Anticipating the Landscape in the Years Ahead: 
Military Members Transition to a Post-War Mission 

July, 2014
Submitted by:

The Military REACH Team
The Research and Outreach (REACH) Laboratory
The University of Minnesota

University of Minnesota Military REACH Project Team
Lynne M. Borden, PhD (PI)
Renada Goldberg, MEd
Kyle R. Hawkey, MEd
Sheryl A. Hess, PhD
Michelle Wittcoff Kuhl, PhD
Jessica Larsen, PhD
Mark Otto, BS
Emily Paradis, BA
Michelle D. Sherman, PhD (Primary Author)
Seth C. Snyder, MA
David Steinman, BA
Lara Westerhof, BS

For additional information, please contact:
Lynne M. Borden, PhD
Department of Family Social Science
The University of Minnesota
Imborden@umn.edu
(612) 625-4227

Developed in collaboration with the Department of Defense’s Office of Family Policy, the National Institute of Food and Agriculture, and the U.S. Department of Agriculture under The University of Minnesota Award No. 2013-48710-21515.
# Table of Contents

- **Executive Summary** .................................................................................................................. 1  
- **Introduction** ............................................................................................................................... 2  
- **Relevant Ongoing Research** ........................................................................................................ 2  
- **Positive Correlates of Deployment** ............................................................................................. 3  
- **Six Domains of Functioning: Current Knowledge and Future Projections** ........................................ 4  
    - Mental Health ............................................................................................................................... 4  
    - Social/Role Functioning ................................................................................................................. 9  
    - Relationship Functioning and Family Life .................................................................................... 12  
    - Spiritual Functioning ................................................................................................................... 15  
    - Physical Health ............................................................................................................................ 16  
    - Financial Well-Being .................................................................................................................... 18  
- **Looking to the Future** .................................................................................................................. 19  
- **Distinct Populations** ................................................................................................................... 21  
- **Conclusions and Implications** ...................................................................................................... 21  
- **References** ................................................................................................................................... 24
Executive Summary

As the wars in the Middle East move toward an end, it is a time to not only reflect and maximize lessons learned, but also look forward to what lies ahead for Service members. Over 2.6 million members of the United States military have deployed in support of Operation Enduring Freedom, Operation Iraqi Freedom, and Operation New Dawn (OEF/OIF/OND); forty percent of troops have deployed more than once. The Global War on Terrorism has been the longest war in our nation’s history, drawing upon unprecedented numbers of National Guard and Reserve personnel, involving multiple deployments for many Service members, entailing a unique kind of warfare, and resulting in physical, emotional, social, and spiritual challenges for a considerable number of people. Due to this unprecedented period in our nation’s military history, it is important to anticipate the experiences of our Service members in the years ahead. Little data exists to predict the specific strengths, needs, and challenges, but we can attempt to extrapolate from previous war eras and available data on post-deployment functioning among OEF/OIF troops. Such projections must be interpreted with caution due to the significantly different experiences faced by OEF/OIF Service members in comparison to personnel from previous wars. Reassessment of functioning over time will be vital.

Although a majority of Service members are resilient and we do not anticipate that they will develop long-term difficulties, this review summarizes research on a range of increased risks for Service members across six domains, including:

- Mental health
- Social and role functioning
- Relationship functioning and family life
- Spirituality
- Physical health
- Financial well-being

For each domain, the literature on OEF/OIF Service members’ post-deployment functioning is reviewed, followed by an overview of future projections for each domain. Research on the course of functioning over time of veterans from previous conflicts is described where available. Most veterans from previous wars were resilient and did not develop lasting psychiatric problems; however, a considerable number of personnel did develop PTSD, and some problems have lasted many years after combat. Similarly, it is likely that some OEF/OIF Service members will have a chronic course of difficulties. Although risk factors and future trajectories vary across these six domains, psychiatric difficulties are a consistent predictor of a worsened course. Supporting Service members in role functioning (in the classroom, in the family, and in the workforce) is anticipated to be an important component of fostering wellness.

