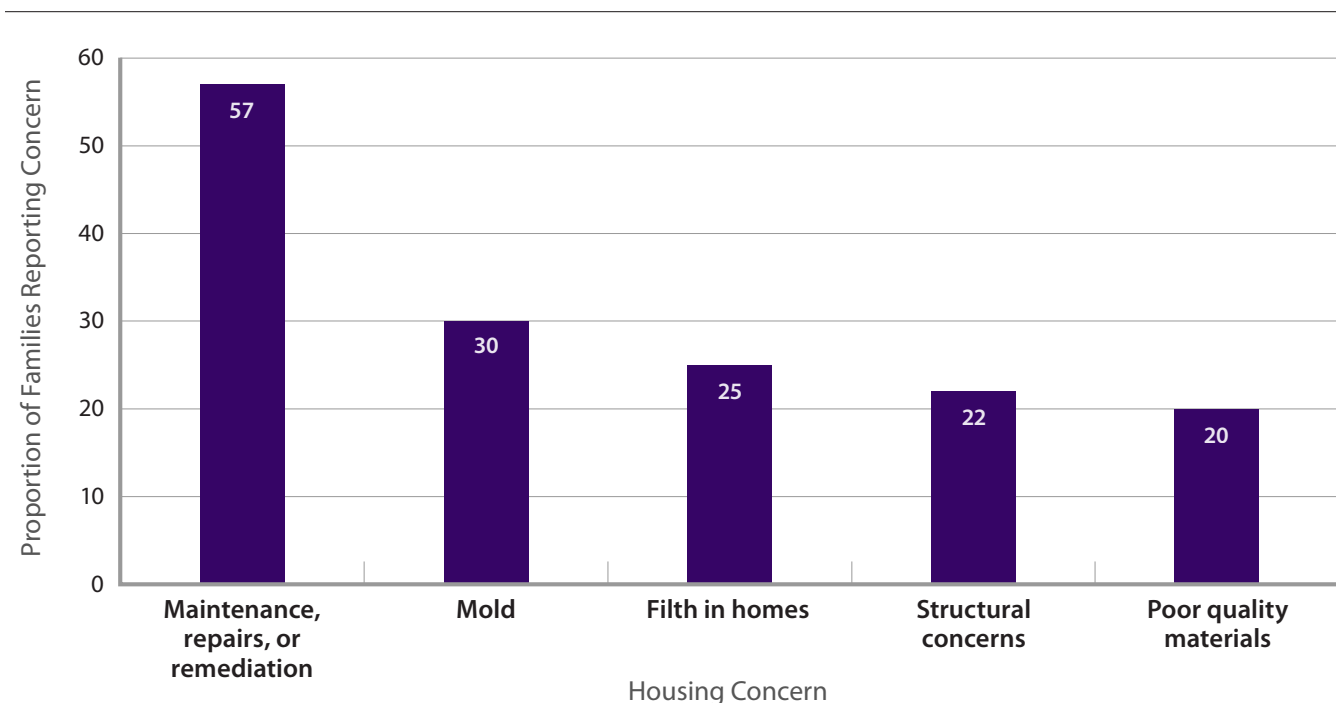
For more information, visit the APHC Lead Information for military Families resource at: <https://phc.amedd.army.mil/topics/workplacehealth/ih/Pages/Lead.aspx>.



Although some limitations in comparing the Army/MHS-specific data exist, the Army has emphasized the importance of managing and controlling lead exposures to protect the health of its Soldiers and the Army's youngest and most vulnerable Family members.



Figure 24. Housing Concerns among Military Families in Privatized Military Housing, 2019



Data source: Final Research Report: Living Conditions of Families in Privatized Military Housing, May 2019 (MFAN 2019).  
Data represent all Services.

Along with the built environment and housing, the natural environment can also play a role in Army Family health. The Army tracks a variety of environmental conditions at or near its installations worldwide to understand and manage the influence on Soldier and family health. These conditions include air quality, water quality, solid waste management, presence of disease-carrying insects, and outdoor heat risk. These conditions are tracked at 42 installations where approximately 90% of Soldiers are stationed, and reported annually in the Army Active Component *Health of the Force* report (APHC 2021b).



Air Quality

In 2019, a majority of installations tracked by the Army experienced very good outdoor air quality, with less than 21 days per year when air quality failed to meet U.S. health-based standards. Installations with 21 or more poor air quality days per year were located mostly outside the U.S., in Italy and South Korea, which has seasonal issues with high levels of fine particulate matter. Families can manage their exposure to poor air quality by paying attention to the local Air Quality Index, and heeding the behavior recommendations on poor air quality days.



## RESOURCES:

Websites for the **local Air Quality Index** nearest to Army installations can be found in the Army Community Resource Guides at: <https://crg.amedd.army.mil/Pages/default.aspx>.



Lyme Disease

Only 10 Army installations were identified at high risk for encountering a Lyme-disease carrying tick in 2019; most of these were located either in the mid-Atlantic U.S. or Germany. However, in the same year, Lyme disease risk could not be evaluated at nearly one-third of the installations that Army tracks due to lack of human tick specimens (APHC 2021a).



## RESOURCES:



Army Families who experience a tick bite can submit that tick to Military Tick Identification/Infection Confirmation Kit Program (MiLTICK) to be evaluated and help Army tick surveillance efforts. MiLTICK is a free tick testing and identification service available to DOD personnel and their families. Ticks can be submitted through an MTF healthcare provider or a simple mail-in process described on the APHC website: <https://phc.amedd.army.mil/topics/envirohealth/epm/Pages/HumanTickTestKitProgram.aspx>.



Water Fluoridation

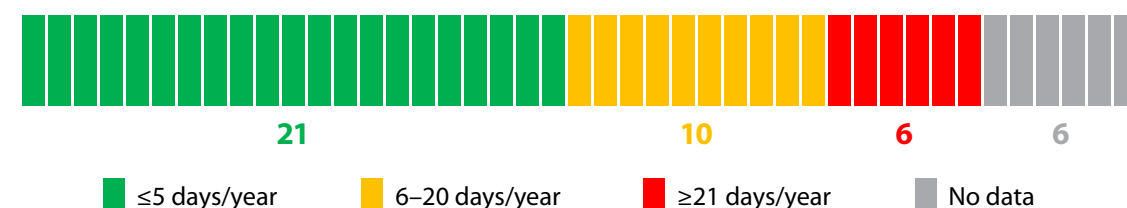
Drinking water fluoridation is tracked at Army installations because of scientific evidence showing that fluoridated water improves oral health, and reduces the likelihood and severity of tooth decay. In 2019, survey data collected by the U.S. Army Office of the Deputy Chief of Staff, G-9 showed that approximately half of Army installations have drinking water with the optimal level of fluoride as recommended by the CDC (0.7-2.0 milligrams/liter (mg/L)).

Figure 25 shows the status of outdoor air quality, drinking water fluoridation, and risk of encountering a Lyme disease tick at Army installations during 2019 (APHC 2021a). Legends show desired status (green) for each metric, which reflects conformance with health authority guidelines or minimal health risk.

Figure 25. Army Environmental Health Indicators, 2019



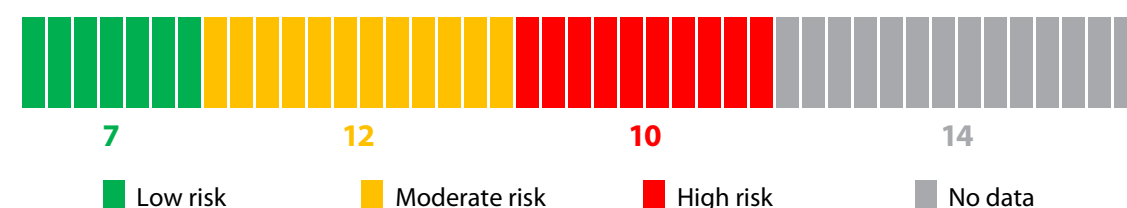
Figure 25a. Number of Installations Experiencing Poor Air Quality Days



Data sources: US EPA Air Data – Air Quality Index Report database; European Environment Agency (EEA) Air Quality e-Reporting database; AirKorea database; Kangawa Prefecture, Japan - Air Pollution Monitoring Monthly Reports (as reported in APHC 2021b).



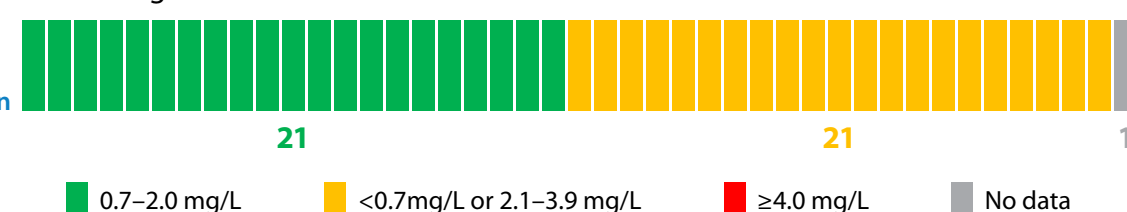
Figure 25b. Number of Installations at Risk of Lyme Disease Encounter



Data source: DOD Human Tick Test Kit Program (as reported in APHC 2021b).



Figure 25c. Number of Installations Meeting CDC Guidelines for Optimal Fluoride in Drinking Water



Data source: Office of the Assistant Chief of Staff for Installation Management - Environmental Compliance Data; Consumer Confidence Reports (as reported in APHC 2021b).

## Sociodemographic Factors

Sociodemographic factors refer to demographic, economic, and social conditions that influence individual and group differences in health. This health domain is specifically concerned with the social determinants of health and opportunities to ensure health equity among all Army Family members. Although there is a distinct research gap in this area, example work points to potential health disparities in Army Families based on Service member rank, geographic distance from the installation, and spouse employment status.

As of 2019, the top problems experienced by Army spouses included their own well-being (i.e., feeling stressed, overwhelmed, and tired), work-life balance, and military practices and culture (e.g., how to navigate the Army system) (Trail et al. 2019). Further analyses indicated that **junior enlisted spouses and spouses who lived farther from post were more vulnerable to negative experiences** such as higher stress, rated existing problems as more severe, held worse attitudes toward the military, and reported less support for retention of their Soldiers than senior enlisted spouses or spouses who lived closer to post. In addition, junior enlisted spouses, spouses who lived farther from post, and spouses without children reported less ability to navigate the system of available Army resources—particularly, knowing whom to contact for help in finding or using Army resources. **Army spouses with children reported greater confidence in their ability to navigate Army resources and more positive attitudes toward the military than those without children.** They were also more likely to support their Soldier staying in the Army (Trail et al. 2019).

To further understand how Army Family members view quality of life, health, and readiness at their installation, see the following spotlight entitled *The Community Strengths and Themes Assessment Supports the Army Family*.

# The Community Strengths and Themes Assessment Supports the Army Family

The Community Strengths and Themes Assessment (CSTA) is a survey tool used to capture community member perceptions of health and wellness at the installation level. The CSTA provides a rich understanding of the quality of life in Army installation communities across five of the seven domains of health: physical, behavioral, spiritual, social/environmental, and family health.

Every 2 years, Army installations around the world conduct the CSTA and ask for input from their installations' Service members, Family members, Retirees, and Civilian personnel. Community members are asked to participate in the survey as part of a coordinated effort directed by the local Army leadership's public health forum, called the Commander's Ready and Resilient Council (CR2C). The APHC analyzes each installation community's CSTA results and then provides summary findings and recommendations back to each installation's CR2C. These recommendations typically focus on process improvement strategies and specific "focus areas" for leaders to address through local, strategic health promotion plans and health, readiness, and resilience improvement initiatives.

The FY2019 Army Aggregate CSTA Report (APHC 2020) provides a picture of overarching community health perceptions by assembling and comparing installation-level surveys conducted between October 2018 and September 2019. A total of 6,603 individuals participated from 13 installations worldwide.

## Family Member Perceptions of their Army Community

Results of the 2019 CSTA indicated that Army Families view the available recreation opportunities and the diversity, cleanliness, and safety of their communities as key strengths. The Family members rated their communities as physically healthy and resilient. It is important to note that in FY2019, only 6% of all participants were Family members.

**Having more Family members complete the CSTA in future years will ensure that the voices of Family members are heard.**

## Five Domains of Health Assessed by CSTA

### 01 Physical Health

### 02 Behavioral Health

### 03 Spiritual Health

### 04 Social / Environmental

### 05 Family Health



## Exploring Family Health through the CSTA

The CSTA tool includes sections dedicated to exploring strengths, concerns, and trends within family health and support programs. These questions provide a unique look at the needs of Army Families from the combined perspectives of our Service members, Civilian workforce, Retirees, and Family members.

Table 3 presents the top health concerns among each of the five domains of health examined in the CSTA, as reported by Family members who participated in the 2019 CSTA. For each area of health, participants selected up to five "top concerns" from an extensive array of options. Across all specified health domains, the survey identified recurrent (and interrelated) themes surrounding poor diet, stress, financial and employment concerns, and work-life balance.

Although the CSTA is an effective tool for identifying community health needs, identifying the strengths of Army communities and Families is equally important. Approximately 89% of Family members participating in the 2019 assessment reported that their community was somewhat or very resilient (APHC 2020). When asked to indicate the top strengths of their communities, participants most frequently cited diverse communities.

Table 3. Top-Rated Health Concerns of Army Family Members within Five Domains of Health, FY2019

Physical Health	%	Behavioral Health	%	Spiritual Health	%	Social/ Environmental	%	Family Health	%
Poor diet	35	Stress	64	No spiritual concerns	42	Lack of career opportunities/ Unemployment	50	Lack of family time together	44
Overweight/ Obesity	34	Depression	60	Lack of morals	28	Work-life imbalance	48	Lack of employment opportunities	44
Lack of access to healthcare	31	Anxiety	39	Lack of adherence to Army Values	20	Financial issues	47	Financial issues	42

Data source: 2019 Community Strengths and Themes Assessment (APHC 2020).

*The CSTA is an important tool for Army Family members to make their voices heard at many levels. If eligible, please participate in your installation's next CSTA!*



## What We Don't Know and What's Next

The information provided on the seven domains of health for the Army Family represents what is readily available within the literature and through existing available data sources.

While many data sources and research studies exist to characterize the health of the Army Family at the home duty station, several gaps exist that can guide future efforts. The available literature and data collection platforms in most of the domains of health vary greatly, and ultimately, **the Army lacks a comprehensive system to centrally store, analyze, and manage data critical to monitoring Family member health, wellness, and quality of life across these domains.** It is not currently possible to systematically analyze and report available data by key demographics such as location. The Army also does not routinely conduct and report public health surveillance of health outcomes of Family members who receive their care within the MHS. Lastly, direct comparisons of health outcomes between Army Family member and civilian populations are very difficult because **data collection tools and efforts at both national and local levels rarely identify military affiliation, which would facilitate these comparisons.**

In addition, more research and assessment efforts are warranted within the sociodemographic factors and spiritual health domains. **It is important to further investigate how race, ethnicity, and experiences of racism may impact health outcomes in the military setting.** There is also a need to explore how the **factors that influence health differ between unique subsets of the Army Family**, including, but not limited to those with nonnuclear families, LGBT families, and dual-military families. Overall, **data on the spiritual health of Family members are lacking** and it is also not yet clear how spirituality, or a sense of meaning, links with physical or behavioral health outcomes for Army Family members. Much of the research in psychological health focuses on the intersection between deployment and health and may need to be updated to reflect current realities of Army Families. Finally, more research is needed to explore how families being stationed in austere/remote or outside the continental U.S. (OCONUS) locations affects family health across all domains.

Improved surveillance and reporting, combined with focused and prioritized research activities to fill specified gaps, will facilitate a better understanding of how Family members fare on all of the domains of health and the links between domains. This will ultimately better enable Army leaders and program proponents to develop new and augment existing support resources to address crucial facets of military life.



## CALL to ACTION

While it is difficult to distill all relevant efforts to the seven domains of health, they capture the breadth of information currently available and also highlight where more investigation is warranted. There are a number of activities that stakeholders of all levels can do to address challenges and enhance Army Family health and quality of life at the home duty station.

### SOLDIERS AND FAMILIES

- Visit a local Army Community Service (ACS) Center to make use of the many family support programs (e.g., Employment Readiness Program, Financial Readiness Program, Exceptional Family Member Program) or access resources online at <https://www.armymwr.com>.
- Utilize Military OneSource for family resources.
- Participate in preventive health screenings, actions, and appointments as communicated and recommended by your healthcare team.
- Share personal and Family members' health concerns with your healthcare team.
- Utilize available resources and services to support your health across domains, to include chaplains and environmental health supports.
- Participate in efforts to solicit feedback on your needs and experiences when possible to ensure your voice is heard (e.g. Town Halls, surveys, focus groups).

### ARMY LEADERS

- Encourage Soldiers and Family members to make use of available programs, services, and resources to prioritize health and well-being.
- Support, maintain, and communicate importance of routine community assessments to stay abreast of rising issues.
- Encourage Soldiers and Families to make healthy lifestyle choices, particularly in areas of sleep, tobacco, and substance use.
- Communicate the links between family financial health and Soldier readiness and retention; initiate conversations with Soldiers about their family's financial health.
- Maintain touchpoints with Family members to understand their health and quality of life concerns across domains.
- Support Soldiers in seeking behavioral health care for their dependents within and outside the MHS; continue to reduce stigma associated with help-seeking.
- Recognize the importance of housing and environmental health on overall Family member health and well-being and maintain visibility into key environmental health indicators at the command, installation, and enterprise levels.

### RESEARCHERS AND EVALUATORS

- Conduct routine public health surveillance and regularly report on health metrics and outcomes for Family members who receive care in the MHS.
- Add military affiliation demographic variables to national and local data collection systems and tools to optimize the ability to compare Army Family health status directly with similar civilian populations.
- Focus research efforts on spiritual health, the intersection of sociodemographic factors and health, and the impact of an austere/remote or OCONUS duty station on health.
- Conduct updated studies within the psychological domain that reflect the evolving circumstances of Army Families.
- Broaden focus of existing data collection and reporting efforts, when possible, to explore the health status and outcomes of diverse families.
- Assess whether health programs, services, and resources are achieving intended outcomes and reaching intended groups, especially those Army Family members who disproportionately experience poor health outcomes.

### POLICY MAKERS AND PROGRAM PROPONENTS

- Advocate for a regularly-occurring centralized system to monitor the health and quality of life of Army Family members to continuously inform and improve programs and policies.
- Resource and plan for routine public health surveillance and reporting on health outcomes for Family members who receive care in the MHS.
- Consider the interrelationships between the seven domains of health and how this may impact program and policy theories of change, specific services and activities, and overall likelihood of program and policy effectiveness.
- Forge partnerships, advocate for, and resource the addition of military affiliation demographic variables to national and local data collection systems and tools to optimize comparison and reporting capabilities.

## *Family Health & Unique Military Events*

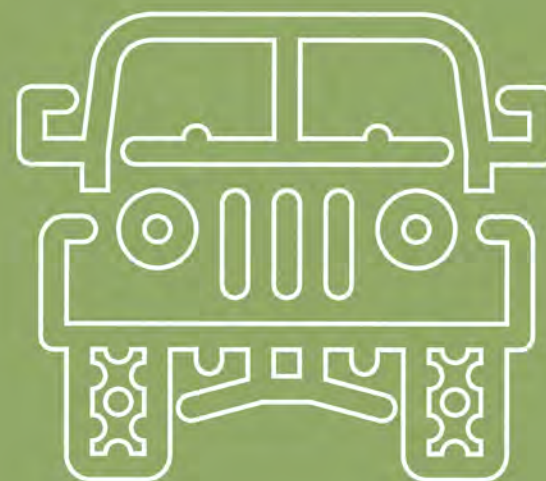
As Army Families move throughout the Military Family Lifecycle, they may encounter unique military events that challenge them beyond what is experienced at the home duty station. This section provides an overview of select events that characterize requirements of military service and how these events both affect, and are affected by, Army Family health. The goal is to provide a comprehensive look at each military event through the lens of holistic health (i.e., the seven domains of health).

While these events may introduce additional stressors to Army Family life, they may also represent opportunities for personal growth and resilience among Soldiers and their Families.

The three chapters within this section of the report will specifically address Family health in the context of —

- The Deployment Cycle (Chapter 3),
- Permanent Change of Station (Chapter 4), and
- Transitions Within and Out of the Army (Chapter 5).

## *Chapter 3: The Deployment Cycle*



# The Deployment Cycle



## What We Know

### Definition

The relationship between Army Family members and deployment is complex. For the purposes of this report, the deployment cycle includes:

- **Preparation** (e.g., financial planning, dialogue with children, Soldier and Family readiness).
- **Separation** (e.g., experiences of Soldiers and Family members during a deployment).
- **Reintegration** (e.g., transition back to home duty station, renegotiation of roles).

Additional factors that may affect how Army Families cope with the deployment cycle include different types of deployment (e.g., combat, noncombat, geo-dispersion); overall deployment OPTEMPO (e.g., wartime, volunteer force); and length, location, and sequence of deployments (e.g., time between deployments, frequency of deployments).

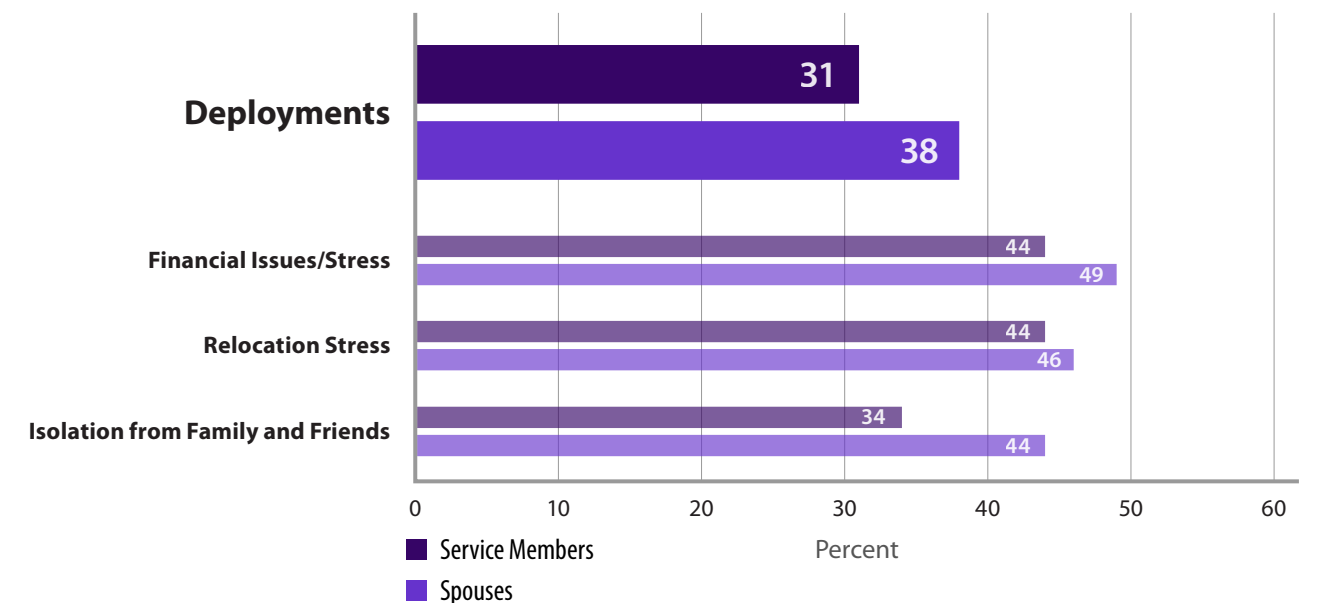
### Overview

This section will summarize what is known about Army Families' experiences during the deployment cycle, which are best captured by the physical health, psychological health, spiritual health, and family readiness domains. The following sub-sections parallel the deployment cycle and present what is known in the context of the available information rather than the seven health domains.

Much of what is currently known about Family member health and experiences throughout the deployment cycle is derived directly or in part from a comprehensive review of literature from the Army Analytics Group Research Facilitation Laboratory entitled, *What We Know about Military Family Readiness: Evidence from 2007-2017* (Hawkins et al. 2018). This comprehensive report synthesizes empirical information from 380 studies on military family readiness and is available at <https://apps.dtic.mil/sti/pdfs/AD1050341.pdf>.

Between September 2001 and September 2015, over **800,000 Active Component Army Soldiers** deployed and contributed an **average of 18 months** across deployments. At the time of deployment, 60% of Army Soldiers were married and 50% had children, emphasizing the **significant impact of deployment was on more than just the Soldier**. Deployments are consistently named as a top stressor among Service members and spouses (Figure 26; BSF 2019).

Figure 26. Top Stressors among Service Members and Spouses, 2019



Data source: 2019 Blue Star Families' annual Military Family Lifestyle Survey (BSF 2019).  
Data represent Active Duty and spouse respondents from all Services.

### Preparation

The preparation phase of deployment can include activities such as planning for finances, discussing the strains that deployment can have on marriage, and talking with children about what to expect during deployment. There is limited research or evaluation in this area, but existing work can be summarized into two domains: communication and readiness.

#### Communication during Preparation

Prior to the Service member leaving for deployment, families may experience changes in interpersonal communication. For example, some spouses prepare themselves for separation by distancing themselves from their Service member, which may exacerbate symptoms of depression (Hawkins et al. 2018). Although discussing an impending deployment is difficult, a study found the large majority of parents communicated the challenges and expectations of deployment to their children (Troxel et al. 2016 as cited in Hawkins et al. 2018). Further, a sample of military adolescents who had experienced parental deployment reported positive effects of pre-deployment communication with their families on coping and adjustment during the separation phase (Huebner et al. 2010 as cited in Hawkins et al. 2018).

Despite the benefits of communication when preparing for deployment, discussing upcoming deployments is indeed challenging and families may not be aware of the resources available to them through the deployment cycle (Heyman et al. 2015 as cited in Hawkins et al. 2018). While there have not been many interventions targeting families in the preparation phase, one video-based intervention provided information on resources aimed at both adults and children to increase awareness of deployment services (Patrin 2009). Understanding effective strategies for pre-deployment communication and how communication patterns may change before and during deployment may better equip families for the separation and reintegration phases.

## Readiness

A number of preparation activities fall into the broader category of deployment readiness, such as the protective effects of financial stability, advance planning for one's family, and talking with professionals about the potential impact of deployment on Family members. Families who engaged in readiness preparation activities had more favorable outcomes post-deployment than families who did not engage in these activities (Meadows et al. 2016). Specifically, Service members and spouses reported higher satisfaction with parenting during the post-deployment reintegration phase, especially when spouses were able to communicate with their Service member during deployment (Meadows et al. 2016). More work is needed to determine how preparation activities link to outcomes such as marital satisfaction, depression, anxiety, substance use, satisfaction with military life, and retention intentions.



### RESOURCES:

The **Mobilization and Deployment Readiness Program** provides an array of trainings to support Soldiers and Families through each phase of the deployment cycle.

## Separation

The second phase of the deployment cycle is separation—the deployment itself. Deployments are a stressful time for Soldiers, spouses, and other Family members. Effects of deployment can be seen in behavioral health, communication, and physical health.

**50%** of spouses *report stress* during deployment.



Separation can prompt a range of negative emotions for Family members on the home front, such as loneliness, powerlessness, and a perceived lack of control, which can be made worse by unexpectedly extended deployments. Evidence suggests an increase in behavioral health visits for female spouses during the separation phase, and children may experience temporary behavioral problems and negative educational outcomes (Mansfield et al. 2010). **Long-term behavioral health impacts may differ depending on experience with the deployment cycle and the overall status of military conflicts** (Hawkins et al. 2018).

**Deployment may also be a time for personal growth for spouses who use adaptive coping skills (Hawkins et al. 2018).** Positive coping skills include:

- Trusting social support networks
- Emphasizing self-sufficiency and independence
- Finding strength in the emotional connection of their marriage
- Keeping busy and active
- Legitimizing negative feelings while focusing on staying positive
- Deriving a sense of meaning, purpose, or identity from military experiences

## Communication during Separation

Communication during the separation phase may protect against some negative outcomes. The ability **to contact spouses and families while deployed can increase Soldier well-being. Increased frequency of communication during deployment has been associated with lower levels of relationship distress (Cigrang et al. 2014). A study on the link between relationship quality and post-deployment PTSD symptoms showed that Soldiers who disclosed combat experiences to their spouses reported higher relationship quality, were less likely to report PTSD symptoms, and may experience smoother post-deployment reintegration (Balderrama-Durbin et al. 2013).** The positive benefits of communication during separation may be restricted to those couples who have established positive relationship functioning prior to deployment (Hawkins et al. 2018).

**“Technology offers opportunities to connect during deployment.”**



Negative consequences of communication have also been identified. For example, Service members have reported feeling distracted and unfocused after speaking with their children and evidence is mixed on how communication with spouses affects Soldiers' job performance (Hawkins et al. 2018). Frequency of communication with spouses did not impact performance; however, lower marital satisfaction, a focus on problems during communication, and conflictual communication were strongly linked to decreased job performance in deployed Soldiers (Carter et al. 2015). Figure 27 below summarizes the various aspects of communication during deployment.

Figure 27. Effects of Communication During Deployment



- Lower relationship distress
- Higher relationship quality
- Greater Soldier well-being



- Possible distraction from mission focus
- Problem-focused communication
- Possible decrease in job performance

Physical Health

Physical well-being of Family members is an important component of separation. Some literature suggests that spouses who report high stress during deployment experience worse physical health outcomes than those who report less stress. For example, one study showed an increased risk for preterm birth among spouses while separated from their Service members (Tarney et al. 2015).

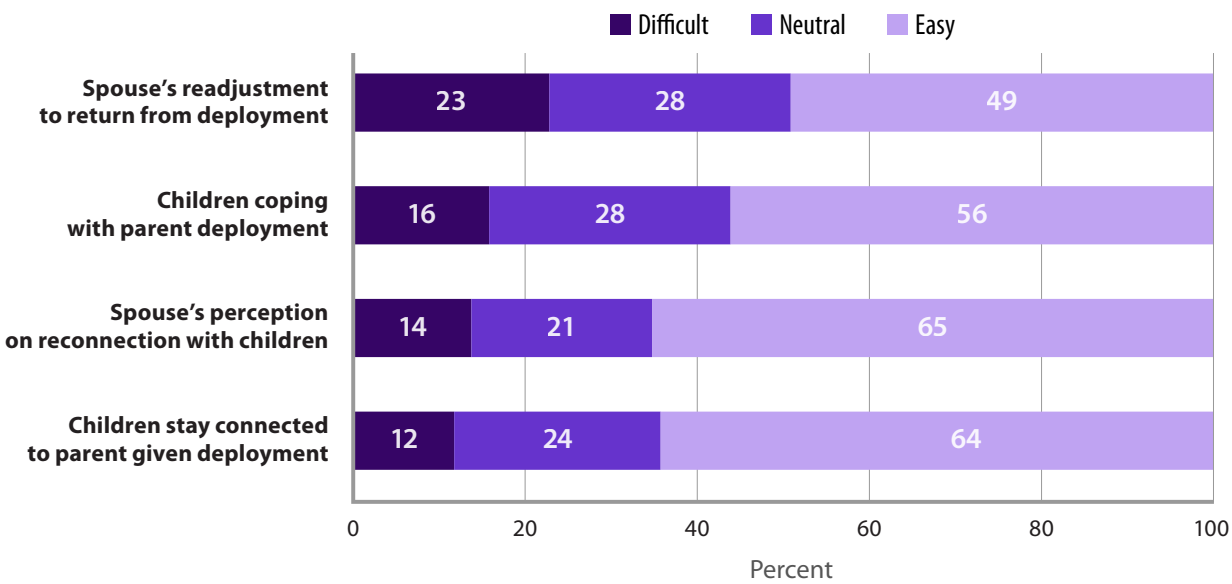
There is some evidence that spouses who do not openly discuss issues with their deployed Service member while separated were more likely to report negative health symptoms (Joseph and Afifi 2010). Further, results of several studies suggest an increased risk for spouse and/or adolescent substance use (e.g., alcohol, other drugs) (Acion et al. 2013; Gilreath et al. 2013; Trone et al. 2018) during deployment as well as child neglect and maltreatment (Gibbs et al. 2007; Fullerton et al. 2011; Faran et al. 2015).

Reintegration

Reintegration is the final phase in the deployment cycle and is defined as a period of reunion and re-adjustment between Soldiers and Family members. Research efforts on reintegration experiences of military families have focused on health, well-being, and family functioning, as well as strategies for managing behavioral health challenges and the importance of social support.

Spouses and Service members tend to have similar experiences and report a wide range of emotions, both positive and negative. Reintegration is a period of complex, significant change as Family members work to reestablish and renegotiate family roles, norms, and routines (see Figure 28; OPA 2017a).

Figure 28. Active Duty Spouses’ Perceptions on Reintegration after Deployment, 2017



Data source: Active Duty Spouse Survey, collected from June-November 2017 (OPA 2017a). Data represent spouses from Active Duty members of the Army, Navy, Marine Corps, and Air Force.

Communication during Preparation

Challenges in communication during deployment have been linked to negative behavioral health outcomes during reintegration and are a contributing factor for relationship stress. Spouses and Service members may struggle with how much to share with each other during reintegration as they renegotiate their relationship processes (Hawkins et al. 2018).

Family Roles

A common challenge reported by Service members and spouses is navigating changes in family roles that occur during separation and again upon reintegration. Service members and spouses experience doubt about their roles upon reunion and returning to pre-deployment life is neither easy nor straightforward. Research findings echo the challenge of re-establishing family roles while trying to manage complex emotions, stressful experiences, possible health concerns, and potential conflict and resentment within couples (Hawkins et al. 2018). A prime example of reintegration challenges is reconnection. **Successful reconnection between child and Active Duty parent has been associated with greater spousal support to remain Active Duty compared to spouses who report difficult reconnection between child and Soldier (DMDC 2015b).**


Behavioral Health and Coping

Factors known to exacerbate spouses’ negative behavioral health symptoms include longer deployment duration, an avoidant attachment style (e.g., avoiding thinking about reintegration, minimizing the impact of separation), severity of depression and anxiety symptoms among their Service member, and the birth of a child with a recently redeployed Service member (Borelli et al. 2014; Vincenzes et al. 2014).

*Spouses may experience negative emotions during reintegration: high stress, uncertainty, anxiety, depression, and PTSD symptoms.*

A study on the effects of deployment on Service members over time found the experience of physical injury and psychological trauma (e.g., seeing injured noncombatants) during deployment was predictive of higher levels of psychological and physical aggression as reported by their spouses during reintegration (Meadows et al. 2016). However, Service members’ exposure to combat trauma (e.g., engaging in hand-to-hand combat, experiencing explosions) during deployment was predictive of lower levels of psychological aggression (Meadows et al. 2016).

Post-deployment experiences of depression, anxiety, and PTSD symptoms among Service members have also been shown to affect their children’s mental health, such that higher levels of symptoms in the Service member predicted greater internalizing problems among children, even 1 year after reintegration. Importantly, this finding was reciprocal, such that children’s internalizing behavioral problems was also predictive of parents’ PTSD symptoms (Hawkins et al. 2018).



RESOURCES:

The **Army Family Advocacy Program (FAP)** offers classes in stress management, anger management, communication skills, and referrals for behavioral health resources.

Table 4 provides a summary of key issues relevant to the preparation, separation, and reintegration phases of deployment.

Table 4. Soldier and Family Needs by Deployment Phase and Health Domains

Deployment Phase	Soldier and Family Needs	Health Domains
Preparation	<ul style="list-style-type: none"><li>Financial planning</li><li>Dialogue with children and spouse about expectations</li><li>Strong relationship functioning prior to deployment may be protective during separation phase</li></ul>	<i>Family Readiness Psychological Sociodemographic factors</i>
Separation	<ul style="list-style-type: none"><li>Social support</li><li>Positive communication between Soldier and spouse</li><li>Sense of meaning as Army spouse and Army Family</li><li>Access to resources to address increased hardship</li></ul>	<i>Physical Psychological Spiritual Sociodemographic factors Healthcare delivery Family Readiness</i>
Reintegration	<ul style="list-style-type: none"><li>Social support</li><li>Positive reconnection between Soldier and child/ children</li><li>Access to resources that may help manage natural stressors of reunion</li><li>Understanding interdependence between parents’ behavioral health and children’s behavioral health</li></ul>	<i>Physical Psychological Healthcare delivery Family Readiness</i>



What We Don’t Know and What’s Next

While there has been some work seeking to understand the impacts of deployment on Soldiers and their Families, not all phases of the deployment cycle have been represented. **Preparation for deployment may be an important time to set Army Families up for success, but there is limited understanding of this phase.**

Families often go through periods of transition during the separation phase, including both challenges and opportunities for growth. Some challenges such as changing housing, medical care, or educational providers may require certain types of support when faced in the absence of the Soldier, but this is an understudied area. Additional information gaps exist regarding the physical health and health behaviors of Family members during deployment, including sleep, nutrition, and substance use in particular.

Relatively little is known about spouses’ experiences of reintegration following the end of Soldiers’ deployments; both the negative and positive outcomes of these experiences warrant exploration. **To best facilitate transitions throughout the deployment cycle for Soldiers and their Families, more research and evaluation work is needed across phases and outcomes of interest.**

Finally, while there are data on Soldiers’ and Families’ experiences during some phases of deployment, there is much more limited information on what works to best support Army Families during these transitions.



## CALL to ACTION

The preparation, separation, and reintegration phases of deployment each bring unique needs, challenges, and opportunities for Family member growth. Several gaps remain in our understanding of the health status of Army Family members across health domains and deployment phases, as well as in the extent to which existing deployment

support services and programs are effective at sustaining or improving health. There are several actions various stakeholder groups can take to apply what is already known as well as fill critical information gaps.

### SOLDIERS AND FAMILIES

- Explore on- and off-post deployment resources for families in preparation phase of deployment.
- Seek support when needed throughout the deployment cycle. Communicate and encourage utilization of available resources and support systems among spouses and children.
- Recognize that deployments have distinct phases and that individual and family experiences and needs may evolve across each phase.
- Have patience with one another during the reintegration process.

### ARMY LEADERS

- Share resources with Soldiers and Families during deployment preparation and reintegration phases, in particular.
- As Operational Security allows, ensure technology is available to facilitate family communication during separation.
- Encourage Soldiers and Families to use technology to communicate constructively during separation, and educate Soldiers and Family members on positive communication tactics to use during separation.
- Provide and promote flexibility for Soldiers to re-acclimate to family life upon reintegration.

### RESEARCHERS AND EVALUATORS

- Seek to understand how preparation may impact experiences and outcomes during the deployment cycle.
- Broaden focus of existing efforts to explore impacts of deployment on nontraditional families.
- Examine the impacts of reintegration on Family member health across health domains and behavioral health, in particular.
- Continually assess and understand the needs of Army Families across all phases of the deployment cycle with specific attention to identify and support those families who disproportionately experience poor outcomes.
- Identify instances in which Soldiers and Families have experienced positive experiences with deployment assistance resources and processes that may inform best practices.

### POLICY MAKERS AND PROGRAM PROPONENTS

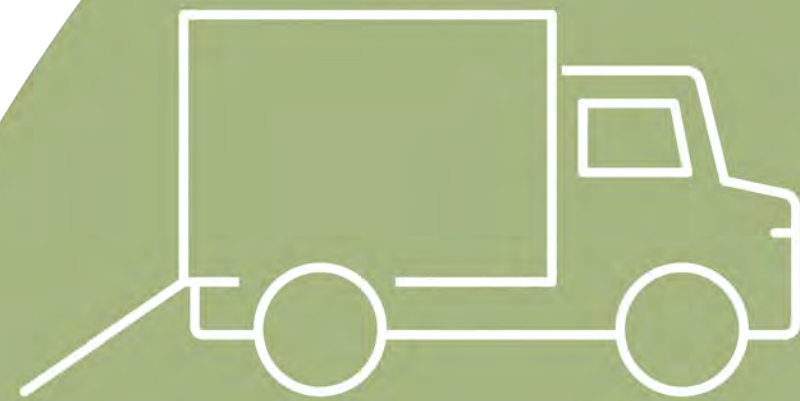
- Advocate for, plan for, and resource assessment and evaluation efforts to ensure deployment support programs, services, and policies are meeting identified needs and are accountable in achieving their desired outcomes.
- Routinely modify policies, programs, and service offerings based on best available evidence from data and studies.