Although the precise course of Service members’ mental health functioning is unknown, it is suspected that the Department of Defense (DoD) will continue its commitment to fostering wellness/resilience as well as funding prevention and treatment efforts. Exploration of a range of supports and modalities of services will likely be useful. Attention to specific subpopulations of Service members (e.g., National Guard and Reservists, women, wounded warriors), as well as their families, will be important in future planning and outreach. Continued re-assessment of Service member functioning across all domains—mental, social, relational, spiritual, physical, and financial—will be important in making strategic plans for the future well-being of our force.
Anticipating the Landscape in the Years Ahead: Military Members Transition to a Post-War Mission

As Service members continue to withdraw from Afghanistan over the coming months, the number of troops committed to combat operations in support of Overseas Contingency Operations will decrease considerably. Beginning in 2001, the Global War on Terrorism has been the longest war in our nation’s history, drawing upon unprecedented numbers of National Guard and Reserve personnel, involving multiple deployments for many Service members, entailing a unique kind of warfare, and resulting in physical, emotional, social, and spiritual challenges for a considerable number of people. According to the Defense Manpower Database, over 2.6 million members of the United States military have deployed in support of Operation Enduring Freedom, Operation Iraqi Freedom, and Operation New Dawn (OEF/OIF/OND); forty percent of troops deployed more than once (Institute of Medicine, 2012; 2014).

The Department of Defense (DoD) is dedicated to understanding and supporting Service members and their families across the deployment cycle, and many resources have been devoted to these important efforts. Uncertainty about the financial climate within the DoD and the pending force shaping are sources of stress for some families, both of which may affect many domains of functioning over time.

Due to this unprecedented period in our nation’s military history, it is important to anticipate the landscape for our Service members in the years ahead. Little data exists to predict the specific strengths, needs, and challenges of military personnel in the next five years, but we can attempt to extrapolate from previous war eras and available data on post-deployment functioning among OEF/OIF troops. Due to the uniqueness of the recent wars, however, these projections must be considered tentative, and re-evaluation of these issues over time will be important.

This review begins by describing some large longitudinal studies currently underway as well as literature on the positive correlates of deployment. The majority of the review is organized around Service member functioning in the following six domains: mental health, social/role functioning, relationships/family life, spiritual functioning, physical health, and financial well-being. Each section will begin by reviewing the existing literature on the functioning of Service members after deployment to Iraq and Afghanistan. Projections about the course of future functioning in each domain will then be described. Several theories have been developed to explain military families’ experiences with deployment and ways to foster wellness, and some extrapolations from these ideas are useful. The unique experiences of specific subgroups of Service members are reviewed, followed by an overview of key measurement instruments that may assist the DoD and researchers in understanding the future course of military families. The review concludes with implications and recommendations for understanding and supporting Service members over the next five to ten years.

Relevant Ongoing Research

More research has been conducted with Service members deployed in support of OEF/OIF and their families than with any previous wars. Although most of the research is cross-sectional, some rigorous longitudinal studies are providing insights into changes in functioning over time; these data will be crucial to understanding and predicting functioning. Although these projects are still ongoing, some preliminary reports are incorporated throughout this report. Future
publications from these projects should provide key insights and guidance for understanding and supporting military families. First, the DoD's Millennium Cohort Study (MCS), the largest prospective research in the history of the United States military, is using a phased enrollment strategy to track more than 100,000 U.S. Service members, with follow-ups planned through the year 2022. Both participant surveys (every three years) and reviews of DoD and Veterans Affairs (VA) databases will be utilized to track objective and self-report data on military experiences as well as a range of health outcomes (Crum-Cianflone, 2013; Ryan et al., 2007). Numerous publications are already yielding useful findings from this project, and future longitudinal work should be very informative.

Similarly, the Deployment Life Study conducted by RAND (2014) is a longitudinal study of military families over the complete deployment cycle. This project surveys Service members, spouses, and preteen/teenage children every four months across a three-year period, and should provide helpful findings about the family experience of deployment (Tanielian, Karney, Chandra, & Meadows, 2014). Another noteworthy project that should provide helpful information is the longitudinal Neurocognition Deployment Health Study (NDHS) examining neuropsychological functioning among a cohort of veterans who deployed to OIF (Aslan et al., 2013).

**Positive Correlates of Deployment**

Service members deployed with the armed forces are exposed to a range of cultures, experiences, and people that may be very different from their homeland. Deployment can afford opportunities to develop new strengths and skills (Basham, 2008). Some research has explicitly examined the positive correlates of deployment to a variety of theaters. Troops who have deployed to Kosovo on peacekeeping missions have reported pride in representing the United States and in accomplishing a successful mission, appreciating support from other Service members (Maguen, Litz, Wang, & Cook, 2004), a broadening of their horizons, and increased self-confidence (Dirkzwager, Bramsen, & Van Der Ploeg, 2005). U.S. Army soldiers on Bosnian peacekeeping missions reported enjoying the additional income, self-improvement, strengthened relationships with others, and time to think (Newby, McCarroll, Ursano, Fan, Shigemura, & Tucker-Harris, 2005). Research with OEF/OIF veterans who had deployed revealed benefits of deployment including financial gain, an ability to use training in the real world, a sense of accomplishment, and strengthened bonds with one’s military unit (Hosek, Kavanagh, & Miller, 2006). A Pew Survey (2011) of post 9/11 veterans revealed several other positive correlates of deployment; over 90% reported pride, increased maturity, and greater self-confidence associated with their service.

A growing literature on post-traumatic growth (PTG) is exploring positive outcomes associated with individuals experiencing traumatic events, including combat veterans (Tedeschi, 2011). Research with Persian Gulf War veterans (Maguen, Vogt, King, King, & Litz, 2006) revealed an increased sense of purpose and meaning in life among recently deployed personnel. A more recent survey of U.S. soldiers found that those who reported the highest number of combat experiences also reported significantly higher levels of overall PTG (Gallaway, Milliken, & Bell, 2011). Thus, although much of this report will focus on challenges faced by Service members after more than a decade of war, it is important to recognize the numerous possible positive correlates of deployment and maximize resilience and growth after challenging experiences.
Six Domains of Functioning: Current Knowledge and Future Projections

Functioning of Service members will be reviewed in the following six domains: mental health, social/role functioning, relationships/family life, spiritual functioning, physical health, and financial well-being. Each section will overview the literature on OEF/OIF Service members’ post-deployment functioning, and then will describe future projections for each domain. Research from veterans from previous conflicts will be described where available. Although most veterans from previous wars were resilient and did not develop lasting psychiatric problems, a considerable number of troops did develop PTSD, and some problems have lasted many years after combat. While learning from past wars is important, extrapolations from these data must be done with caution due to the significantly different experiences faced by OEF/OIF Service members in comparison to personnel from previous wars (for a review of the unique features of this war, see IOM Report, 2010). Reassessment of functioning across these domains over time will be vital.

Mental Health

Current knowledge. Most of the research on deployment among Service members has focused on mental health issues, especially rates of PTSD, depression, and alcohol abuse. Although attention to various psychiatric sequelae of deployments is important, it is imperative to note that most Service members who deploy and face operational stressors are resilient and do not develop lasting mental health problems (Litz & Schlenger, 2009). However, a growing research base is documenting some emotional problems among a sizable cohort of troops. For example, data from the Armed Forces Surveillance Center reports that between 2001 and 2011, rates of mental health conditions among active duty Service members increased by about 62% (incidence of PTSD increased 656% and anxiety 226% in this time period) (Blakeley & Jansen, 2013). In this timeframe, almost one million Service members or veterans were diagnosed with a psychological disorder either during or after deployment, with almost half having more than one mental health disorder.