U.S. Army photo by Pat Molnar

## *Family Health & Unique Military Events*

### **Chapter 4: Permanent Change of Station**



# Permanent Change of Station



## What We Know

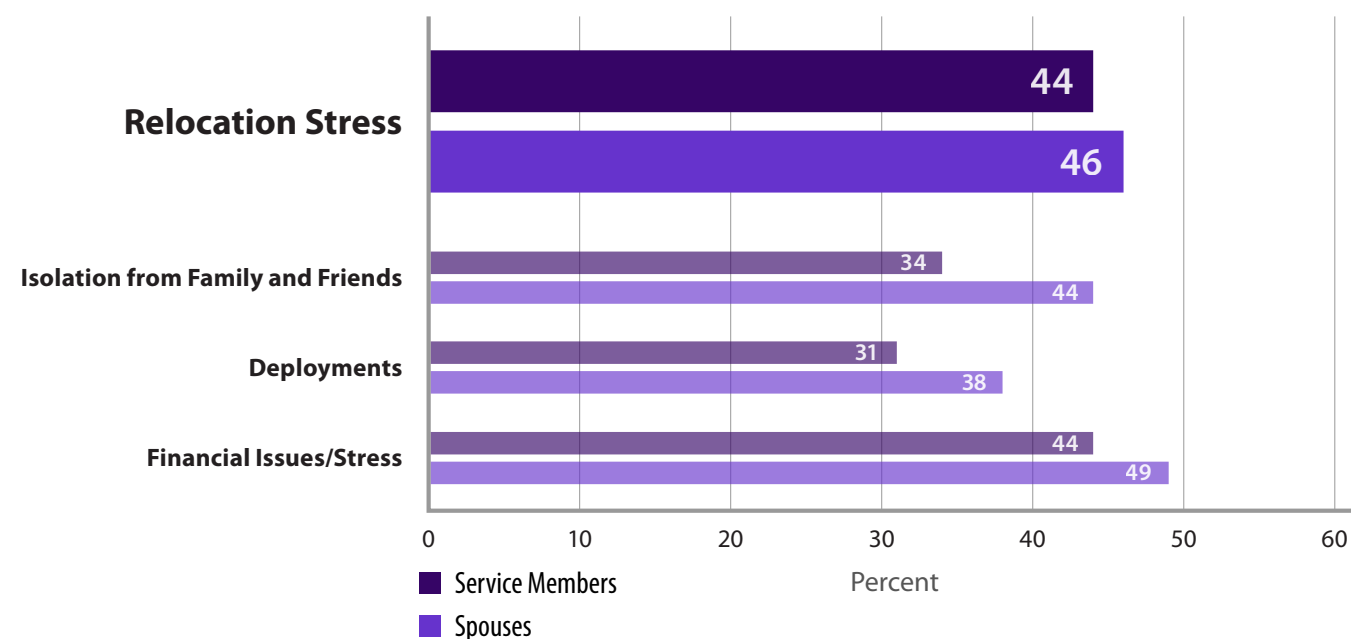
### Definition

Permanent changes of station are defined as movement from one duty location to another for a period of no less than 1 year. The permanent change of station (PCS) process begins when a Soldier receives their orders and continues through the transition and integration into the new duty location. Relocation is a core feature of military life and **each year approximately one-third of Service members relocate to a new duty location** (Tong et al. 2018). Those Service members with dependents are routinely faced with moving their Family members and all the decisions associated with this significant life event.

### Overview

Relocation can be a challenging experience for many military families as they establish new healthcare providers, social support networks, employment, norms and routines, and adjust to new schools (Hawkins et al. 2018). However, relocation may also provide positive benefits to Soldiers and Families such as career advancement and strengthening family resilience, particularly among children (Spencer et al. 2016). **Overall, relocation is cited as a top stressor for Service members and spouses (Figure 29; BSF 2019).**

Figure 29. Top Stressors among Service Members and Spouses, 2019



Data source: 2019 Blue Star Families' annual Military Family Lifestyle Survey (BSF 2019).  
Data represent Active Duty and spouse respondents from all Services.

PCS moves can yield both short-term effects on the well-being of Soldiers and Families and long-term effects on the broader Army mission of ready and retained Soldiers. Therefore, the process of identifying, addressing, and preventing challenges associated with PCS moves is critical to optimizing the health and well-being of Soldiers and Army Families.

Much of what is currently known about Family member health and experiences during PCS moves is derived directly or in part from a RAND report entitled, *Enhancing Family Stability During a Permanent Change of Station: A Review of Disruptions and Policies* (Tong et al. 2018). This comprehensive report synthesizes existing literature, secondary analyses, and interviews from subject matter experts and is available at: [https://www.rand.org/pubs/research\\_reports/RR2304.html](https://www.rand.org/pubs/research_reports/RR2304.html).

### PCS Moves as a Period of Vulnerability

The months leading up to a PCS move may be a period of potential vulnerability for Soldiers and their Families with respect to military commitment, satisfaction, and financial strain. Research shows that **the 2 months prior to a PCS move are associated with a decrease in Service member commitment, retention intentions, and satisfaction with military life, as well as an increase in spousal financial stress** (Tong et al. 2018). After the move has taken place and a sense of normalcy is restored, Service members' commitment, retention intentions, and satisfaction increase can return to pre-move levels. However, spousal financial stress continues to remain elevated after the move.

**This pattern of results indicate that in the months leading up to a PCS move, Soldiers and Family members may benefit from additional support from Army leaders, programs, and services.** Lingering financial stress among spouses suggest additional targeted support for Families after a PCS move may be warranted; leaders, programs, and services can be used to widely promote existing resources during this time. This support can address both direct disruptions, such as buying new household goods and enrolling in a new school, or indirect disruptions, such as building new social networks (Tong et al. 2018).



## The Challenge of Frequent Moves

Multiple research efforts on military families discuss the challenges of frequent PCS moves. A recent meta-analysis (i.e., a summary of effects across multiple studies) suggests that **recent and/or frequent PCS moves may pose greater challenges than sheer number of career PCS moves** for Service members and Families (Nihill et al. 2019). A study on the effects of PCS moves on family stability found that 28% of military spouses reported frequent relocations as a critical factor for whether their Service member will stay in the military (Tong et al. 2018). Although frequency of PCS may influence the decision to remain in the military, there is less certainty as to what is considered a “frequent” move. A 2001 Government Accountability Office report found that frequency of PCS moves is associated with less spousal support for their Service members’ retention (U.S. General Accounting Office 2001 as cited in Tong et al. 2018). Specifically, spouses of Service members who averaged less than 2 years between moves were more likely to favor leaving the military than spouses whose Service members averaged more than 2 years between moves.

**28%** of spouses cite **frequent relocation as a factor** for whether their Service member will stay in the military.



Frequent moves are also associated with disruptions in health care among Soldiers and Families. Interruptions in ongoing medical care due to PCS moves contributes to decreased satisfaction among military families and may also contribute to poor health outcomes (Gleason and Beck 2017). This particular issue is further explored in the spotlight, *The Effects of Relocation on Exceptional Army Families*.

## The Challenge of Financial Strain

The mobile military lifestyle (e.g., frequent relocations and deployments) can sometimes interfere with the financial stability of military families, and financial health is a critical factor for Soldier and Family readiness (Hawkins et al. 2018). Spouses who report better financial status are more likely to be satisfied with the military, which in turn predicts spousal support for retention (DMDC 2015b) – a precursor of actual retention behavior (OPA 2019b). The timing of PCS moves and delays in receiving PCS orders intensifies the negative relationship between financial strain and spousal support for retention, which may further disrupt family stability. Interviews with military personnel provide additional insight into the issue of timeliness of PCS orders. The most frequently reported timing issue was PCS moves that occur during summer months, or “peak periods.” Although summer moves may reduce disruptions related to school, the moving process itself may be more challenging due to reduced availability of contractors (e.g., movers) and other required resources (Tong et al. 2018).



# The Effects of Relocation on Exceptional Army Families

**Nearly 1-in-10 Army Soldiers have at least one Family member with special needs.** Relocation can be especially challenging for families with special needs as they re-establish critical medical care, educational services, and support networks at their new duty location. The Exceptional Family Member Program (EFMP) provides medical, educational, and resource navigation support to military families with a dependent who has special medical or educational needs (i.e., Exceptional Family Member (EFM)).

In May 2019, the APHC responded to a request from the Secretary of the Army to develop and administer a survey to—

- Understand how continuity of medical and educational services for EFMs are affected by PCS moves;
- Identify which aspects of the EFMP are most and least valued; and
- Provide actionable recommendations for program improvement.

A total of 3,024 Soldier Sponsors with Family members enrolled in the EFMP participated in the survey, and reported the effects of PCS moves on access to required medical and educational services for their EFM(s) as well as their experiences with the EFMP in general.

## Demographic Group Differences

The impact of PCS differed by EFMP Soldier Sponsor demographics. **Those who were lower rank (Enlisted pay grade), located in the Continental United States (CONUS), or had multiple EFMs reported a greater impact on EFM(s) access to services due to PCS** (Figure 30a-c) (APHC 2019).

## Access to Medical Care

**The majority of EFMP Sponsors (75%) reported needing medical care for their EFM(s).** At the time the survey was administered, **30% were unable to receive care after their most recent PCS.** Among EFMP Sponsors unable to receive care for EFMs, their most frequently cited barriers included: limited appointment availability, long wait lists to see providers, and unavailability of required services at new duty locations (APHC 2019). For the 70% who did receive care for EFMs, most families established medical services within 1 month or less upon arrival to their new duty location. However, these families reported similar barriers to accessing care in a timely manner, including limited

appointment availability and long wait times. The EFMP Sponsors who experienced longer wait times to establish primary and specialty medical care reported more severe impacts of PCS moves on their EFM(s) (Figure 31a-c) (APHC 2019).

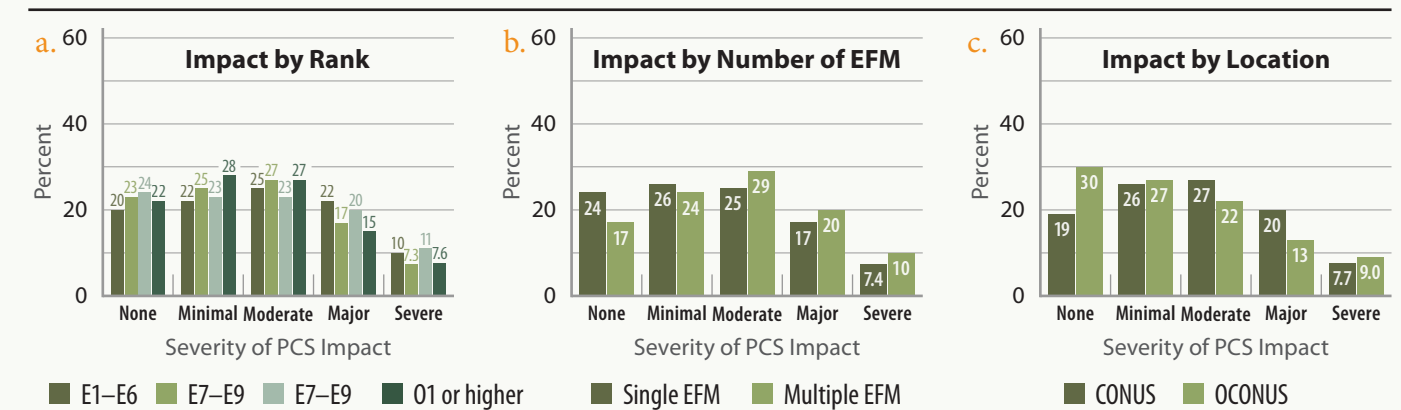
## Access to Educational Services

**About half of EFMP Sponsors required educational services for their EFM(s).** At the time of this survey, **35% did not receive educational services after their most recent PCS,** and cited delayed meetings at the EFM's new school for the EFM's Individual Education Plan (IEP)—as well as other issues with the EFM's IEP—as top barriers to accessing required services (APHC 2019). Among the 65% who received educational services, nearly two-thirds (64%) established care within 1 month. However, these Sponsors also reported delayed meetings for the IEP and long wait lists as their top challenges to accessing educational services for their EFM(s). Survey responses, with regard to PCS impact on establishing educational services, mirrored feedback regarding PCS impact on establishing medical services; those who reported a longer time to establish educational services reported more severe impacts of PCS on the EFM(s) (Figure 32a-b) (APHC 2019).

## Supporting Families with EFMs before PCS

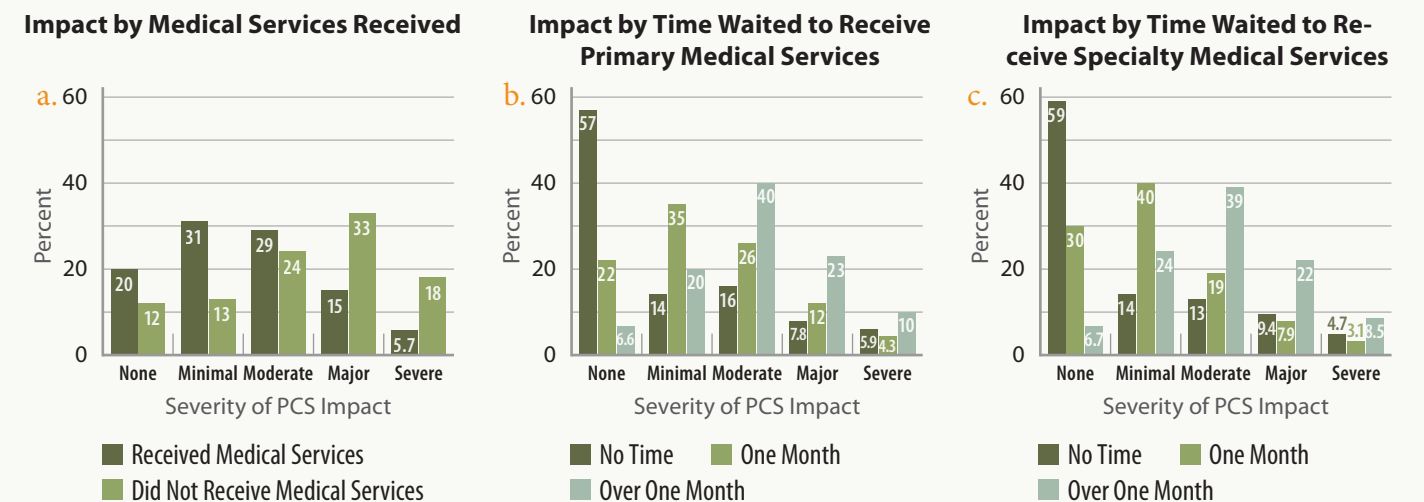
**These findings suggest the need to mitigate the impact of PCS for families with EFMs by ensuring medical and educational services are readily available once Army Families arrive at new duty locations.** The EFMP processes may continue to be standardized to help Families establish medical and educational services at the new duty location before the PCS move. The engagement between families and EFMP family support may be strengthened so that Families receive detailed and current information about the new duty location (e.g., a list of providers in the area, processes for educational transfers). This engagement is essential to help ease the transition to the new duty location.

Figure 30. Severity of PCS Impact on Army Families with EFMs, 2019



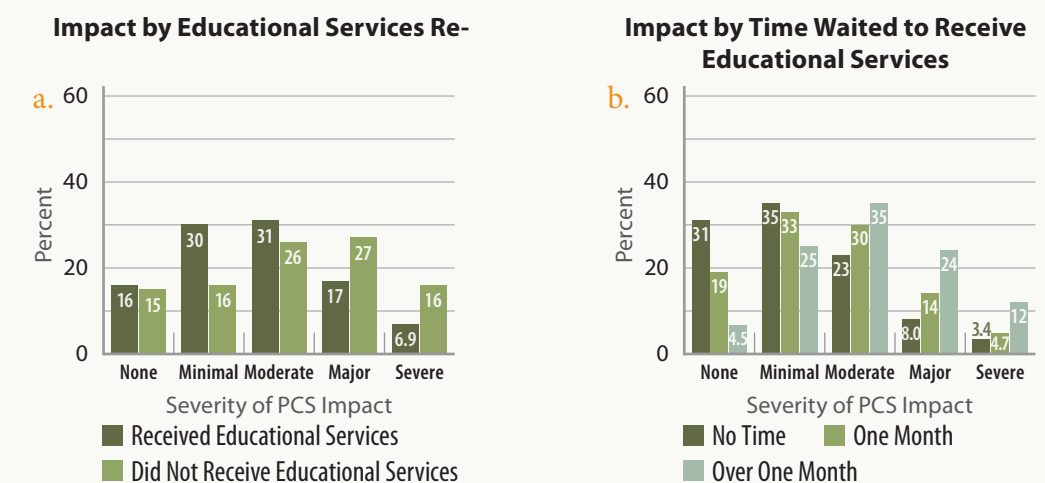
Data source: 2019 Exceptional Family Member Program Survey (APHC 2019). Data represent Active Duty Army respondents.

Figure 31. PCS Impact on Medical Service Receipt for Army Families with EFMs, 2019



Data source: 2019 Exceptional Family Member Program Survey (APHC 2019). Data represent Active Duty Army respondents.

Figure 32. PCS Impact on Educational Service Receipt for Army Families with Exceptional Family Members (EFMs), 2019



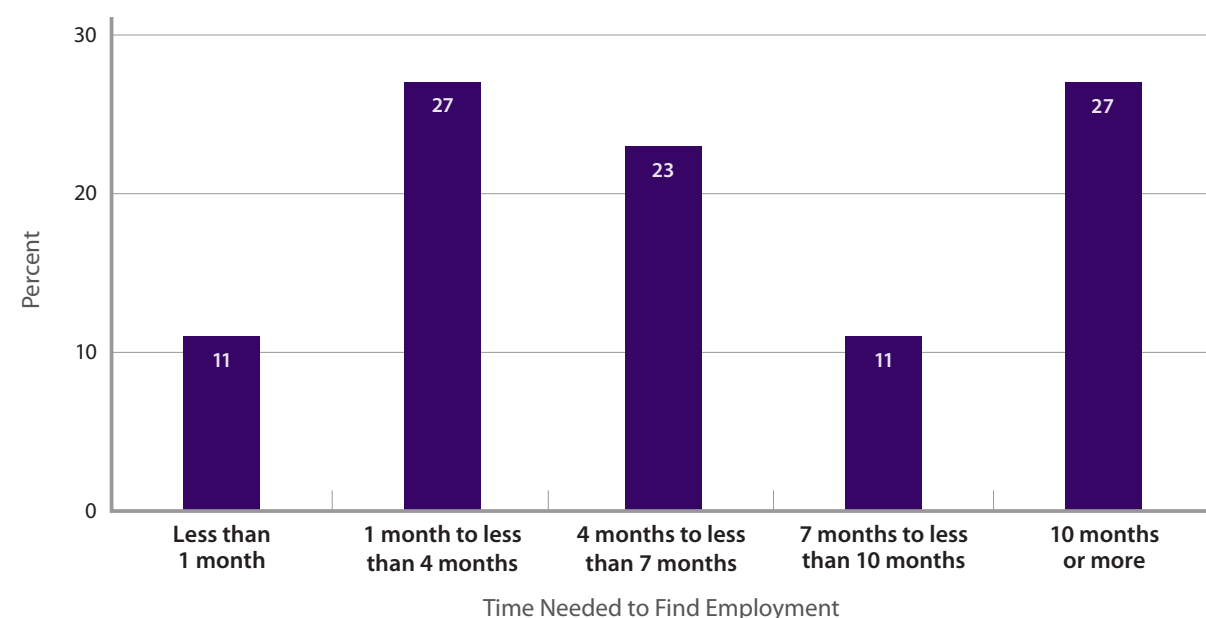
Data source: 2019 Exceptional Family Member Program Survey (APHC 2019). Data represent Active Duty Army respondents.

**27%** of spouses took **10 months or more** to find a job after their most recent PCS move.



A key contributor of financial strain is the potentially disruptive effects of PCS moves on spouse employment. Evidence suggests significant links between PCS moves and spousal unemployment, spousal under-employment, and loss in spousal earnings (Tong et al. 2018). This disruption in employment can be seen in the number of months it takes for military spouses to find employment after their most recent PCS move. Results from the 2015 Survey of Active Duty Spouses showed that 27% of spouses found a job in 1 to 4 months and 44% of spouses took between 4 and 10 months. However, more than one-fourth of spouses (27%) took 10 months or more to find a job after their most recent PCS move (Figure 33; DMDC 2015b).

Figure 33. Average Length of Time for Military Spouses to Find Employment after Last PCS Move, 2015



Data source: 2015 Survey of Active Duty Spouses (DMDC 2015b).  
Data represent Active Duty Spouses from all Services.