Post-traumatic Stress Disorder (PTSD). Prevalence estimates of PTSD among Service members returning from Iraq and Afghanistan vary considerably, ranging from 4-30% (IOM, 2014; Richardson, Frueh & Achierno, 2010; Tanielian & Jaycox, 2008). The variability in estimates is due to a range of differences across studies, including sampling, measurement, timing, criterion for assessment (etc.). Prospective data from the Millennium Cohort Study found a threefold statistically significant increase in new onset self-reported symptoms or diagnosis of PTSD among recently deployed military personnel who report combat exposure (Smith et al., 2008).

Depression and Grief. Although PTSD has been named one of the “signature injuries” of the wars in Iraq and Afghanistan, returning Service members face an array of other mental health difficulties as well. Troops who experience combat deployment have been found to be at an increased risk for depression compared to nondeployed Service members (Shen, Arkes, & Williams, 2012; Wells et al., 2010). Estimates of the prevalence of major depression among Service members who have deployed to Iraq or Afghanistan vary, ranging from 5-37% (IOM, 2014). Considerable numbers of OEF/OIF veterans entering the VA healthcare system are experiencing depression; one study examining new enrollees from 2002-2008 found that almost
one-fifth of these veterans were diagnosed with depression (Seal, Metzler, Gima, Bertenthal, Maguen, & Marmar, 2009).

Grief is a relatively unexamined construct in the literature, but may be a component of or contributor to depression. In one study of infantry soldiers six months after an OEF/OIF deployment, 21% reported difficulty coping with grief over the death of someone close to them. After controlling for possible confounds, grief significantly contributed to Service members having more physical health problems, poor general health, and more days of missed work (Toblin et al., 2012).

Sleep Problems. Sleep problems may be a related or distinct problem from depression and PTSD for OEF/OIF Service members. Given the established literature on the importance of sleep for both physical (Ferrie, Shipley, Cappuccio, Brunner, Miller, Kumari, & Marmot, 2007) and emotional health (Benca, Obermeyer, Thisted, & Gillin, 1992), examining sleep difficulties is important. The most recent Mental Health Assessment Team (MHAT 9, 2013) report reveals considerable numbers of troops having sleep problems during deployment, with clear relationships between insufficient sleep and both mental health problems and having accidents on the job. Poor sleep hygiene and sleep difficulties can continue upon homecoming, exacerbating other reintegration difficulties.

Analysis of MCS data revealed that the average sleep duration was shorter among Service members who deployed in comparison to nondeployers; additionally, greater stress and male gender were related to shorter sleep duration (Seelig et al., 2010). Further sleep problems may be relatively widespread. A recent examination of OEF/OIF veterans found that 89% were categorized as “poor sleepers,” with more severe sleep problems among those with less education, lower rank, more combat exposure, and comorbid psychiatric problems.

Suicide. A correlate of a range of mental health problems can be self-injurious behavior, including suicide. This issue has received a great deal of attention, both via research and in the popular press, in part due to the growing rates of Service member suicide over the past five years (Kuehn, 2009). Specifically, the rate of suicide in the DoD rose by 60% from 2005-2011 (DCOE, 2012).

Neither Vietnam, Gulf War, nor OEF/OIF veterans have been found to have significantly elevated rates of suicide compared to the general population; however, both Vietnam and OEF/OIF veterans with psychiatric problems have been found to be at elevated risk for suicide in comparison to the general population (Kang & Bullman, 2009).

Alcohol Use. Combat deployment may be related to an increased risk of alcohol problems upon homecoming (Shen et al., 2012), and considerable numbers of Service members may be experiencing substance use issues. For example, approximately 30% of National Guard Service members reported hazardous drinking 45-90 days after homecoming (Blow et al., 2013). Similarly, in a community sample of OEF/OIF veterans, 30% of men and 16% of women
screened positive for hazardous drinking (Scott, Pietrzak, Mattocks, Southwick, Brandt, & Haskell, 2013). Surveys of combat brigade infantry troops three to four months after deployment revealed that 25% screened positive for alcohol misuse, and 12% exhibited alcohol-related behavioral problems. Soldiers who had higher exposure to the threat of death or injury were more apt to report alcohol misuse; soldiers exposed to atrocities were more likely to both misuse alcohol and have alcohol-related behavior problems (Wilk, Bliese, Kim, Thomas, McGurk, & Hoge, 2010).

Examination of administrative data of diagnoses of approximately 450,000 OEF/OIF veterans who were first-time users of VA healthcare from 2001-2009 revealed that 10% received alcohol use diagnoses, 5% received drug use diagnoses, and 3% received both (Seal, Cohen, Waldrop, Cohen, Maguen, & Ren, 2011); further, substance use diagnoses were 3-4.5 times more likely in veterans with PTSD and depression.

Finally, Millennium Cohort Study research has similarly found considerable rates of alcohol use among deployed troops. In particular, National Guard and Reservists who had deployed and experienced combat were more apt to experience new-onset heavy weekly drinking, binge drinking and alcohol-related problems than nondeployers; the youngest Service members in this cohort were at highest risk for all alcohol-related variables (Jacobson et al., 2008).

Women. According to the 2012 DoD Demographics Profile of the Military Community, women currently comprise approximately 14% of active duty troops and 18% of the Reserves. Women have served in war-efforts throughout history, but their roles have changed dramatically in the past decade.

Since 2001, over half of female troops have deployed; of these, over half have deployed multiple times (Defense Advisory Committee on Women in the Services, 2011). The Pentagon recently formalized the integration of women in direct ground combat positions by 2016 (Pellerin, 2013). However, women have already had a range of combat experiences; a national survey of OEF/OIF veterans revealed that 73% of women had experienced at least one combat event (Street, Gradus, Giasson, Vogt, & Resick, 2013).

Relatively little is known about the unique experiences of deployed women to OEF/OIF, but they face challenges above and beyond the actual or perceived dangers common to all Service members. Women may be confronted with additional challenges associated with being away from at-home family responsibilities and risks of gender-based violence, including but not limited to military sexual trauma and sexual harassment (LeardMann et al., 2013).

Data from the Millennium Cohort Study found that after adjusting for covariates, OEF/OIF women who experienced combat during deployment had almost two times greater risk of a mental health condition than nondeployed women (Seelig et al., 2012). Similarly, women who experienced combat were 1.78 times more likely to report new disordered eating problems and over twice as likely to lose 10% or more of their body weight in comparison to deploying women who did not experience combat (Jacobson et al., 2009).
Military Members Transition to a Post-War Mission

Role of Multiple Deployments. As noted previously, 40% of troops have deployed more than once in the wars in Iraq and Afghanistan, rates much higher than in previous wars (IOM, 2014). Mental Health Advisory Team (MHAT) reports have explicitly examined functioning related to multiple deployments, revealing increased prevalence of mental health problems among these Service members. For example, the 2008 report found that while 12% of troops with one deployment reported mental health problems, rates were considerably higher for those with multiple deployments (19% for 2 deployments and 27% for 3 or 4 deployments) (MHAT 5, 2008). This trend was replicated in the most recent MHAT report (MHAT 9, 2013) in which noncommissioned officers with multiple deployments had lower morale and a higher likelihood of meeting screening for PTSD than those on their first deployment. Similar findings emerged in an analysis of National Guard troops in which soldiers who had deployed more than once were three times more likely to screen positive for both PTSD and major depression than soldiers with only one deployment. Multiple deployers were more than twice as likely to report chronic pain and over 90% more likely to score below the general population norm on physical functioning than single deployers (Kline et al., 2010).

Although the experience of multiple deployments does not necessitate actual increase in combat exposures, it may elevate the risk for such exposure. The literature has clearly documented strong correlations between repeated trauma/combat exposure and a range of psychiatric problems, further highlighting the importance of understanding and supporting these multiple deployers via prevention and intervention efforts.