Employment challenges can influence spousal well-being; this effect may be more pronounced in Army spouses with lower socio-economic status (including lower income and less reported education). These spouses reported greater distress associated with financial strain surrounding a PCS move than those of higher socio-economic status (Hawkins et al. 2018). Across demographic groups, military spouses face greater employment challenges compared to civilian spouses. Military spouses are employed at much lower rates and earn less than civilian spouses with the same characteristics (Harrell et al. 2005). On average, female spouses of Active Duty Service members earned 37% less income than similar civilian counterparts. Despite attaining a higher education level than comparable full-time civilian workers, military spouses earned less (Hiring Our Heroes, U.S. Chamber of Commerce Foundation 2017). Additionally, when examining unemployment rates across services, Army spouses reported the highest unemployment rate of all the services (28%) (OPA 2017a).

Frequent relocation and changes in Soldiers' duty hours may result in spouses accepting short-term, lower-paying jobs, posing challenges for spousal career development and maintaining a consistent work history. In fact, studies have identified an earnings gap between military spouses and their civilian counterparts, and this earnings gap is larger for female military spouses than male military spouses (Hawkins et al. 2018).



#### RESOURCES:

The **Relocation Readiness Program** offers resources to Soldiers and Families to ease transitional and financial strain.

Recent research lends further support to the need for increased financial and employment support services for Army Families before and after PCS moves. Results of a meta-analysis (Nihill et al. 2019) on the relationship between PCS moves and spouse employment show that more time elapsed since relocation predicted greater likelihood of eventual employment. Spouse employment status was also related to satisfaction with the military, and a strong relationship was observed between satisfaction with the military and greater commitment to the military (i.e., lower turnover intentions and greater spousal support for retention). **Importantly, this study's research team recommended that family support programs target spouses soon after or before their PCS move to minimize disruptions in employment.** More details on spousal employment can be found in the spotlight entitled *Spouse Employment is an Important Army Issue*.

#### The Effects of PCS Moves on Military Children

The effects of PCS moves on military children are characterized by both negative and positive outcomes. Research indicates that PCS moves often create stressful situations for children (Davis and Finke 2015) and can affect multiple domains of health, such as social relationships, behavioral health, and academic performance (Hawkins et al. 2018). Conversely, it may also lead to increased resilience relative to their civilian counterparts.

Adolescents may experience greater behavioral health challenges during relocation than younger children. Frequent relocation is associated with depression and anxiety symptoms among adolescents. Relocation has also been linked to problems such as truancy, carrying a weapon, and sexual activity. Specifically, military adolescents who had relocated in the past 5 years were 4.8 times as likely to be sexually active than those who had not relocated (Hernandez et al. 2015).

School-related problems tend to be the most frequently reported concerns among military parents. Frequent school changes is predictive of decreased well-being among military children and is related to the loss of academic credits (Richardson et al. 2011). Further, changing schools 4 or more times in the past 5 years was associated with a 53% increase in the likelihood of gang-affiliation of military-connected adolescents (Estrada et al. 2017).

Although moves are inherently stressful, some research indicates that relocation can result in increased resilience among military children, such as decreased school-related problems (i.e., fewer nonroutine requests by the school for a conference with parents) and a positive attitude toward moving (Huebner et al. 2019). Studies have also shown that relocation can be protective if children are able to distance themselves from negative peer group influences (Hutchinson 2006). Access to a supportive military community and programs specifically designed to address relocation challenges may aid in protecting military children from the negative effects of relocation.

## SPOTLIGHT

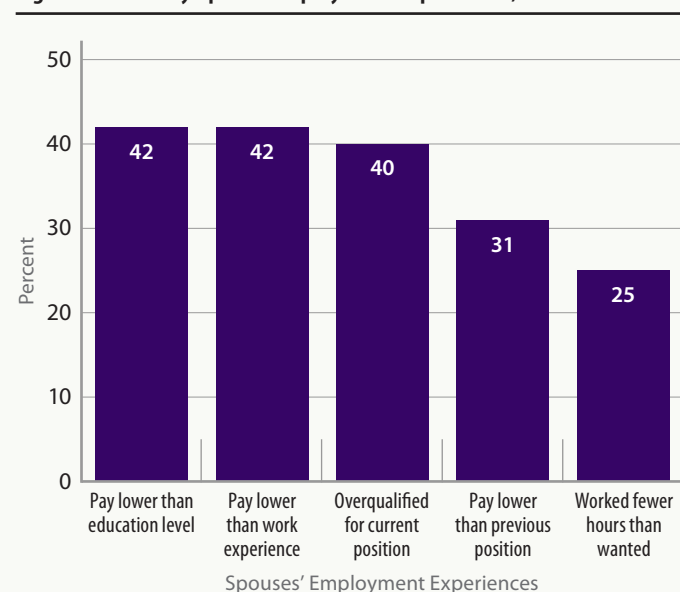
## Spouse Employment is an Important Army Issue

**Military spouses are the backbone of the Armed Forces. They keep the home front strong when their Service member is away for training, deployment, or attending professional schools. However, military spouses can face challenges in their own employment due to unique factors of military life. This, in turn, can affect family financial stability, satisfaction with military life, and even decisions to re-enlist.**

According to the 2017 Survey of Active Duty Spouses, 24% of military spouses reported being unemployed; unemployed spouses reported having sought employment for an average of 4 months (OPA 2017a). Military spouses with the highest proportions of unemployment included Army spouses (28%), spouses of junior enlisted Soldiers (E1–E4 rank; 29%), spouses of minority status (31%), spouses who had relocated in the past 12 months (40%), and spouses with children (27%). Further, of the spouses who were employed, only 56% reported being employed within the area of their education or training (OPA 2017a).

Data from the 2019 Blue Star Families' Military Lifestyle Survey (Figure 34) shed further light on the circumstances contributing to military spouse underemployment, such as lower pay, feeling overqualified, and working fewer hours than desired (Blue Star Families and The Institute for Veterans and Military Families 2019). Spouse employment is an important Army Family issue, and therefore an important Army issue. For this reason, the DOD has made resources available to help military spouses achieve professional goals.

Figure 34. Military Spouse Employment Experiences, 2019



Data source: 2019 Blue Star Families' annual Military Family Lifestyle Survey (BSF 2019).

Data represent Active Duty Spouses from all Services.

## EMPLOYMENT RESOURCES

- Army Quality of Life-Spouse Employment: <https://www.army.mil/qualityoflife/#spouse-employment>
- Army Spouse Employment, Career and Education Information and more: <https://www.army.mil/article/236579>
- Community Resource Guides: <https://crg.amedd.army.mil>
- Department of Defense Spouse Education and Career Opportunities program: <https://myseco.militaryonesource.mil/portal/>
- Military Spouse Interstate License Recognition Options at the U.S. Department of Labor: <https://www.veterans.gov/milspouses/>
- Resources for military and Veteran family members: <https://www.va.gov/careers-employment/family-resources/>

One of the greatest challenges observed in military children during relocation is disruption to their social relationships. Importantly, school-aged children who reported more **social support resources experienced fewer depressive symptoms and greater self-efficacy than those who reported less support** (Richardson et al. 2016). The importance of social connections and positive peer relationships for the well-being of military children is echoed in multiple studies, and military children who participate in military-sponsored activities reported more friendships than those who did not (Hawkins et al. 2018).

### The Impact of Relocation May Differ Between Groups

PCS moves do not impact every family in the same way and may be especially challenging for junior enlisted Soldiers and Families due to less experience and personal resources to facilitate the moving process. A 2009 pilot study on the utilization of the **Relocation Readiness Program** by Soldiers cited out-of-pocket expenses, housing, settling-in costs, and insufficient pre-arrival information as the top problems experienced during relocation (Family Life Development Center (FLDC) 2009).



#### RESOURCES:

The **Total Army Sponsorship Program** aims to help Soldiers and their Families during PCS moves. Incoming Soldiers are assigned to sponsors prior to arriving at the assigned duty station to support integration into the new Unit. The TASP works in tandem with the ACS Relocation Readiness Program to provide a full spectrum of Soldier and Family support during PCS moves.

On average, Soldiers relocating for the first time reported fewer problems than those with prior PCS experience. However, this finding was only true for single Soldiers or couples without children. Soldiers with three or more dependents in the household reported twice as many problems during their first PCS move compared to other groups (FLDC 2009). Further, Soldiers with child dependents reported nearly twice the amount of expenses as those without children and expenses increased with each additional child. Soldiers with an EFM (i.e., a dependent with special medical or educational needs) reported out-of-pocket expenses that were 2.5 times greater than those without an EFM (FLDC 2009). Although these results are dated and highlight the need for more current work in this area, they suggest **challenges of PCS moves may differ based on family composition**. Additional research and evaluation is warranted to further understand the needs of these groups and the extent to which relocation resources are effective in easing the burden of PCS moves.

“Soldiers with 3 or more dependents had twice as many problems during their first PCS than other groups.”



## What We Don't Know and What's Next

The effects of PCS moves may have far-reaching implications on the valued Army outcomes of Soldier readiness and retention. The challenges of PCS moves can affect Service member retention through multiple channels, such as their own dissatisfaction and waning military commitment, as well as through spousal stress and less spousal support for retention (Tong et al. 2018). The findings reviewed in this section strongly suggest that the Army will benefit by alleviating the challenges and strains associated with PCS moves for Soldiers and their Families. Programs and policies that effectively ease the transition to new duty locations may be viewed as an investment in a ready and retained force. Specific programs and policies that aim to address spouse employment challenges should be priorities for implementation, evaluation, and augmentation.

Additional research is needed to determine whether certain demographic groups are more vulnerable to the challenges associated with PCS moves than others, and the types of programs and policies that may be most helpful to address these challenges. Further investigation can also help better understand factors that build resilience among military children who face frequent PCS moves.

Lastly, although there is considerable information on the experience of PCS moves for Soldiers and Families, little is known about whether existing programs and services are effective in easing transitional and financial strain.



“PCS moves may have **far-reaching implications** on the valued Army outcomes of Soldier readiness and retention.”



## CALL to ACTION

Program evaluation will continue to prove a critical tool in assessing whether existing relocation programs and policies are implemented as intended, if target populations are reached, and whether or not and how these efforts reduce the strains associated with relocation to optimize a ready and retained force. Relocation programs and policy efforts should be strengthened with considerable emphasis on promoting a coordinated and effective system of support. Given the amount of money invested in PCS moves and the apparent weight that these moves have on retention, the Army has a vested interest in supporting key partnerships between Soldiers and Families, Army leaders, researchers and evaluators, and policy makers and program proponents.

### SOLDIERS AND FAMILIES

- Use programs and services that aim to support Soldiers and Families during periods of transition, such as the Army Community Service (ACS) Relocation Readiness Program, Employment Readiness Program, Financial Readiness Program, Total Army Sponsorship Program, and Exceptional Family Member Program.
- Learn about available Child and Youth Services (CYS) for children (e.g., positive youth development programs), for opportunities to connect with other military youth.
- Plan for significant changes to spousal employment options at the new duty station to minimize financial and other impacts.

### ARMY LEADERS

- Encourage Soldiers and their Families to familiarize themselves with available resources well before PCS orders are received.
- Work with relevant leadership personnel to ensure PCS orders are delivered well in advance of the move to provide adequate preparation for Soldiers and their Families.
- Promote Sponsorship efforts whenever possible to help Soldiers and Family members traverse the moves with as much support as possible.
- Advocate for Soldiers and Families who disproportionately experience poor outcomes (e.g., EFMs) to ensure smooth transitions between units.

### RESEARCHERS AND EVALUATORS

- Identify which sub-groups may disproportionately experience poor outcomes because of relocation challenges; conduct needs assessments with these groups to prioritize programs and policies that may best assist them.
- Continue to conduct rigorous process and outcome evaluations to assess quality and effectiveness of existing programs and policies aimed at relocation support.
- Identify instances in which Soldiers and Families have experienced positive experiences with relocation assistance resources and processes that may inform best practices.

### POLICY MAKERS AND PROGRAM PROPONENTS

- Appropriately resource and offer critical program and service support during summer months and other times during which PCS moves are more frequent.
- Ensure that Family members who are disproportionately impacted by PCS moves (e.g., EFMs) can easily and quickly access available services and resources and can obtain necessary appointments.
- Continually examine PCS requirements and alternative means through which Soldier career advancement may occur without relocation.

## *Family Health & Unique Military Events*

### **Chapter 5: Transitions Within and Out of the Army**



# Transitions Within and Out of the Army



## What We Know

### Definition

This section will examine some of the common transitions Soldiers and Families experience due to their decisions to remain in, advance within, or separate from the military. Separation from the military is a different experience than retirement from service; retirement marks the completion of a minimum of 20 years of service or retirement due to injury, while separation refers to the decision to leave the military prior to the 20-year milestone.

### Overview

Although career-related events such as promotion and reclassification (i.e., moving into a different military occupational specialty) introduce changes to the family system, there is not much research on how these decisions impact or are impacted by Army Family health. More exploration is needed to understand how moving up the ranks or changing areas of specialization affect domains of Army Family health, such as family readiness (e.g., financial health), sociodemographic factors, psychological health (e.g., stress), and healthcare access and utilization.

A primary goal of Army leadership is to retain top talent. Like other important transitions reviewed in this report, decisions about whether to stay in the military are informed by individual factors (e.g., Soldier satisfaction and commitment) as well as family-level factors. Family-level factors can include spouse satisfaction, attitudes toward retention, and perceived military support for families. Importantly, these factors do not always operate in isolation, but instead can exert mutual influence on one another.

### Service Member Factors for Retention

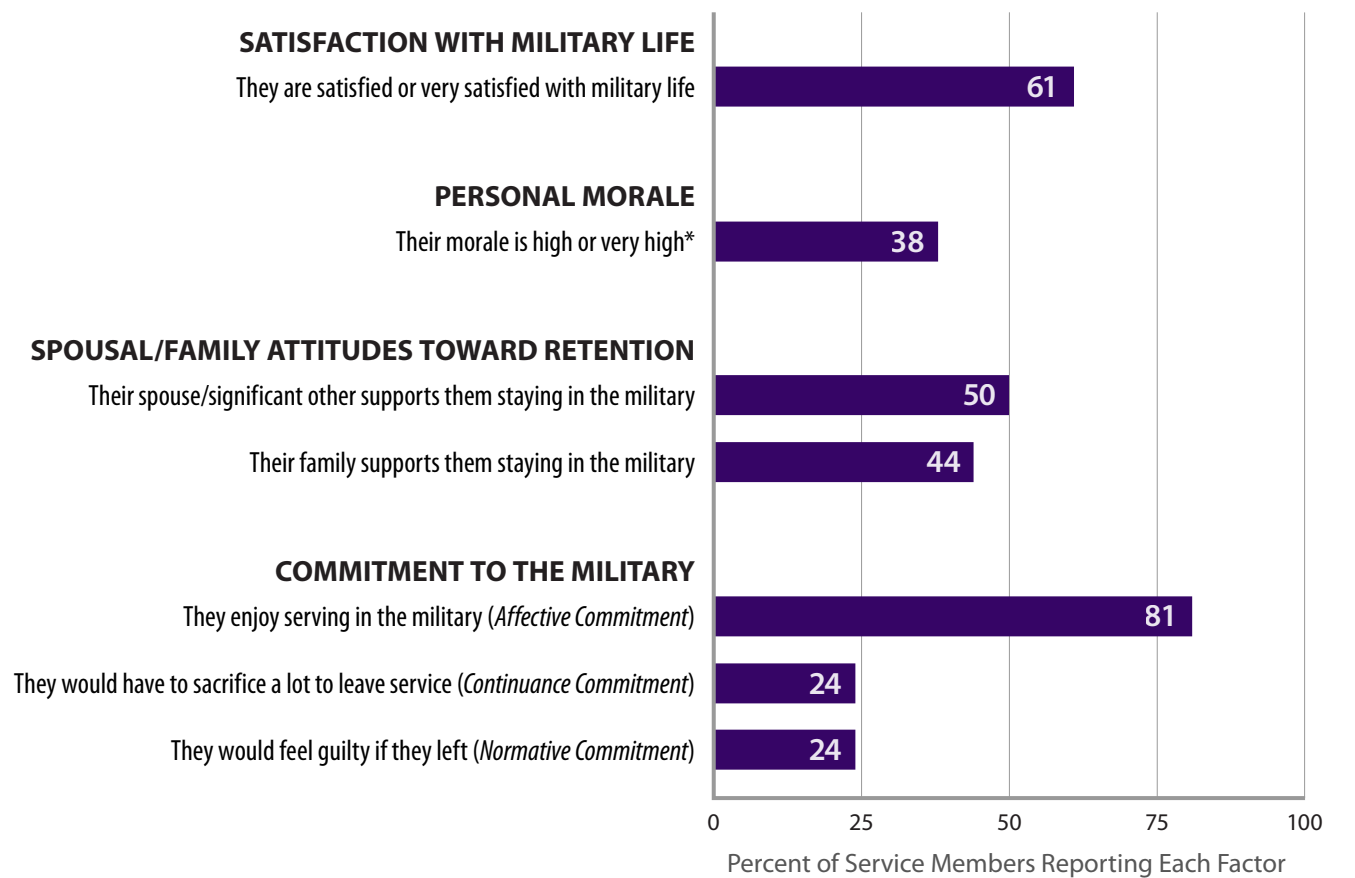
Research highlights a long history of the importance of Service member satisfaction for retention decisions (Burnam et al. 1992; OPA 2017c). The OPA (2017c) analyzed data from the Status of Forces Survey of Active Duty Members from 2010 to 2017 and identified four critical factors that are most predictive of Service members' intentions to remain on Active Duty (Figure 35; OPA 2017c).

#### PREDICTORS OF SERVICE MEMBER RETENTION INTENTIONS

1. Satisfaction with military life;
2. Personal morale;
3. Spousal/family attitudes toward retention; and
4. Commitment to the military (3 components)
  - » Affective: emotional attachment to the military.
  - » Continuance: perceived cost of leaving the military.
  - » Normative: sense of obligation to stay in the military.

Across all services, higher ratings for each of these factors was associated with greater retention intentions.

Figure 35. Predictors of Service Member Retention Intentions, 2017



\*These data are from 2016

Data source: 2017 Status of Forces Survey of Active Duty Members (OPA 2017c).  
Data represent Active Duty Spouses from all Services.

Recently, a study examining attrition and promotion trends from fiscal years 2004 through 2018 found that the likelihood of separation from the Army was higher for female Soldiers compared to male Soldiers (Government Accountability Office (GAO) 2020). There are unique factors affecting the retention of female Soldiers which are described further in the spotlight, *The Challenge of Retaining Female Service Members*.

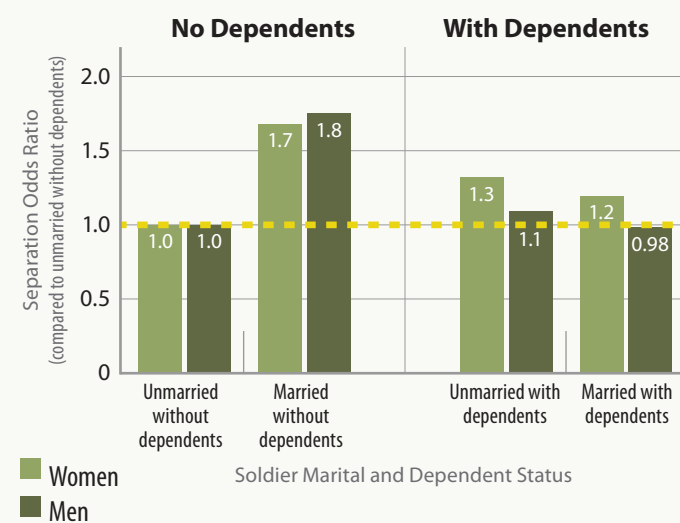
# The Challenge of Retaining Female Soldiers

Females comprise over 50% of the population in the United States, but only 15% of the Active Duty Army as of 2018. The DOD has identified female recruitment and retention as important to military diversity.

The Government Accountability Office (GAO 2020) recently analyzed attrition and promotion trends from fiscal years 2004 through 2018. The report found that the likelihood of separation from the Army was 36% higher for female Soldiers compared to male Soldiers.

One of the main reasons for this discrepancy was found to be associated with family planning and dependent care. The report found that married male Soldiers with dependents were less likely to separate from the military compared to single male Soldiers without dependents (see Figure 36). However, female Soldiers with dependents were more likely to separate from the military compared to unmarried female Soldiers without dependents. Likelihood of separation was even higher for single female Soldiers with dependents (32%) compared to married female Soldiers with dependents (19%).