Future projections. Of all of the domains reviewed in this report, the most research has been conducted on the course of mental health functioning over time, with the bulk of the focus on PTSD. This section will first provide the historical lens on symptom trajectories of veterans from previous wars, and then will summarize the longitudinal findings to date for troops from Iraq and Afghanistan.

Research with World War II and Korean War veterans has documented some long-term challenges associated with war-time service. One study of veterans from these two wars found that 19% had clinically significant distress related to their war-time experience 50 years after the events (Hunt & Robins, 2001), suggesting possible long-term effects of experiences in war.

Regarding veterans who served in Vietnam, analyses of the National Vietnam Veterans Readjustment Study (NVVRS) data (Dohrenwend, Turner, Turse, Adams, Koenen, & Marshall, 2006) revealed elevated rates of PTSD and continuation of symptoms for years after war. Specifically, 19% of the veterans who had developed war-related PTSD during their lifetimes and 9% were currently suffering from PTSD 11 to 12 years after the war. Further, these veterans with PTSD at the time of data collection had moderate impairment in functioning.

A 14-year follow up of American Legionnaires who had served in Vietnam provided important insights into their course of mental health functioning over time, with special focus on community attitudes and involvement (Koenen, Stellman, Mager, Stellman, & Sommer, 2003).
Several factors at baseline predicted a more chronic course of PTSD, including high combat exposure, perceived negative community attitudes at homecoming, minority race, depression, and elevated anger. On the other hand, baseline community involvement was found to be a protective factor, associated with decreased risk of PTSD at the 14-year follow up period. Among these veterans, combat exposure predicted the course of PTSD more strongly than any other risk factor.

Regarding Persian Gulf War veterans, Kang and colleagues (2003) surveyed a population-based sample from 1995 to 1997, and concluded that approximately 10% had PTSD symptoms years after returning from deployment; further, rates of PTSD were higher among veterans who had experienced greater deployment-related stress. Other research has documented a similar prevalence of PTSD among Operation Desert Storm veterans, with higher rates among reserve veterans than active duty (Stretch, Marlowe, Wright, Bliese, Knudson, & Hoover, 1996). Another study found that rates of PTSD in Gulf War Veterans increased significantly over time, with a rate of 3% (3% for men, 8% for women) immediately upon return from the war and a rate of 8% (7% for men, 16% for women) at follow-up 1.5 to 2 years later (Wolfe, Erickson, Sharkansky, King, & King, 1999). Subsequent detailed analyses of the course of PTSD symptoms among this cohort revealed two distinct trajectories: (a) low levels of PTSD symptoms with little increase over time and (b) higher initial PTSD symptoms with a significant increase over time. Notably, Service members had a higher probability of worsening of symptoms over time if they were female, non-Caucasian, had less education, and had more combat exposure (Orcutt, Erickson, & Wolfe, 2004). Much of the research on this cohort of veterans was weakened by after-the-fact recall biases and a lack of longitudinal research design.

Research on symptom trajectories for OEF/OIF military personnel is limited by the recency of deployment(s) for many Service members. Continued research will be helpful in documenting the course of mental health over time. Several longitudinal studies have examined psychiatric symptoms in the months after deployment, revealing that, for some Service members, symptoms continue and may even increase over time.

One study assessed military personnel at homecoming and 120 days postdeployment after a one-year combat deployment (Bliese, Wright, Adler, Thomas, & Hoge, 2007). Anger, PTSD, and depression were significantly higher at the 120 day time period than at homecoming; further analyses revealed that a small percentage of soldiers improved over time (3%) and a sizable percentage were initially nonsymptomatic but developed symptoms by the second assessment (15%). Similarly, a comparison of postdeployment health assessments at homecoming and again at 3-6 months afterward found that interpersonal concerns rose four fold across that time period (Milliken et al., 2007); at the second assessment, soldiers reported increased mental health concerns, and such reports were associated with attrition from the armed forces. Similar findings emerged in a longitudinal study of United States Air Force Special Forces who had deployed to OIF. Assessments at homecoming and then six and nine months postdeployment revealed significant deterioration in individual and interpersonal adjustment; the declines in functioning were medium to large in effect size, and were especially notable among Service members with lower social support (Cigrang et al., 2014). Finally, a study that extended the follow-up to one year found stable rates of PTSD and depression among the Active Component soldiers, but increases in symptoms from the 3- to 12-month assessment for National Guard soldiers (Thomas et al., 2010).

Several studies have specifically defined symptom trajectories for Service members, revealing large majorities of troops evidencing resilience across time. A study of US soldiers deployed on a NATO-led peacekeeping mission to Kosovo revealed four distinct trajectories across four time...
points (pre-deployment to nine months post deployment) (Dickstein, Suvak, Litz, & Adler, 2010). Trajectories included: resilience (84%: low symptoms across time); recovery (4%: initial elevation in symptoms upon homecoming but then return to baseline); delayed (3%: moderate symptoms prior to and immediately after deployment, followed by worsening over time); and unrealized anxiety (9%: relatively high at predeployment and gradually decreasing). The Millennium Cohort Study has described similar trajectories with the most common pattern being resilience or low-stable post-traumatic stress symptoms (83-85%), followed by moderate improving (8-9%), and worsening chronic PTSD (5-7%) (Bonnano et al., 2012).

In sum, most Service members deployed to OEF/OIF are resilient and we do not anticipate they will develop long-term mental health problems. Data from previous wars suggest that a subset of those with emotional difficulties will develop a chronic course. Findings to date from OEF/OIF have only been able to assess functioning in the first year after deployment, but some of the research points to lingering difficulties and even worsening mental health over the course of early reintegration. Their future trajectories in the decades ahead are challenging to predict, but continued screening and re-assessment over time will be vital. Examination of the processes and factors (e.g., social support) that help some individuals continue to be resilient and others to recover from distress may be useful in continued prevention and early intervention efforts. These findings suggest that making evidence-based treatments available for those with significant psychiatric problems will be important and hopefully can prevent the development of lifelong, disabling mental health problems among Service members.

Social / Role Functioning

Current knowledge. Although much of the research has focused on mental health outcomes, there is a growing recognition of the importance of a broad range of domains of functioning among Service members after deployment and beyond. A national mail survey of OEF/OIF combat veterans using VA services assessed a range of reintegration problems (Sayer, Noorbaloocchi, Frazier, Carlson, Gravely, & Murdoch, 2010). Overall, one-quarter to slightly over one-half of these veterans reported some to extreme difficulty in social functioning, productivity, community involvement and self-care domains. Almost all veterans (96%) expressed interest in services to help adjust to civilian life.

Closer examination of specific problems in the Sayer et al. (2010) study provides important information. For example, 35% of these veterans reported others noticing them engaging in dangerous driving; this concern about driving has emerged with other samples (e.g., Killgore et al., 2008), especially finding elevated rates among veterans seen in polytrauma clinics, and even higher rates among veterans with PTSD in these clinics (Lew, Kraft, Pogoda, Amick, Woods, & Cifu, 2011). Relatedly, combat exposure and multiple deployments have been found to predict motor vehicle crashes within six months of homecoming from OEF/OIF deployments (Woodall, Jacobson, & Crum-Cianflone, 2014).
A second domain of functioning measured by the VA user survey (Sayer et al., 2010) pertained to the sense of “fitting in” and broader community involvement. Almost half of respondents reported difficulty with participating in community activities, belonging in “civilian” society, and enjoying free time. Relevant qualitative inquiry has termed this challenge one of “warring identities” (Smith & True, 2014), as Service members struggle when transitioning out of wartime activity. Some Service members do not feel understood by civilians and feel separated from their communities and culture of origin, which can result in some wanting to return to a combat zone because they feel they “belong” and are understood in that environment. Shifting from a high-stress environment to stateside functioning (“going from the battlefield to the bedroom”) can be challenging and may affect one’s work functioning, relationships, and quality of life (Adler, Zamorski, & Britt, 2011).