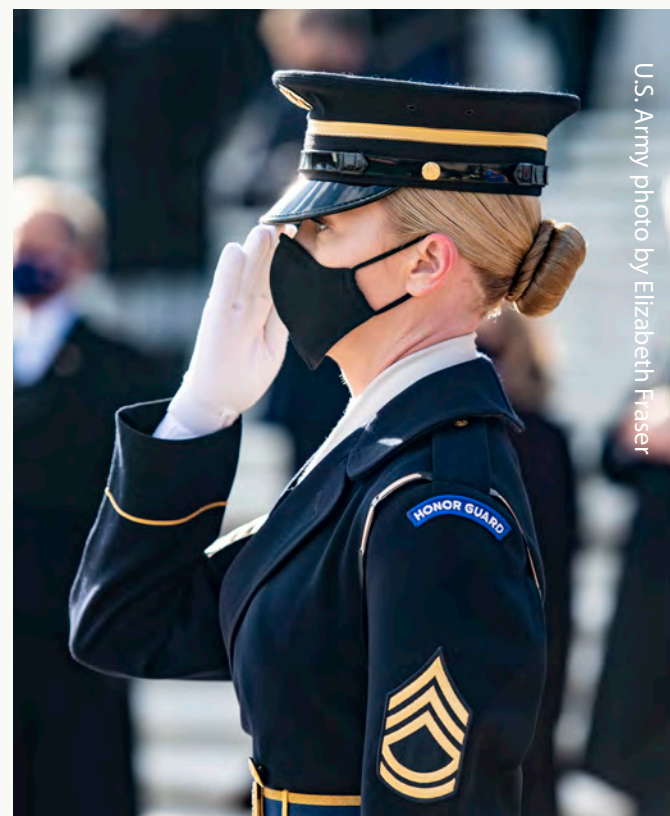
Figure 36. Likelihood of Separation from Army for Women and Men by Marital and Dependent Status, 2020



Data source: 2020 Government Accountability Office (GAO 2020).

Other reasons for separation among female Soldiers include uncertainty about work schedules, perceived pressure to time pregnancies so they do not interfere with career goals, challenges of deployment, and issues with on-post child-care (e.g., inconvenient hours and long waitlists).

Although all organizations experience a certain amount of attrition, a renewed focus on the Family may improve retention and readiness of the Force. **Additional support for female Soldiers, especially with respect to work schedules, family planning, and childcare, may aid in the retention of these key personnel.**



## Family-Level Factors for Retention

Soldier satisfaction is not only driven by their own experiences in the Army but is also informed by the environment the Army provides for their Family. Soldiers who perceive a supportive environment for their Family members report greater satisfaction with the Army way of life (Bourg and Segal 1999). These feelings of support are especially important among families who have experienced deployment in the past year (DeGraff et al. 2016). Individuals' perceptions of their organization's investment in their health and well-being can influence actual health (Wilson et al. 2004), and this finding may be extended to the Army context. The extent to which Soldiers and Family members feel cared for by the Army may affect physical health and decisions to remain in the Army. Specifically, **feelings of support from Army leaders and fellow Soldiers were found to predict Soldiers' and spouses' life-satisfaction**, which was also associated with military life satisfaction (DeGraff et al. 2016). Importantly, military life satisfaction is predictive of spousal support for retention (DMDC 2015b). For spouses, a key aspect of perceived support is the amount of advanced notice from Army leaders before relocation or deployment extensions (Hawkins et al. 2018).

Spouse satisfaction with military life is also influenced by the degree of interference of the Soldier's military requirements with family responsibilities (Bourg and Segal 1999; McFadyen et al. 2005). The concept of "work/family fit" is adapted from organizational research and is featured in multiple research studies on military life satisfaction (McFadyen et al. 2005). It refers to feelings that work demands (i.e., military duties) and family responsibilities are not in constant competition with one another. Feelings of "fit" are enhanced when Soldier job demands are aligned with Family members' expectations and Family members feel prepared for and capable of working with these demands. Applied to the Army context, families who experience greater "fit" between the demands of Army service and the demands of family life may translate to more satisfied Army Families.

**Spousal satisfaction with military life strongly predicts spousal support for retention (DMDC 2015b) which, in turn, contributes to actual retention behavior (OPA 2019b).** When spouses indicated strong support to stay, 93% of Service members were still in the military 2 years later. When spouses indicated strong support to leave, only 44% of Service members remained 2 years later. Aspects of spousal support to stay included: satisfaction with the military; social support from family, friends, and community; one's child expressing pride in having a military parent; and marital satisfaction. Aspects of spousal support to leave included: increased stress, depression, and anxiety symptoms; frequent PCS moves; and one's child expressing anger about their parent's military service (OPA 2017d).



### Spousal Support

- Satisfaction with military life
- Social support from family, friends, community
- Child having pride in military parent
- Satisfaction with marriage

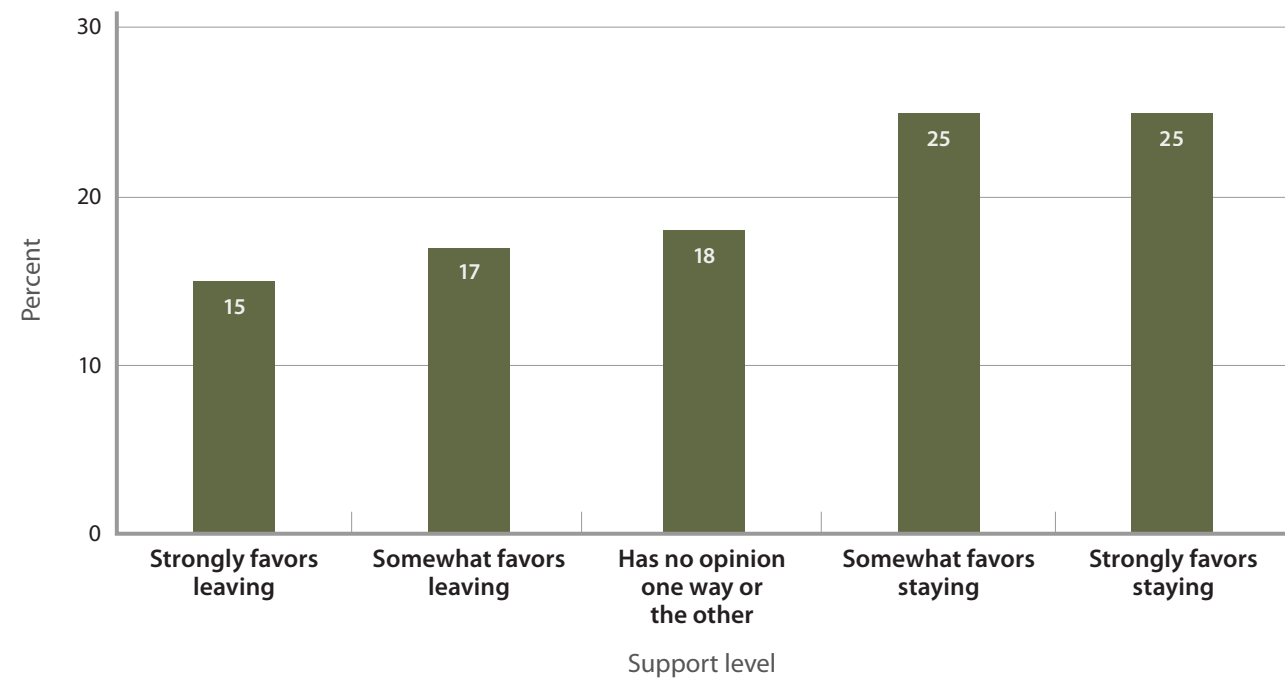


### Spousal Support

- Service member wounded during most recent deployment
- Increased stress, depression, anxiety
- Frequent PCS moves
- Child having anger toward parent's military requirements

As of 2017, 50% of Active Duty Soldiers reported their spouse or significant other indicated support to stay on Active Duty (Figure 37; OPA 2018b).

Figure 37. Spousal Support for Staying on Active Duty, 2017



Data source: 2017 Status of Forces Survey of Active Duty Members (OPA 2018b).  
Percentages are presented for Army Active Duty Soldiers only.

Recent research has focused on identifying top problems and needs among Army spouses and how they are implicated in issues of satisfaction and support for retention (Trail et al. 2019). Top problems experienced by Army spouses include their own well-being (i.e., feeling stressed, overwhelmed, and tired), a lack of work-life balance, and lack of knowledge about military practices and culture (e.g., where to go and with whom to talk in order to get help or information). Importantly, spouses with unmet needs (i.e., those who tried to solve a problem, but were unsuccessful) reported greater levels of stress, less positive attitudes toward the military, and less support for retention than those whose needs had been met.

**Some spouses may be more vulnerable to challenges than others.** On average, military spouses are satisfied with the military lifestyle. However, junior enlisted spouses were found to be those least satisfied in their roles (Hawkins et al. 2018). These spouses reported more stress, rated their problems as more severe, held fewer positive attitudes toward the military, and reported less support for retention compared to senior enlisted spouses (Trail et al. 2019). These findings are critical to the issue of retention, as increased spousal stress, unfavorable attitudes toward the military, and less support for staying on Active Duty are known detractors for Soldier retention (OPA 2017d).

In partnership with the Headquarters Department of Army, Deputy Chief of Staff G9, the RAND Corporation will soon release a report on the underlying mechanisms that drive spousal support for retention decisions and will focus on how attitudes toward the military shape the decision to stay on Active Duty. It will be published on RAND's website upon completion.

## Army Family Health after Leaving the Military

While research has recently focused on the impact of family factors on the decision to remain on Active Duty, there is less evidence on the effect leaving the military has on family health. Families transitioning out of the military may face significant changes in support, such as change in programs for family readiness and housing, as well as changes in healthcare delivery, which could affect continuity of care. Leaving the military may cause shifts in the structure of the family. For example, Worthen et al. (2012) found that Soldiers' parents could be a particularly valuable source of support when exiting the military and returning to civilian life. However, this may depend on the family's understanding of the military experience.

It is also important to consider the manner in which families leave the military. Active Duty Soldiers may experience or be exposed to deployment-related injury or death and the consequences for their families can be profound and long-lasting (Holmes et al. 2013).

**Military researchers, Holmes et al. (2013), offered several recommendations for programs and policies for families who have separated from the military due to combat-related injury or death.**

- Stabilize the family environment throughout recovery by ensuring access to basic needs (e.g., housing, education, health care, childcare, and jobs).
- Identify and promote services that support family functioning, communication, coping, and resilience.
- Incorporate family-centered care models into clinical and community practice to provide basic parenting intervention and education about the challenges of a Service member's visible or invisible injuries, or of a surviving parent's bereavement.
- Identify and treat behavioral health problems, such as depression, anxiety, and PTSD, in uninjured parents and children.
- Tailor services to families' risks and strengths.
- Educate clinical and community service providers about the unique needs of families of Service members who have been injured or killed in combat.
- Commit to sustaining systems of support for these families.

Regardless of the route through which families leave the military, there are currently resources available. One such program is the Department of Defense Transition Assistance Program (DoD TAP), which provides information, access to important documents, and training to ensure Service members separating from Active Duty are prepared for their next step in life, whether pursuing additional education, finding a job in the public or private sector, or starting their own business. Service members receive training through the TAP curriculum, which includes both a core curriculum and individual training tracks focused on Accessing Higher Education, Career Technical Training, and Entrepreneurship.



### RESOURCES:

The **Transition Assistance Program** helps prepare Soldiers for their transition into civilian life.



## What We Don't Know and What's Next

While some of the health factors that help determine Army Family decisions to continue to serve or leave the Army are well studied, how this decision directly impacts Family health is less known. More research is needed to determine how leaving the Army will impact family health, healthcare receipt, and other aspects of health. It is also important to develop a better understanding of how other transitions (e.g., promotion, reclassification) within the Army affect Army Family health.

Research points to Soldier and Family member satisfaction as key drivers of retention, and recent results have shed light on linkages between satisfaction, spousal support for retention, and actual retention behavior. An important next step for Army Leadership will be to continue to strengthen those drivers as much as possible through executing and continuously improving policies, programs, and services at multiple levels. Although many such policies, programs, and services exist, it is also vital that the Army work to evaluate existing programs and services that are designed to help Soldiers and Families mitigate the challenges of military life. Programs and services that successfully reduce the various stressors and strains explored in this report may also prove to be effective routes to retention by facilitating Soldier and Family satisfaction and the desire to remain a part of the Army Family. Program evaluation efforts will shed light on what is working well, what is not, and how existing services can be improved to better meet the needs of those they serve.



## CALL to ACTION

Individual and family-level factors can influence the decision to re-enlist, and spousal support in particular is an important driver of retention. However, less is known about how other domains of health impact retention, or how health in general is impacted by other types of transitions. There are several actions that stakeholders can take to both optimize health through transitions and explore health as it is impacted by and impacts the spectrum of transitions Army Families may encounter.

### SOLDIERS AND FAMILIES

- Use existing services and resources (e.g., DoD TAP) during important life changes.
- Maintain awareness of and utilize services, resources, and benefits that support maximizing work-life balance and family responsibilities (e.g., breastfeeding policies, childcare subsidies, flexible work arrangements).
- Communicate needs and ways the Army can best support you during periods of transition to optimize Soldier and Family member morale and satisfaction.

### ARMY LEADERS

- Promote existing services and resources to facilitate transitions.
- Discuss findings on links between family satisfaction and retention with Soldiers; create open dialogue with Soldiers to enhance possibilities of retention.
- Support Army Families and female Soldiers in particular by allowing for maximum flexibility with respect to work schedules, childcare considerations, and family planning activities.

### RESEARCHERS AND EVALUATORS

- Explore the impact of promotion and reclassification on Army Family health.
- Assess whether transition support programs, services, and resources are achieving intended outcomes, reaching intended groups, and impacting family health.
- Identify instances in which Soldiers and Families have experienced positive experiences with transition support resources and processes that may inform best practices.

### POLICY MAKERS AND PROGRAM PROPONENTS

- Leverage existing and emerging data on the impact of military transitions on Soldier and Family member well-being to enhance the Army Family experience.
- Enact policies to support maximum flexibility with respect to work schedules, childcare considerations, and family planning activities, to support retention of female Soldiers and Army Families.

## *The Future Army Family*

### **Chapter 6: The Incoming Generation of Soldiers**



# The Incoming Generation of Soldiers

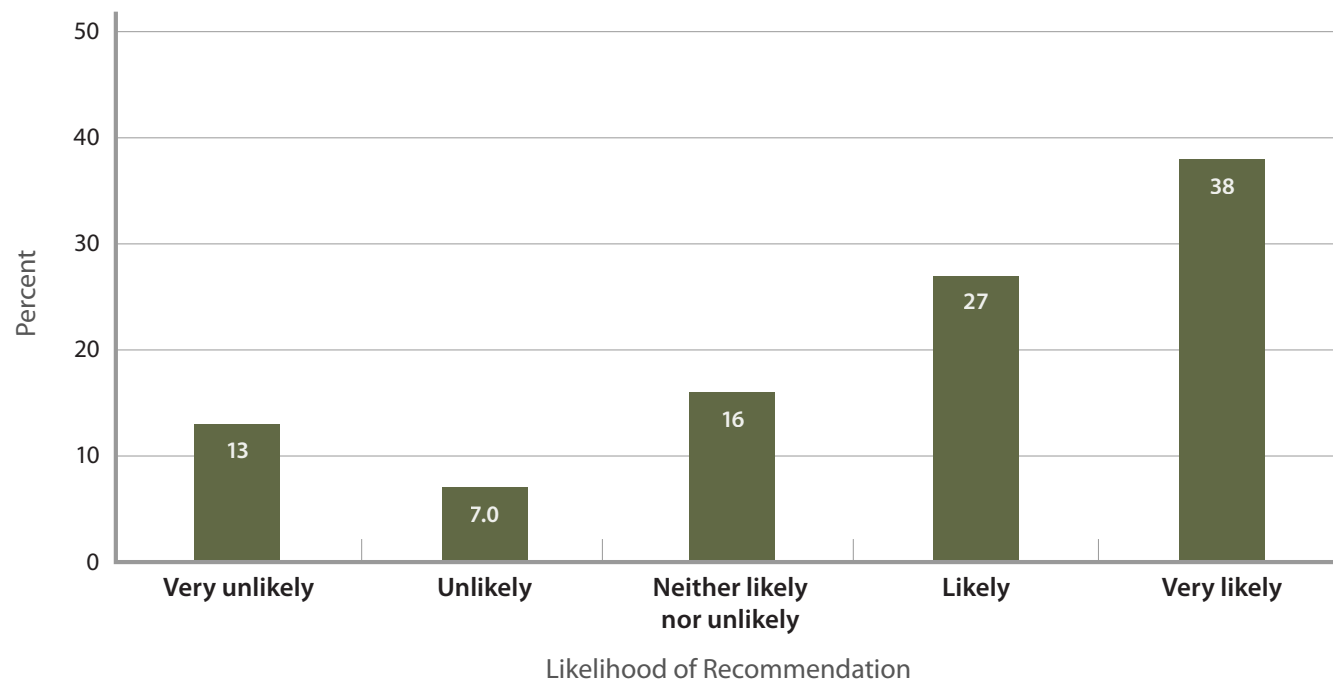


## What We Know

Many of today's new Army recruits are furthering a familial military tradition, and nearly two-thirds (65%) of current Active Duty Soldiers are likely or very likely to recommend their child join the military (Figure 38; OPA 2018b). This trend places the Army Family at the center of conversations about who are likely to become the Soldiers of tomorrow and creates a compelling incentive for Army leaders to optimize the quality of life of today's Army Families.

Research on recruitment also echoes the importance of family when new military recruits are asked about their top concerns when deciding to join the military. Across all recruits, concerns about leaving one's family and friends (32%) were greater than fear of physical injury or death (23%) (Joint Advertising Market Research & Studies (JAMRS) 2016). Top concerns held by new Army recruits, specifically, included leaving friends and family (30%), physical injury or death (29%), and going to combat (16%) (JAMRS 2021).

Figure 38. Likelihood that Active Duty Soldiers Recommend Their Child Join the Military, 2017



Data source: 2017 Status of Forces Survey of Active Duty Members (OPA 2018b).  
Percentages are presented for Army Soldiers only.

Research efforts have sought to understand why many of today's youth do not consider the military as a viable career path. Results indicate the intrinsically motivating factors of military service, such as sense of meaning and quality of life, are not a top consideration among youth, whereas the potential physical and psychological impact of service are salient (JAMRS 2016). The JAMRS research cites the growing disconnect between military personnel and today's youth population whose perception of military service is often colored by the news and entertainment media. This disconnect extends beyond a lack of basic knowledge about the military and its career opportunities and includes doubts about whether people in the military are "like me."

The JAMRS (2016) cites a decline in youths' perceptions of quality of life in the military and the benefits of military employment as critical recruiting challenges facing today's military. **A majority (91%) of youth ages 16 to 21 reported the top priority for their future was a job that made them happy, but only 36% of youth thought a military career would help them achieve this goal.** A similar gap was observed between youths' desire to attain an attractive lifestyle (88%) and their belief that this could be achieved through a career in the military (36%).

A commitment to family appears to be a key element of what youth consider an attractive lifestyle. Youth participants in focus groups indicated having doubts about whether having a family is compatible with a career in the military. Specifically, focus group participants shared concerns about having children while in the military, which include the inability to give time and support to one's children and the cost of separation during deployment. Some participants stated simply that the benefits of military service are not worth having to leave one's family (JAMRS 2016).



## What We Don't Know and What's Next

The cycle of joining the military, raising a family in a military environment which includes deployments, PCS moves, and other transitions, and then recommending the incoming generation do the same is clearly impacted by satisfaction with the military way of life. What may be less obvious is how family health status and experiences impact the decision to recommend a military career. Concretely understanding these potential linkages will help policy makers and program proponents focus efforts on maintaining recruitment and participation in this cycle.

# The Influence of Family on the Decision to Join the Army

The family plays a critical role in shaping decisions to join the military. Findings from the 2017 Status of Forces Survey indicate that 39% of Active Duty Soldiers were greatly influenced by their family's military tradition in their decision to join the Army (Figure 39). Further, a 2020 survey with new recruits across all military services showed that 43% reported having a grandparent with prior military service, 23% reported having a father with prior service, 6% reported having a mother with prior service, and 14% reported a brother or sister with prior service (JAMRS 2021).

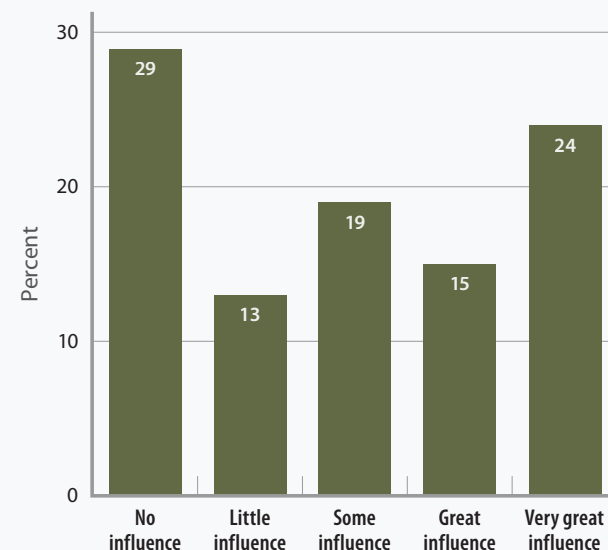
Of note, in the same survey, **new Army recruits were more likely than other recruits to report personal connections to their specific branch of service** (JAMRS 2021).

These data also show that conversations about joining the military often start within the family. Most new military recruits (71%) cited a Family member who served or is currently serving as an important source of information on their decision to enlist. Two-thirds of new recruits also cited a Family member or friend who has served as a source of information on quality of life in the service. **Family members and friends with prior service exerted the greatest influence on new recruits' initial interest in the military, and 36% of new recruits reported that family/friends who had served had the greatest impact on their decision to join** (JAMRS 2021). In fact, the percentage of new recruits who cited family/friends as most influential in their decision to join (36%) was similar to those who attributed their decision to recruiters (35%).

A study on youth perceptions of military life showed that although many participants believed the military can provide a well-paying job, career preparation, and source of pride, **many did not see the military as providing either a job that makes them happy or an attractive lifestyle. These participants indicated a positive environment for family is a key component of an attractive lifestyle** (JAMRS 2016). These findings point to the need to continue supporting Soldiers and their Families with quality of life programming, as well as promote these offerings in hopes of reframing Army service as a career that is compatible with a healthy, happy family life.

While there is not yet evidence that a healthy Army Family is more likely to continue the Army tradition, these findings do suggest that family support and the perceived lifestyle provided by the military can be a critical influence in the decision to join the military. **The Army has a vested interest in preserving the well-being of current Army Families as they can potentially help shape decisions of future recruits and tomorrow's fighting force.**

Figure 39. Influence of Family Military Tradition in the Decision to Join the Army, 2020



Data source: 2017 Status of Forces Survey of Active Duty Members (OPA 2018b). Percentages are presented for Army Soldiers only.



## CALL to ACTION

Perceptions of low quality of life in the military held by today's youth paired with the knowledge that current military families can influence their children and relatives on decisions to join the military indicates that when the Army thinks about its incoming generation of Soldiers, they should consider starting with thinking about today's Army Families. Recruitment efforts can strive to introduce the services, benefits, and policies that align with the goal of a high-quality family life, and communicate the strong and ongoing commitment to optimize the health of Army Families. Further, policy makers and program proponents must continue their work of supporting research and evaluation of existing quality of life programs.

### SOLDIERS AND FAMILIES

- Use existing health and quality of life programs (e.g., Army Community Services, Army Family and Morale, Welfare, and Recreation (MWR) found at [www.armymwr.com](http://www.armymwr.com) or at your local installation). Provide feedback to program proponents on program improvements.

### ARMY LEADERS

- Create opportunities to engage Families and recognize the importance of their contributions. Maintain visibility of key family satisfaction and quality of life concerns.
- Encourage the use of Soldier and Family health and quality of life programs and services.
- Provide and model family as a priority, ensuring Soldiers can regularly spend time with their families around training and operational schedules.

### RESEARCHERS AND EVALUATORS

- Examine how military experiences impact Soldier decisions to recommend the military lifestyle to younger relatives and other potential new Service members.
- Explore how health outcomes affect the likelihood to recommend enlistment to the younger generation.

### POLICY MAKERS AND PROGRAM PROPONENTS

- Partner with researchers and evaluators to ensure health and quality of life programs achieve intended outcomes.
- Action recommended improvements from researchers and evaluators to ensure programs and services are of high relevance and quality to Soldiers and Family members.

## *What's Next*

### *Chapter 7: Call to Action: Summary and Priorities*



# Call to Action: Summary and Priorities

Each chapter of this document provides focused and specific calls to action based on topic and audience. In an effort to summarize, synthesize, and prioritize these calls to action, the report authors reviewed and themed the salient, overarching actions for each audience. These overarching actions included three categories of recommendations:

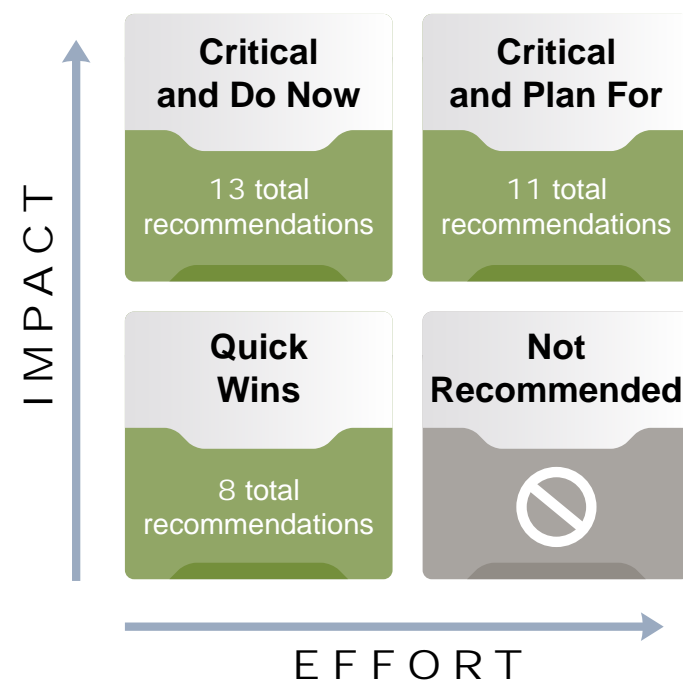
1. Recommendations that crosscut multiple chapters within the report
2. Recommendations included in previous chapters that are of particular strategic importance to optimize the health of the Army Family
3. Recommendations applying to all chapters of the report that would have created unnecessary redundancy

Each of the overarching recommended actions was then rated on the perceived level of effort to execute and the perceived level of impact of the results, which resulted in four categories:

- **Critical and Do Now** to implement immediately (potential for high impact, relatively low effort);
- **Quick Wins** that are not critical but are worth executing now (relatively low impact, relatively low effort);
- **Critical and Plan For** to prioritize and plan (potential for high impact, high effort); and
- **Not Recommended** (lower impact, high effort).

These categories can help stakeholder groups prioritize and begin thoughtful planning and scoping. Please note that this report does not categorize any actions as “not recommended” at this time. Given the data and implications presented in this report, only those recommendations that fell into the first three categories are described in this report.

The following pages are organized by stakeholder group and describe the recommended actions. Optimizing the health of the Army Family is going to take the passion and dedication of everyone with a vested interest, from the Soldiers and Family members themselves to policy makers and program proponents. Each step furthers progress toward a robust, ready, and resilient Force.



## Soldiers and Family Members

Below are the actions Soldiers and Family members can take to contribute to Army Family health.



### Critical and Do Now (Potential for high impact, Relatively low effort)

- Visit the local Army Community Service center in person or online (<https://www.armymwr.com>) to make use of the following family support programs at the home duty station, during transitions, and at all stages of the military lifecycle:
  - » Employment Readiness
  - » Financial Readiness
  - » Exceptional Family Member
  - » Relocation Readiness
  - » Transition Assistance
  - » Child, Youth, and School Support
- Utilize additional military resources available to support Soldiers and their Families.
  - » Military OneSource
  - » Army Community Resource Guide
  - » Total Army Sponsorship Program
- Participate in efforts to solicit feedback on your needs and experiences when possible to ensure your voice is heard.
- Communicate regularly with your healthcare team about your personal and family health questions and concerns and follow recommended guidance.



### Critical and Plan For (Higher Effort, Higher Impact)

- Plan for changes in healthcare delivery, family readiness, and support systems during military transitions, such as PCS and deployment.



### Quick Wins (Lower Effort, Lower Impact)

- During times of transition, leverage available support systems to mitigate stressors and share with/mentor other Army Families going through similar transitions.
- Maintain awareness of and utilize services, resources, and benefits that support maximizing work-life balance and family responsibilities.
- Participate in efforts to solicit feedback on your needs and experiences when possible to ensure your voice is heard (e.g., Town Halls, surveys, focus groups).

Army Leaders

Below are the actions Army leaders can take to contribute to Army Family health.



Critical and Do Now (Potential for high impact, Relatively low effort)

- Be knowledgeable about and encourage Soldiers and Families to use the available health and quality of life programs and services to prioritize health and well-being.
- Understand the links between these health domains on Soldier and Family readiness and retention; engage in open dialogue with Soldiers.
- Maintain visibility into who constitutes Soldiers’ Families and support systems and recognize and support diverse family structures.



Critical and Plan For (Higher Effort, Higher Impact)

- Work with relevant leadership personnel to advocate for Soldiers and Families who disproportionately experience poor outcomes, particularly during transitions.
- Create opportunities to engage Families and recognize the importance of their contributions. Maintain visibility of key family satisfaction and quality of life concerns.



Quick Wins (Lower Effort, Lower Impact)

- Promote programs specific to Soldier and Family transitions:
  - » Relocation Readiness, Total Army Sponsorship, and Exceptional Family Member Programs when preparing for PCS moves.
  - » Financial Readiness Program when planning for deployment or PCS moves.
- Provide flexibility for Soldiers as they navigate transitions with their Families.

Researchers and Evaluators

Below are the actions researchers and evaluators can take to contribute to Army Family health.



Critical and Do Now (Potential for high impact, Relatively low effort)

- Work with program proponents, policy makers, and Army leaders at the outset of projects to discuss how assessment, evaluation, or research results will be used, ensuring all-important questions will be answered, and the format can be tailored to the primary audience(s).
- Broaden focus of investigations to explore health domains throughout the military lifecycle across the diversity of Army Families.
- Ensure recommendations are targeted and actionable.



Critical and Plan For (Higher Effort, Higher Impact)

- Focus research efforts on spiritual health, the intersection of sociodemographic factors and health, and the impact of an austere/remote or OCONUS duty station may have on Army Family health.
- Develop and administer data collection tools that improve an understanding of who makes up the Army Family.
- Conduct routine public health surveillance and regularly report on health metrics and outcomes of Army Family members; when applicable, advocate for adding military affiliation demographic variables to national and local data collection systems.
- Conduct rigorous needs assessments, process evaluations, and outcome evaluations (when feasible) to determine customer needs, challenges, satisfaction, quality of program implementation, and realization of intended outcomes. Pay special consideration to groups vulnerable to poor outcomes or identified as requiring more support.



Quick Wins (Lower Effort, Lower Impact)

- Identify mid-term program and service outcomes that connect short-term aims to health and quality of life outcomes and long-term goals of Soldier readiness and retention.
- Explore the impact of understudied transitions across the military lifecycle (e.g., promotion, reclassification) on Army Family health. Ensure existing programming and services support Soldiers and their Families through these transitions.

## Policy Makers and Program Proponents

Below are the actions policy makers and program proponents can take to contribute to Army Family health.



### Critical and Do Now (Potential for high impact, Relatively low effort)

- Appropriately resource and offer critical program and service support during Army Family transitions (i.e., PCS), particularly to those who are disproportionately impacted by transitions.
- Assess and provide needed support to integrate program evaluation processes into program and service delivery models; involve evaluation teams early in program planning or program revision efforts.
- Begin to broaden the definition of Army Family, integrating recommendations into policy, and including expanded items on program surveys and monitoring tools.



### Critical and Plan For (Higher Effort, Higher Impact)

- Routinely modify policies, programs, and service offerings based on best available evidence from data and studies.
- Advocate for a regularly occurring centralized system to monitor the health and quality of life of Army Family members to continuously inform and improve programs and policies. Resource and plan for routine public health surveillance and reporting on health outcomes through activities including analysis of existing data and the inclusion of military identifiers in national and locally driven data collection efforts.
- Continue to partner with researchers and evaluators to—
  - » Develop a unified research and evaluation strategy and agenda in the area of Army Family health;
  - » Better understand the needs of Army Families during key phases of the military lifecycle (e.g., in the separation and reintegration phases of deployment);
  - » Assess whether certain groups are more vulnerable than others; and
  - » Determine the extent to which available programs and resources are effective.
- Continue to prioritize the critical role of health and quality of life outcome achievements in official program policy. Strengthen policy to support and empower all factors in the program evaluation process. Support program evaluation capacity and infrastructure to ensure available resources effectively address the unique needs of Soldiers and Families.



### Quick Wins (Lower Effort, Lower Impact)

- Review existing research and evaluation findings and action recommended improvements to ensure programs and services are of high relevance and quality to Soldiers and Family members.



U.S. Army photo

# Conclusions and Implications

The inaugural *Health of the Army Family* report aimed to compile the best information available to describe the health of the Army Family in a single, consolidated resource. The goal of the report was to provide a snapshot of what we know, what we don't know, and what's next for those with a vested interest in Army Family health. In developing the report, the authors reviewed 367 articles and consulted 33 data sources and found that there is a wealth of information available in many domains of health and across multiple phases of the military lifecycle. For example, Army Family health may exceed civilian benchmarks for key physical health metrics (e.g., obesity, physical activity), but the Army Family may experience disproportionate rates of behavioral health concerns when compared to civilian populations. Additionally, financial health and readiness is a key underlying factor associated with many aspects of health and is a crucial area of continued emphasis and attention.

Gaps remain in knowledge and in the ability to report information on key demographics such as Family member age, gender, and location. Numerous gaps also exist in the ability to make direct comparisons between Army Family member health and comparable civilian populations. Those gaps must be addressed to fully understand the health status of the Army Family and to identify which members of our Army Family may be disproportionately affected by poor health status and outcomes.

Further, there is a multitude of programs, services, and resources to support and improve the health of the Army Family across the seven domains of health and at various touch points in the military lifecycle. Many of these resources are highlighted in this report to make key linkages between what a Family member may need and what is available. However, in developing this report, the APHC also found that there is limited information on which of the many programs, services, and resources available to support the health and quality of life of the Army Family are able to demonstrate effectiveness in improving outcomes or affecting positive change—not that they are ineffective; rather, the information largely does not exist. This is another critical information gap to fill to ensure the Army Family is receiving the most evidence-informed, high quality, and effective services available and that the Army's Family Readiness System is best positioned to meet Family member needs.

Given the wealth of information that is available and the gaps that have been identified, there are several actions that various stakeholder groups (i.e., Soldiers and Family members, Army Leaders, Researchers and Evaluators, and Policy Makers/Program Proponents) can take, in both the short- and long-term, to action this information and fill these gaps. Thus, the report specifies more than 70 focused Calls to Action throughout its first six chapters along with 30 summarized and prioritized Calls to Action in Chapter 7. Neither the audiences listed nor the actions provided are exhaustive; however, they can serve as an initial framework to move forward thoughtfully in our collective efforts to optimize the health of the Army Family.

As an inaugural report, this is an initial formal effort to compile, report, and synthesize information on the health of the Army Family holistically. New information, data, and studies emerge constantly. As this effort evolves, the APHC remains committed to improving and expanding the report over time and collaborating with key partners. In addition, the APHC intends to update this report and publish it at least every 3 years to enable a consistent and informed focus on Army Family health.

We know with certainty that Family member health and satisfaction are vital to a Service member's plan to continue serving. Providing the best quality of life and caring for Soldiers and their Families are essential to recruiting, retention, and readiness. In addition, the Army Family of today is the fighting force of tomorrow. By communicating and addressing the health status, needs, and concerns of our Family members, the Army recognizes and remains committed to its greatest resource of all—its people.

# Appendices

APPENDIX **A** — *Methods*

APPENDIX **B** — *Limitations*

APPENDIX **C** — *Acknowledgments*

APPENDIX **D** — *References*

Appendix A  
Methods

To meet the intent of understanding what the U.S. Army Public Health Center (APHC) knows about the health of the Army Family, the technical team and contributors to this report (see Appendix C) compiled information using two distinct processes: Data Acquisition and a Literature Search, both described below.

Data Acquisition

To determine the sources, reliability, and accessibility of data on the Army Family, the technical team utilized a staged approach including:

- 1. Informational discussions with experts (these included APHC, Army, military, and non-military experts) in each domain to identify key data sources;
- 2. Review of the Methods and Results of published sources for all primary-referenced data sources;
- 3. Review of the reference lists for all primary-referenced data sources;
- 4. Acquisition and review of the referenced reports in the primary-referenced data sources;
- 5. Integration of key results and findings from these data sources into figures;
- 6. Review of figures for gaps and limitations in available data; and
- 7. Selection of final data sources and figures for inclusion in the report.

The data sources referenced in this report, both cited in the text and reflected by the figures, can be grouped into one of the three following categories: 1) primary monitoring and evaluation data from within APHC; 2) primary data obtained from the Armed Forces Health Surveillance Division (AFHSD; reported within *Chapter 2: Life at the Home Duty Station*); or 3) data points from published reports and peer-reviewed scientific articles. Appendix D contains the full report reference list.

The team produced a series of figures that reflected the available data on six of the seven domains of interest: physical, psychological, family readiness, healthcare delivery, environment and housing, and sociodemographic factors. The prioritized reporting period for this report was 2017-2019 data, though multiple data sources were outside this reporting range. Limited data were available for the spiritual domain, but items to capture these data were added to the 2019 Active Duty Spouse Survey data collection cycle and are expected to be included in future iterations of this report. Each figure includes a footnote specifying the relevant data source(s) to ensure readers are able to locate original sources if needed.

In total, the team reviewed 25 data sources, and data from 16 of these sources were presented within the figures included in the main body of this report. These 16 sources include:

- 2018 Military OneSource Demographics Profile (U.S. Department of Defense 2018)
- 2017 Defense Medical Surveillance System (DMSS) maintained by the Armed Forces Health Surveillance Division (AFHSD n.d.)
- 2012 Millennium Cohort Family Study (Corry et al. 2019)
- 2017 Annual Suicide Report (DSPO 2018)
- 2019 Blue Star Families’ annual Military Family Lifestyle Survey (BSF 2019)
- 2018 Status of Forces Survey (OPA 2018c)
- 2017 Survey of Active Duty Spouses (OPA 2017a)
- Health Care Survey of DOD Beneficiaries, Fiscal Year 2018
- 2019 Summary of the Headquarters Department of the Army Residential Communities Initiative Resident Survey (On-Base) (CEL & Associates Inc. 2019a)
- 2019 Executive Summary of the Headquarters Department of the Army FH Resident Survey (Owned and Leased) Housing (CEL & Associates Inc. 2019b)
- Final Research Report: Living Conditions of Families in Privatized Military Housing, May 2019 (MFAN 2019)
- US EPA Air Data – Air Quality Index Report database; European Environment Agency (EEA) Air Quality e-Reporting database; AirKorea database; Kangawa Prefecture, Japan - Air Pollution Monitoring Monthly Reports (as reported in APHC 2021b)
- DOD Human Tick Test Kit Program (as reported in APHC 2021b)
- Office of the Assistant Chief of Staff for Installation Management - Environmental Compliance Data; Consumer Confidence Reports (as reported in APHC 2021b)
- 2015 Survey of Active Duty Spouses (DMDC 2015b)
- 2017 Status of Forces Survey of Active Duty Members (OPA 2018b)

Additional data sources that are reflected in the report’s nine spotlights include, but are not limited to:

- 2018 Workplace and Gender Relations Survey of Active Duty Members (OPA 2019a)
- 2018-2019 Army Caregivers Survey (APHC 2021a)
- 2020 Behavioral Health Advisory Team – COVID-19 Survey Phase I (WRAIR and APHC 2020)
- 2019 Community Strengths and Themes Assessment (APHC 2020)
- 2019 Exceptional Family Member Program Survey (APHC 2019)

Literature Search

The second major task executed for this report included a search of the literature for research, evaluation studies, and reports relevant to each of the seven identified health domains: physical, psychological, sociodemographic factors, spiritual, family readiness, environmental, and healthcare delivery, which were defined in the main body of the report.

The technical team conducted a scoping literature review with the intent of compiling findings to gain a high-level understanding of the current state of the literature on Army Family health and well-being. Inclusion criteria included articles published after 2001, with a priority emphasis on those published after 2013.

Both Google Scholar and PubMed were used to conduct the literature search. The Army Family was defined as Army beneficiaries (i.e., spouses, children, and adult dependents). Articles that focused on families in a Military- or Department of Defense-wide context were included under the stipulation that one of the subpopulations explored was the Army. Keywords included each of the specific health domains and their definitions along with “Army” and “family,” “dependent,” or “spouse.”

The literature review generated a total of 367 individual articles that fit the inclusion criteria, with the majority of articles providing information relevant to multiple health domains. Among these included articles, 90 were reviewed for physical health content, 201 for psychological health content, 160 for sociodemographic factors, 81 for spiritual health content, 252 for family readiness content, 47 for environmental content, and 79 for content related to the healthcare system.

The technical team compiled key findings and conclusions from each of the articles in a spreadsheet organized by health domain. Then, they met collectively to summarize the findings by phase within the Military Family Lifecycle (e.g., life at the home duty station, PCS, deployment) in an effort to communicate the available research based on key events a Soldier and Family may experience. Of note, not all of the 367 sources were cited in this report; only those from which findings or themes were specifically extracted or communicated are included and named in the reference list.

Data Reporting

For each of the processes detailed above, all information was first searched and then organized by health domain. Then, information was organized according to the Military Family Lifecycle. Phases within the Military Family Lifecycle are potential touchpoints during which the various stakeholder groups addressed in this report may be able to apply the information presented.

The technical team ultimately used two different approaches for reporting data based on whether the data were APHC primary data (e.g., or secondary data). For APHC primary data, the team reported two significant figures, with exceptions for those statistics (e.g., odds ratios), where more than two significant figures are vital to meaning and interpretation. The team reported secondary data as it was provided in the source documents, unless source data reported more than two significant figures. In those instances, the team rounded to two significant figures for consistency throughout the report.

Appendix B

Limitations

Overall Limitations

Limitations are important to note when interpreting the information presented within this report. This section presents a summary of limitations that spanned the report.

- 1. Limited Definition of Army Family:** As highlighted in *Chapter 1: Characterizing the Army Family*, for the purposes of this report and consistency with included data, the Army Family is defined as Active Duty Soldiers, their spouses, and dependents (e.g., child or adult dependents), and the primary focus of this report was specifically Soldiers’ spouses and dependents. There is a growing body of evidence suggesting that additional individuals may comprise who a Soldier considers his or her Family to be. As definitions of the Army Family evolve within the military, the *Health of the Army Family* report will adjust its definition accordingly.
- 2. Lack of Information on Army Children:** The information presented within this report is most commonly associated with Army or military spouses. Limited data exist on Army or military children, largely due to protections associated with research on or information collection from vulnerable populations.
- 3. Variability in Data Samples (Army versus All Military Services):** Many data sources (and figures) were only available for the entire military or multiple military services and, therefore, could not be limited to Soldiers and Army beneficiaries specifically. Other data are from Army Medical Treatment Facilities (MTFs) beneficiaries and may include data from beneficiaries of the Army and other services. For example, Navy beneficiaries who utilize Army MTFs would be included in these population data.
- 4. Differing Time Periods and Populations:** Where possible, contributors reported data from 2017 to 2019. However, most sources of data are secondary and, therefore, have different dates and time periods for data collection (e.g., an entire calendar year, a 6-month period across calendar years). In addition, some data sources are representative of the entire Army or specific Army Family populations (e.g., spouses), whereas others reflect convenience samples. Lastly, because 2017-2019 was the prioritized reporting period, some data sources may have released more current information since this report was developed and released.
- 5. Inability to Make Comparisons to Civilian Populations:** Report contributors would ideally like to compare each data point or the Army or military services to the U.S. population, but a sufficient comparison group does not always exist. The Military Health System (MHS) is a socialized medical system in that everyone who is on Active Duty is enrolled. Although approximately 90% of individuals in the United States are enrolled in health insurance, data on major health outcomes are often private (e.g., employer health plans); therefore, these data are not publicly available, which precludes representative comparisons. Additionally, several nationally representative data sources (e.g., the Centers for Disease Control and Prevention (CDC) Behavioral Risk Factor Surveillance System, the CDC Youth Risk Behavior Survey) could potentially inform this report and offer comparisons between military and civilian populations; however, these data systems do not contain reliable indicators of military Family member identification necessary to enable such comparisons.

6. **Lack of Comparisons on Key Demographics:** Other population health reports within the Army (e.g., the annual *Health of the Force* report) are able to provide information stratified by key demographics including age, race/ethnicity, gender, and location (i.e., installation). Since many of the data provided in this report are secondary data, this detailed information is not currently or consistently available for many of the data presented within this report. The reporting team hopes to be able to do more sophisticated reporting on key demographics in the future.
7. **Limited Comprehensiveness of Information Provided:** Though the reporting team attempted to provide a robust picture of Army Family health across multiple domains and by key phases within the Military Family Lifecycle using the best available data, new information, data, and research are constantly emerging. There are likely additional data and literature sources not included in this report that could be relevant. The authors will therefore continue to monitor data systems, data sources, and emergent literature for inclusion in future iterations of the *Health of the Army Family* report.
8. **Gaps in Calls to Action:** The Calls to Action presented within each chapter of the report are neither comprehensive nor exhaustive. These are some initial actions that key stakeholder groups can take to apply the information presented or fill noted information and data gaps. All readers are encouraged to continue to review the data presented to determine if there are additional actions or recommendations that could be relevant.
9. **Non-Exhaustive Resources:** Throughout the report, several resources are presented (e.g., Army Community Service, Family Advocacy Program, Financial Readiness Program). However, the resources presented are not necessarily exhaustive or comprehensive. The Army's Family Readiness System is complex, and the resources provided are examples of what is available. Numerous additional resources are available to the Total Army Family within the military, governmental, community, and non-governmental sectors. All readers are encouraged to contact [Military OneSource](#) or the [Community Resource Guide](#) to learn more about what may be available.
10. **Gaps in Data Acquisition:** This initial *Health of the Army Family* report is viewed as a pilot since the report's technical team was not able to obtain desired data for all domains of interest or across all phases within the Military Family Lifecycle. For example, limited data were available and presented for spirituality, reflecting an opportunity to bolster this area in the next report based on spirituality questions that were added to the Active Duty Spouse Survey (ADSS) in mid-2019 and other potential data sources. For future reports, the team would like to specifically obtain data and/or expand reporting on topics including, but not limited to asthma; obesity and overweight; health behaviors; injury (e.g., total cost of injuries using the injury cost matrix); spouse employment; spirituality (in progress with the ADSS); maternal health outcomes; and data elements from the Millennium Cohort Family Study.
11. **Data Ownership and Access:** The U.S. Army Public Health Center (APHC) does not own most of the data presented in this report. However, the APHC report contributors are forming partnerships with numerous agencies including the Millennium Cohort Family Study and Office of People Analytics to bolster access to data and data systems.
12. **Timeliness of Data Acquisition:** The range of time for Armed Forces Health Surveillance Division (AFHSD) data provision varies widely. The report authors' goal is to establish a routine data request so these data are consistently obtained and reported.
13. **Unknown Data Points of Contact (POCs):** The POCs are unknown for many data sources. Identifying reliable POCs will also be a focus of future efforts.

## Source-Specific Limitations

There are also limitations that affected only specific domains and figures presented in this report. This section provides a detailed summary of each limitation, as well as how the technical team addressed the limitations.

1. **Population Differences:** There were multiple healthcare populations that could have been used for several figures presented within the report including the eligible, enrolled, and utilizer populations. Although there are advantages and disadvantages to each population, the team used the utilizer population since the numerator and denominator were both derived from one data source (DMSS) with the most information on these individuals. A more detailed justification of this choice is available upon request.
2. **Data Aggregation:** Data can come in two forms: aggregated or individual. Because the MHS population is so large, the report authors received aggregated data from AFHSD for a number of figures created for the report. These types of data are advantageous in that they are easier to transfer and interpret, but they were not stratified by anything other than age and sex. Therefore, important demographic trends (e.g., by race/ethnicity, education level, rank) may be missing.
3. **Survey Validity:** Many of the data presented within this report are derived from surveys. There are limitations inherent with all survey data. These include recall bias, response bias, and more. Therefore, each data source presented within this report has its own limitations that must be considered, and those limitations are most frequently included in the source documents associated with the data presented. When possible, the technical team selected sources that transparently documented their methods, population, sample, and limitations. Of note, Figure 24 presents the Military Family Advisory Network (MFAN) data. However, it is unclear how this survey was developed, targeted, and deployed.

Acknowledgements

Health of the Army Family Report Core Planning Team

**Jason Embrey**, Visual Information Specialist, Visual Information and Digital Media Division<sup>1</sup>  
**Andrew Leitzer**, Visual Information Specialist, Visual Information and Digital Media Division<sup>1</sup>  
**Lauren Shirey Ogledzinski, MPH**, Public Health Scientist, Public Health Assessment Division<sup>1</sup>  
**Lisa Ruth, PhD**, *Health of the Force* Project Manager, Population Health Reporting Program<sup>1</sup>  
**Theresa Jackson Santo, PhD, MPH**, Division Chief, Public Health Assessment Division<sup>1</sup>  
**Christina Via, MPH**, Health Statistician, Public Health Assessment Division<sup>1</sup>  
**Ivan Walters**, Technical Writer/Editor, Publication Management Division<sup>1</sup>  
**Emily Warren, MA**, ORISE Participant, Public Health Assessment Division<sup>1,2</sup>  
**Shaina Zobel**, *Health of the Force* Product Manager, Population Health Reporting Program<sup>1</sup>

Technical Team

**Matthew Beymer, PhD, MPH**, Health Statistician, Division of Behavioral and Social Health Outcomes Practice<sup>1</sup>  
**Jill Brown, PhD**, Public Health Scientist, Public Health Assessment Division<sup>1</sup>  
**Charsey Cherry, DrPH**, Epidemiologist/Biostatistician 3, Public Health Assessment Division<sup>1,3</sup>  
**Michelle Canham-Chervak, PhD, MPH**, Senior Epidemiologist/Program Manager Injury Prevention Program<sup>1</sup>  
**Ellyce Cook, PE**, Environmental Engineer, Environmental Health Engineering Division<sup>1</sup>  
**Kelly Gibson, MPH**, Epidemiologist, Army Satellite-Armed Forces Health Surveillance Division<sup>4</sup>  
**Erin Anderson Goodell, PhD, ScM**, Senior Epidemiologist, Division of Behavioral and Social Health Outcomes Practice<sup>3,4</sup>  
**Marek Kopacz, MD, PhD**, Public Health Scientist, Public Health Assessment Division<sup>1</sup>  
**Ijeoma Mordi, MPH**, ORISE Participant, Public Health Assessment Division<sup>1,2</sup>  
**Catherine Rappole, MPH**, Epidemiologist, Injury Prevention Branch,<sup>1,5</sup>  
**Rachana Sikka, PhD, MPH**, Epidemiologist/Biostatistician, Public Health Assessment Division<sup>1,3</sup>  
**LTC Michael Superior, MD, MPH**, Program Manager, Disease Epidemiology Branch<sup>1</sup>  
**Christina Via, MPH**, Health Statistician, Public Health Assessment Division<sup>1</sup>  
**Emily Warren, MA**, ORISE Participant, Public Health Assessment Division<sup>1,2</sup>

Content Developers

**Amy Adler, PhD**, Clinical Research Psychologist, Center for Military Psychiatry and Neuroscience<sup>6</sup>  
**Amy Millikan Bell, MD, MPH**, Medical Advisor<sup>1</sup>  
**Matthew Beymer, PhD, MPH**, Health Statistician, Division of Behavioral and Social Health Outcomes Practice<sup>1</sup>  
**Amanda Braasch, MPH**, Monitoring and Evaluation Officer, Health Promotion Operations Division<sup>1</sup>

**Jill Brown, PhD**, Public Health Scientist, Public Health Assessment Division<sup>1</sup>  
**Stephanie A. Q. Gomez, PhD**, Health Statistician, Public Health Assessment Division<sup>1</sup>  
**Ijeoma Mordi, MPH**, ORISE Participant, Public Health Assessment Division<sup>1,2</sup>  
**Lauren Shirey Ogledzinski, MPH**, Public Health Scientist, Public Health Assessment Division<sup>1</sup>  
**Lisa Polyak, MSE, MHS**, Environmental Engineer, Environmental Health Sciences and Engineering Directorate<sup>1</sup>  
**Phillip Quartana, PhD**, Research Psychologist, Department of Military Psychiatry<sup>6</sup>  
**Lyndon Riviere, PhD**, Research Scientist, Military Psychiatry Branch, Center for Military Psychiatry & Neuroscience<sup>6</sup>  
**Theresa Jackson Santo, PhD, MPH**, Division Chief, Public Health Assessment Division<sup>1</sup>  
**Christina Via, MPH**, Health Statistician, Public Health Assessment Division<sup>1</sup>  
**Emily Warren, MA**, ORISE Participant, Public Health Assessment Division<sup>1,2</sup>

Contributors

**Amy Millikan Bell, MD, MPH**, Medical Advisor<sup>1</sup>  
**Abigail Bickford, PhD**, ORISE Participant, Health Education and Application Division<sup>1,2</sup>  
**Jill Brown, PhD**, Public Health Scientist, Public Health Assessment Division<sup>1</sup>  
**Steven Cersovsky, MD, MPH**, Deputy Director<sup>1</sup>  
**Dorie Hickson**, Program Analyst, Soldier and Family Readiness Division<sup>7</sup>  
**Douglas Holl**, Media Relations Officer, Public Affairs and Marketing Division<sup>1</sup>  
**Ethel Kefauver**, Visual Information Specialist, Visual Information and Digital Media Division<sup>1</sup>  
**Wendy LaRoche, MEd**, Health Promotion Outcomes Researcher, Health Education and Application Division<sup>1</sup>  
**Stephanie Meier, PhD, MA**, Epidemiologist/Biostatistician, Public Health Assessment Division<sup>1,5</sup>  
**Laura Mitvalsky, MS**, Director, Health Promotion & Wellness<sup>1</sup>  
**Lauren Shirey Ogledzinski, MPH**, Public Health Scientist, Public Health Assessment Division<sup>1</sup>  
**Katherine Schaugency, PhD, MHS**, Epidemiologist, Division of Behavioral and Social Health Outcomes Practice<sup>1</sup>  
**Theresa Jackson Santo, PhD, MPH**, Division Chief, Public Health Assessment Division<sup>1</sup>  
**Eren Youmans Watkins, PhD, MPH**, Supervisory Epidemiologist, Division of Behavioral and Social Health Outcomes Practice<sup>1</sup>

<sup>1</sup> U.S. Army Public Health Center  
<sup>2</sup> Oak Ridge Institute for Science and Education  
<sup>3</sup> General Dynamics Information Technology  
<sup>4</sup> Defense Health Agency  
<sup>5</sup> Knowesis Inc.  
<sup>6</sup> Walter Reed Army Institute of Research  
<sup>7</sup> Headquarters, Department of the Army, Deputy Chief of Staff, G-9 (Installations)

## Appendix D

## References

- Acion L., M.R. Ramirez, R.E. Jorge and S. Arndt. 2013. Increased risk of alcohol and drug use among children from deployed military families. *Addiction*, 108(8):1418-1425.
- Aducci C.J., J.A. Baptist, J. George, P.M. Barros and B.S. Nelson Goff. 2011. What Might Trauma Mean in Our Relationships? The Recipe for Being a Good Military Wife: How Military Wives Managed OIF/OEF Deployment. *Journal of Feminist Family Therapy*, 23(3-4):231-249.
- Allen E.S., S.M. Stanley, G.K. Rhoades, H.J. Markman and B.A. Loew. 2011. Marriage Education in the Army: Results of a Randomized Clinical Trial. *Journal of Couple & Relationship Therapy*, 10(4):309-326.
- Armed Forces Health Surveillance Division (AFHSD). No date. Defense Medical Surveillance System (DMSS). <https://health.mil/Military-Health-Topics/Combat-Support/Armed-Forces-Health-Surveillance-Branch/Data-Management-and-Technical-Support/Defense-Medical-Surveillance-System>.
- Balderrama-Durbin C., D.K. Snyder, J. Cigrang, G.W. Talcott, J. Tatum, M. Baker, D. Cassidy, S. Sonnek, R.E. Heyman and A.M. Smith Slep. 2013. Combat disclosure in intimate relationships: mediating the impact of partner support on posttraumatic stress. *Journal of Family Psychology*, 27(4):560-568.
- Blue Star Families (BSF). 2019. 2019 *Military Family Lifestyle Survey*. <https://bluestarfam.org/wp-content/uploads/2020/03/BSF-2019-Survey-Comprehensive-Report-Digital-rev200305.pdf>.
- Borelli J.L., D.A. Sbarra, J.E. Snavely, D.L. McMakin, J.K. Coffey, S.K. Ruiz, B.A. Wang and S.Y. Chung. 2014. With or without you: Preliminary evidence that attachment avoidance predicts nondeployed spouses' reactions to relationship challenges during deployment. *Professional Psychology: Research and Practice*, 45(6):478-487.
- Bourg C. and M.W. Segal. 1999. *The Impact of Family Supportive Policies and Practices on Organizational Commitment to the Army*. *Armed Forces & Society*, 25:633-652.
- Buchanan C., J. Kemppainen, S. Smith, S. MacKain and C.W. Cox. 2011. Awareness of posttraumatic stress disorder in veterans: a female spouse/intimate partner perspective. *Military Medicine*, 176(7):743-751.
- Burnam M.A., L.S. Meredith, C.D. Sherbourne, R.B. Valdez and G. Vernez. 1992. *Army Families and Soldier Readiness*.
- Carter S.P., B. Loew, E.S. Allen, L. Osborne, S.M. Stanley and H.J. Markman. 2015. Distraction during Deployment: Marital Relationship Associations with Spillover for Deployed Army Soldiers. *Military Psychology*, 2(2):108-114.
- CEL & Associates Inc. 2019a. *2019 Summary of the Headquarters Department of the Army Residential Communities Initiative Resident Survey (On-Base)*. Available at [https://www.army.mil/e2/downloads/rv7/families/Army\\_Privatized\\_Housing\\_Survey\\_Results\\_EXSUM.pdf](https://www.army.mil/e2/downloads/rv7/families/Army_Privatized_Housing_Survey_Results_EXSUM.pdf).
- CEL & Associates Inc. 2019b. *2019 Executive Summary of the Headquarters Department of the Army FH Resident Survey (Owned and Leased) Housing*. Available at [https://www.army.mil/e2/downloads/rv7/families/Army\\_Owned\\_and\\_Leased\\_Housing\\_Survey\\_Results\\_EXSUM.pdf](https://www.army.mil/e2/downloads/rv7/families/Army_Owned_and_Leased_Housing_Survey_Results_EXSUM.pdf).

- Centers for Disease Control and Prevention. 2012. *Low Level Lead Exposure Harms Children: A Renewed Call for Primary Prevention, Report of the Advisory Committee on Childhood Lead Poisoning Prevention*. [https://www.cdc.gov/nceh/lead/acclpp/Final\\_Document\\_030712.pdf](https://www.cdc.gov/nceh/lead/acclpp/Final_Document_030712.pdf).
- Cigrang J.A., G.W. Talcott, J. Tatum, M. Baker, D. Cassidy, S. Sonnek, D.K. Snyder, C. Balderrama-Durbin, R.E. Heyman and A.M. Smith Slep. 2014. Intimate partner communication from the war zone: a prospective study of relationship functioning, communication frequency, and combat effectiveness. *Journal of Marital and Family Therapy*, 40(3):332-343.
- Composite Health Care System. 2019. Health Level 7, Chemistry Data System. Falls Church, VA: Defense Health Agency.
- Corry N.H., S. Radakrishnan, C.S. Williams, A.C. Sparks, K.A. Woodall, J.A. Fairbank and V.A. Stander. 2019. Association of military life experiences and health indicators among military spouses. *BMC Public Health*, 19(1):1517.
- Davis J.M. and E.H. Finke. 2015. The Experience of Military Families with Children with Autism Spectrum Disorders During Relocation and Separation. *Journal Autism and Developmental Disorders*, 45(7):2019-2034.
- Defense Health Agency. 2020. *Total Force Fitness*. <https://health.mil/Military-Health-Topics/Total-Force-Fitness>.
- Defense Manpower Data Center. 2015a. *Military Family Life Project: Active Duty Spouse Study: Longitudinal Analyses 2010-2012 Project Report*. <https://download.militaryonesource.mil/12038/MOS/Reports/MFLP-Longitudinal-Analyses-Report.pdf>.
- Defense Manpower Data Center. 2015b. Survey of Active Duty Spouses. Briefing slide deck available at [https://download.militaryonesource.mil/12038/MOS/Surveys/ADSS1501\\_Briefing\\_Mini\\_2015.pdf](https://download.militaryonesource.mil/12038/MOS/Surveys/ADSS1501_Briefing_Mini_2015.pdf).
- Defense Suicide Prevention Office. 2018. *Annual Suicide Report*. [https://www.dsps.mil/Portals/113/2018%20DoD%20Annual%20Suicide%20Report\\_FINAL\\_25%20SEP%2019\\_508c.pdf](https://www.dsps.mil/Portals/113/2018%20DoD%20Annual%20Suicide%20Report_FINAL_25%20SEP%2019_508c.pdf).
- DeGraff A.N., C.W. O'Neal and J.A. Mancini. 2016. The Significance of Military Contexts and Culture for Understanding Family Well-Being: Parent Life Satisfaction and Adolescent Outcomes. *Journal of Child and Family Studies*, 25:3022-3033.
- Estrada J.N., T.D. Gilreath, C.Y. Sanchez and R.A. Astor. 2017. Associations between school violence, military connection, and gang membership in California secondary schools. *American Journal of Orthopsychiatry*, 87(4):443-451.
- Family Life Development Center. 2009. *U.S. Army Community Service Relocation Readiness/Exceptional Family Member Program Pilot Study*. Report prepared for the Family and Morale, Welfare, and Recreation Command supported by U.S. Department of Agriculture under Cooperative Agreement 2008-48654-04795.
- Faran M.E., P.L. Johnson, P. Ban, T. Shue and M.D. Weist. 2015. The evolution of a school behavioral health model in the US Army. *Child and Adolescent Psychiatric Clinics of North America*, 24(2):415-428.
- Federal Interagency Forum on Child and Family Statistics. 2019. *America's Children: Key National Indicators of Well-Being*. Washington, DC: U.S. Government Printing Office.

- Foran H.M., K.M. Wright and M.D. Wood. 2013. Do combat exposure and post-deployment mental health influence intent to divorce? *Journal of Social and Clinical Psychology*, 32(9):917-938.
- Fullerton C.S., J.E. McCarroll, M. Feerick, J. McKibben, S. Cozza, R.J. Ursano and Child Neglect Workgroup. 2011. Child neglect in Army families: a public health perspective. *Military Medicine*, 176(12):1432-1439.
- Gibbs D.A., S.L. Martin, L.L. Kupper and R.E. Johnson. 2007. Child maltreatment in enlisted soldiers' families during combat-related deployments. *JAMA*, 298(5):528-535.
- Gilreath T.D., J.A. Cederbaum, R.A. Astor, R. Benbenishty, D. Pineda and H. Atuel. 2013. Substance use among military-connected youth: the California Healthy Kids Survey. *American Journal of Preventive Medicine*, 44(2):150-153.
- Gleason J.L. and K.H. Beck. 2017. Examining Associations Between Relocation, Continuity of Care, and Patient Satisfaction in Military Spouses. *Military Medicine*, 182(5):e1657-e1664.
- Government Accountability Office (GAO). 2020. GAO-20-61: *Female Active-Duty Personnel, Guidance and Plans Needed for Recruitment and Retention Efforts*. <https://www.gao.gov/assets/710/707037.pdf>.
- Harrell M.C., N. Lim, L. Werber and D. Golinelli. 2005. *Working Around the Military - Challenges of Military Spouse Employment*. [https://www.rand.org/pubs/research\\_briefs/RB9056.html](https://www.rand.org/pubs/research_briefs/RB9056.html).
- Hawkins S.A., A. Condon, J.N. Hawkins, K. Liu, Y. Melendrez Ramirez, M.M. Nihill and J. Tolins. 2018. *What We Know About Military Family Readiness: Evidence From 2007-2017*. <https://apps.dtic.mil/sti/pdfs/AD1050341.pdf>.
- Hernandez B.F., M.F. Peskin, C.M. Markham, J. Burr, T. Roberts and S. Tortolero. 2015. Associations between parental deployment, relocation, and risky sexual behaviors among a clinic-based sample of military-dependent youth. *Journal of Primary Prevention*, 36(5):351-359.
- Heyman R.E., A.M. Smith Slep, C. Sabathne, et al. 2015. Development of a multilevel prevention program for improved relationship functioning in active duty military members. *Military Medicine*, 180(6):690-696. doi: 10.7205/MILMED-D-14-00491.
- Hiring Our Heroes, U.S. Chamber of Commerce Foundation. 2017. *Military Spouses in the Workplace. Understanding the Impacts of Spouse Unemployment on Military Recruitment, Retention, and Readiness*. Report available at <https://www.uschamberfoundation.org/reports/military-spouses-workplace>.
- Holmes A.K., P.K. Rauch and S.J. Cozza. 2013. When a parent is injured or killed in combat. *Future Child*, 23(2):143-162.
- Huebner A.J., J.A. Mancini, R.M. Wilcox, S.R. Grass and G.A. Grass. 2007. Parental Deployment and Youth in Military Families: Exploring Uncertainty and Ambiguous Loss. *Family Relations*, 56(2):112-122. doi: 10.1111/j.1741-3729.2007.00445.x.
- Huebner C.R., Section On Uniformed Services and Committee on Psychosocial Aspects of Child and Family Health. 2019. Health and Mental Health Needs of Children in US Military Families. *Pediatrics*, 143(1):e20183258.
- Hutchinson J.W. 2006. Evaluating risk-taking behaviors of youth in military families. *Journal of Adolescent Health*, 39(6):927-928.

- Joint Advertising Market Research & Studies (JAMRS). 2016. *Understanding the Disconnected: Perspective on how the military can narrow the military-civilian gap*. Executive note prepared by JAMRS program, May 2016.
- JAMRS. 2021. *April –September 2020 Active Duty New Recruit Survey Briefing: Media Habits and Sources of Information*. Defense Office of Prepublication and Security Review Case 21-S-2749.
- Joseph A.L. and T.D. Afifi. 2010. Military wives' stressful disclosures to their deployed husbands: The role of protective buffering. *Journal of Applied Communication Research*, 38(4):412-434.
- Kees M., L.S. Nerenberg, J. Bachrach and L.A. Sommer. 2015. Changing the Personal Narrative: A Pilot Study of a Resiliency Intervention for Military Spouses. *Contemporary Family Therapy*, 37(3):221-231.
- Kimerling R., K.M. Iverson, M.E. Dichter, A.L. Rodriguez, A. Wong and J. Pavao. 2016. Prevalence of intimate partner violence among women veterans who utilize Veterans Health Administration primary care. *Journal of General Internal Medicine*, 31(8):888-894.
- Lester P., K. Peterson, J. Reeves, L. Knauss, D. Glover, C. Mogil, N. Duan, W. Saltzman, R. Pynoos, K. Wilt and W. Beardslee. 2010. The long war and parental combat deployment: effects on military children and at-home spouses. *Journal of the American Academy of Child & Adolescent Psychiatry*, 49(4):310-320.
- Mansfield A.J., J.S. Kaufman, S.W. Marshall, B.N. Gaynes, J.P. Morrissey and C.C. Engel. 2010. Deployment and the use of mental health services among U.S. Army wives. *New England Journal of Medicine*, 362(2):101-109.
- McFadyen J.M., J.L. Kerpelman and F. Adler-Baeder. 2005. Examining the Impact of Workplace Supports: Work-Family Fit and Satisfaction in the U.S. Military. *Family Relations*, 54(1):131-144.
- Meadows S.O., C.C. Engel, R.L. Collins, R.L. Beckman, M. Cefalu, J. Hawes-Dawson, M. Waymouth, A.M. Kress, L. Sontag-Padilla, R. Ramchand and K.M. Williams. 2018. 2015 *Department of Defense Health Related Behaviors Survey (HRBS)*. [https://www.rand.org/pubs/research\\_reports/RR1695.html](https://www.rand.org/pubs/research_reports/RR1695.html).
- Meadows S.O., T. Tanielian and B. Karney. 2016. *The Deployment Life Study: Longitudinal Analysis of Military Families Across the Deployment Cycle*. [https://www.rand.org/pubs/research\\_reports/RR1388.html](https://www.rand.org/pubs/research_reports/RR1388.html).
- Meyer I.H. and D.M. Frost. 2013. Minority stress and the health of sexual minorities. In C. J. Patterson and A. R. D'Augelli (Eds). *Handbook of Psychology and Sexual Orientation* (pp. 252-266). Oxford: Oxford University Press.
- Military Family Advisory Network (MFAN). 2018. *Military Family Support Survey 2017 Results*. <https://militaryfamilyadvisorynetwork.org/wp-content/dl/MFAN-2017-Survey-Report.pdf>.
- MFAN. 2019. *Final Research Report- Living Conditions of Families in Privatized Military Housing*. [http://militaryfamilyadvisorynetwork.org/wp-content/uploads/Privatized-Military-Housing-Survey-Report-5\\_20.pdf](http://militaryfamilyadvisorynetwork.org/wp-content/uploads/Privatized-Military-Housing-Survey-Report-5_20.pdf).
- National Academies of Sciences, Engineering, and Medicine. 2019. *Strengthening the Military Family Readiness System for a Changing American Society*. <https://www.nap.edu/catalog/25380/strengthening-the-military-family-readiness-system-for-a-changing-american-society>.
- National Prevention Council. 2011. *National Prevention Strategy*. <https://www.hhs.gov/sites/default/files/disease-prevention-wellness-report.pdf>.

Nihill M.M., L.L. Vie, S.A. Hawkins, J. Hawkins, D. Bonett, W. Kelley, Y. Melendrez Ramirez and C. Weywadt. 2019. Indicators of Family Readiness Meta-Analysis: Military Life Experiences. U.S. Army Analytics Group Research Facilitation Laboratory Technical Report. Monterey, CA.

Office of People Analytics (OPA). 2017a. *2017 Survey of Active Duty Spouses*. <https://download.militaryonesource.mil/12038/MOS/Surveys/Survey-Active-Duty-Spouses-2017-Overview-Briefing-MSO.pdf>.

OPA. 2017b. *Spousal support to stay as a predictor of actual retention behavior: A logistic regression analysis* (Survey Note No: 2017-009). Alexandria, VA.

OPA. 2017c. *Member Intention to Remain on Active Duty*. Infographic presented at Family Support Research Network Meeting, 25 October 2018, Alexandria, VA.

OPA. 2017d. *Spousal Support is the Best Predictor of a Member Intending to Stay on Active Duty*. Infographic presented at Family Support Research Network Meeting, 25 October 2018, Alexandria, VA.

OPA. 2018a. *Financial Health of Active Duty Members: Results from 2018 Status of Forces Survey of Active Duty Members (SOFS-A): Army*. Briefing slide deck.

OPA. 2018b. *2017 Status of Forces Survey of Active Duty Members: Tabulations of Responses. Report No. 2018-030, July 2018*.

OPA. 2019a. *2018 Workplace and Gender Relations Survey of Active Duty Members Overview Report. Report No. 2019-027*. [https://www.sapr.mil/sites/default/files/Annex\\_1\\_2018\\_WGRA\\_Overview\\_Report.pdf](https://www.sapr.mil/sites/default/files/Annex_1_2018_WGRA_Overview_Report.pdf).

OPA. 2019b. *Predictors of spousal support for a member to stay on active duty*. <https://download.militaryonesource.mil/12038/MOS/Surveys/Predictors-Spousal-Support.pdf>.

Office of the Surgeon General. 2021. *Policy Memorandum 21-001, subject: Preventing Childhood Lead Exposure - Lead Hazard Management, 06 January 2021, expires 06 January 2023*. Joint Base San Antonio, TX.

O'Neal C.W., E.W. Richardson and J.A. Mancini. 2020. Community, Context, and Coping: How Social Connections Influence Coping and Well-Being for Military Members and Their Spouses. *Family Process*, 59(1):158-172.

Patrin G. 2009. *Deployment Effects on Children and Adolescents: Designing and Deploying a Developmentally Appropriate Education and Screening Video Program for Military Families*. <https://apps.dtic.mil/sti/pdfs/ADA516563.pdf>.

Perdue W.C., L.A. Stone and L.O. Gostin. 2003. The built environment and its relationship to the public's health: the legal framework. *American Journal Public Health*, 93(9):1390-1394.

Ramchand R., T. Tanielian, M.P. Fisher, C.A. Vaughan, T.E. Trail, C. Epley, P. Voorhies, M. Robbins, E. Robinson and B. Ghosh-Dastidar. 2014. *Hidden Heroes: America's Military Caregivers - Executive Summary*. [https://www.rand.org/pubs/research\\_reports/RR499z1.html](https://www.rand.org/pubs/research_reports/RR499z1.html).

Richardson A., A. Chandra, L.T. Martin, C.M. Setodji, B.W. Hallmark, N.F. Campbell, S. Hawkins and P. Grady. 2011. *Effects of Soldiers' Deployment on Children's Academic Performance and Behavioral Health*. <https://www.rand.org/pubs/monographs/MG1095.html>.

Richardson E.W., J.K. Mallette, C.W. O'Neal and J.A. Mancini. 2016. *Do Youth Development Programs Matter? An Examination of Transitions and Well-Being Among Military Youth*. *Journal of Child and Family Studies*, 25:1765-1776.

Rock L. 2017. Financial Health of Active Duty Members. Results from 2017 Status of Forces Survey of Active Duty Members (SOFS-A). Office of People Analytics Briefing Slide Deck.

Spencer E., K. Page and M.G. Clark. 2016. Managing Frequent Relocation in Families? Considering Prospect Theory, Emotional Framing, and Priming. *Family and Consumer Sciences Research Journal*, 45(1):77-90.

Substance Abuse and Mental Health Administration. 2016. *Spouses and Children of U.S. Military Personnel: Substance Use and Mental Health Profile from the 2015 National Survey on Drug Use and Health*. Prepared by Lipari R.M., B. Forsyth, J. Bose, L.A. Kroutil and M.E. Lane. <https://www.samhsa.gov/data/sites/default/files/NSDUHMilitaryFamily-2015/NSDUH-MilitaryFamily-2015.htm>.

Tarney C.M., C. Berry-Caban, R.B. Jain, M. Kelly, M.F. Sewell and K.L. Wilson. 2015. Association of Spouse Deployment on Pregnancy Outcomes in a U.S. Military Population. *Obstetrics & Gynecology*, 126(3):569-574.

Teachman J.D. and L. Tedrow. 2008. Divorce, race, and military service: More than equal pay and equal opportunity. *Journal of Marriage and Family*, 70(4):1030-1044.

Tong P.K., L.A. Payne, C.A. Bond, S.O. Meadows, J.L. Lewis, E.M. Friedman and E.J. Maksabedian Hernandez. 2018. *Enhancing Family Stability During a Permanent Change of Station: A Review of Disruptions and Policies*. [https://www.rand.org/pubs/research\\_reports/RR2304.html](https://www.rand.org/pubs/research_reports/RR2304.html).

Trail T.E., C.S. Sims and M. Tankard. 2019. *Today's Army Spouse Survey: How Army Families Address Life's Challenges*. [https://www.rand.org/pubs/research\\_reports/RR3224.html](https://www.rand.org/pubs/research_reports/RR3224.html).

Trone D.W., T.M. Powell, L.M. Bauer, A.D. Seelig, A.V. Peterson, A.J. Littman, E.C. Williams, C.C. Maynard, J.B. Bricker and E.J. Boyko. 2018. Smoking and drinking behaviors of military spouses: Findings from the Millennium Cohort Family Study. *Addictive Behaviors*, 77:121-130.

Troxel W.M., T.E. Trail, L.H. Jaycox and A. Chandra. 2016. Preparing for deployment: Examining family-and individual-level factors. *Military Psychology*, 28(3):134-146. doi: 10.1037/mil0000110.

U.S. Army. 2014. Comprehensive Soldier and Family Fitness: Army regulation 350-53. <http://milreg.com/File.aspx?id=218>.

U.S. Army. 2020a. *Ready and Resilient Campaign Plan*. <https://readyandresilient.army.mil/resources.html>.

U.S. Army. 2020b. *Sexual Harassment/Assault Response & Prevention. FAQs*. <https://www.armyresilience.army.mil/sharp/pages/faq.html>

U.S. Army. 2021. *People First: Insights from the Army's Chief of Staff*. [https://www.army.mil/article/243026/people\\_first\\_insights\\_from\\_the\\_armys\\_chief\\_of\\_staff](https://www.army.mil/article/243026/people_first_insights_from_the_armys_chief_of_staff).

U.S. Army Medical Command (MEDCOM). 2021. *Operations Order 21-17, Environmental Health Hazard Management Control Plan, 07 January 2021*. Joint Base San Antonio, TX.

U.S. Army Public Health Center (APHC). 2019. Public Health Assessment Report No. S.0065576-19, *Exceptional Family Member Program Survey: Assessing the Needs of Exceptional Army Families*.

U.S. APHC. 2020. Technical Report No. S.0048269.3-19, *January 2020 Health Promotion and Wellness, U.S. Army Community Strengths and Themes Assessment (CSTA) Aggregate Results, 01 October 2018–30 September 2019*. Unpublished report available to U.S. Government Agencies.

U.S. APHC. 2021a. Assessment of Military Caregiver Burden and Needs, May 2018-May2019. Briefing slides presented to the U.S. Army Caregivers workgroup, July 2021.

U.S. APHC. 2021b. 2020 *Health of the Force*. <https://phc.amedd.army.mil/PHC%20Resource%20Library/2020-hof-web.pdf>.

U.S. Department of Defense. 2020. *Transition Assistance Program (TAP) Military Lifecycle Model*. <https://www.dodtap.mil/mlc.html>.

U.S. Department of Defense. Office of the Deputy Assistant Secretary of Defense for Military Community and Family Policy. 2018. *2018 Demographics Profile of the Military Community*. <https://download.militaryonesource.mil/12038/MOS/Reports/2018-demographics-report.pdf>.

U.S. General Accounting Office. 2001. *Longer Times Between Moves Related to Higher Satisfaction and Retention*. <https://www.gao.gov/assets/gao-01-841.pdf>.

Vincenzes K.A., L. Haddock and G. Hickman. 2014. The Implications of Attachment Theory for Military Wives: Effects During a Post-Deployment Period. *The Professional Counselor*, 4:122-128.

Walter Reed Army Institute of Research (WRAIR) and U.S. Army Public Health Center (APHC). 2020. Technical Report No. S.0079120-20, *Behavioral Health Advisory Team – COVID-19 Survey Phase I Findings, 4 May–1 June 2020*. Prepared by Quartana, P., A.M. Bell, A. Adler, T.J. Santo, S. Gomez, M. Beymer, L.J. Riviere, I. Gutierrez, and J. Holzinger. <https://phc.amedd.army.mil/PHC%20Resource%20Library/cv19-bhat-techreport-phase1.pdf>.

Wilson M.G., D.M. Dejoy, R.J. Vandenberg, H.A. Richardson and A.L. McGrath. 2004. Work characteristics and employee health and well-being: Test of a model of healthy work organization. *Journal of Occupational and Organizational Psychology*, 77:565-588.

World Health Organization. 2004. *Promoting Mental Health: Concepts, Emerging Evidence, Practice*. [http://www.who.int/mental\\_health/evidence/en/promoting\\_mhh.pdf](http://www.who.int/mental_health/evidence/en/promoting_mhh.pdf).

World Health Organization. 2020. Basic documents: forty-ninth edition (including amendments adopted up to 31 May 2019). [https://apps.who.int/gb/bd/pdf\\_files/BD\\_49th-en.pdf#page=6](https://apps.who.int/gb/bd/pdf_files/BD_49th-en.pdf#page=6).

Worthen M., R. Moos and J. Ahern. 2012. Iraq and Afghanistan Veterans' experiences living with their parents after separation from the military. *Contemporary Family Therapy*, 34(3):362-375.

# HEALTH OF THE ARMY FAMILY REPORT



Visit us at:

<https://phc.amedd.army.mil/topics/campaigns/armyfamily/Pages/default.aspx>