The reintegration problem endorsed by the largest percentage of respondents in the VA survey was problems controlling anger (57%) (Sayer et al., 2010); further, 35% of respondents reported thoughts or concerns about hurting someone. Research in the early 1990s examined the relationship between deployment and intimate partner aggression, finding the probability of severe aggression was greater for soldiers who had deployed in the past year in comparison to nondeployed soldiers (McC Carroll et al., 2000).

Exposure to combat has been associated with increased rates of aggression upon homecoming. For example, in a study of combat infantry brigades in the first year after homecoming, 40% reporting getting angry with someone and kicking, smashing or punching something; over one-third threatening someone with physical violence; and almost 20% getting into a fight with someone and hitting the person (Thomas, Wilk, Riviere, McGurk, Castro, & Hoge, 2010). This research also found increases in self-reported perpetration of anger from 3 to 12 months after homecoming. Further, exposure to certain combat experiences (killing a person, violent combat, high exposure to human trauma) has predicted both a greater propensity for risk-taking after homecoming as well as elevated actual risk-taking behavior at home (increased alcohol use, increased physical and verbal aggression) (Killgore et al., 2008). These researchers suggest that these violent combat experiences may affect the Service member’s sense of being invincible which may slightly increase their likelihood of engaging in risky behaviors after homecoming.

As well documented with previous eras of veterans, PTSD is known to be associated with increased irritability and anger management problems (Beckham, Feldman, Kirby, Hertzberg, & Moore, 1997; Orth & Wieland, 2006). Iraq and Afghanistan veterans with PTSD report higher levels of hostility and aggression than veterans without PTSD, both generally and toward female partners (Jakupcak et al., 2007, Teten et al., 2010). Preliminary research has found that veterans with PTSD and negative affect (anger/irritability) may be at increased risk for criminal arrests (Elbogen et al., 2012).

Thus, deployment has been associated with a range of social functioning difficulties, underlining the importance of understanding and proactively addressing these issues to promote wellness. Some Service members are at higher risk for such difficulties, including those who experienced combat and those with PTSD. Continued re-evaluation of social role functioning over time will be vital to understanding the course of these difficulties. It will be important to examine if the challenges resolve quickly without intervention, are responsive to treatment, or develop into longer-term problems.
Future projections. Although clinical lore and theorists have described challenges faced by previous generations of war veterans “fitting in” and reintegrating into their communities (e.g., Shay, 2003), social/role functioning after deployment has not been a primary focus of past research. Therefore, the consequences of Service members feeling they are not understood or accepted by their communities remain to be seen.

Two important roles that many Service members will assume upon homecoming and beyond include that of student and employee. Academic functioning and retention are well known to be affected by psychiatric distress (Brackney & Karabenick, 1995; Gerdes & Mallinckrodt, 1994), but little research exists about the higher education performance of veterans of previous wars. Further, extrapolating from Vietnam War veterans to today’s cohort is difficult due to the conscription that sometimes altered students’ career trajectories in past generations (Teachman, 2005). However, a trend that existed with Vietnam era military personnel completing fewer years of education than their civilian peers may continue with an all-volunteer force (Card, 1983; Teachman, 2007). Minimal research exists on Vietnam veterans’ academic performance, with an exception of one study documenting higher grade point averages (GPAs) among Vietnam-era veterans than civilians (Joanning, 1975).

Only a few studies have examined the experience of OEF/OIF veterans in higher education. Data collected from college OEF/OIF veterans in 2008 found they were at higher risk for tobacco use, alcohol misuse, and unsafe behaviors than their non-veteran counterparts in school (Widome, Laska, Gulden, Fu, & Lust, 2011); further, the students with a PTSD diagnosis had an elevated risk for fighting and high-risk drinking (Widome, Kehlem, Carlson, Laska, Gulden, & Lust, 2011). A national survey of student veterans found almost half reported suicidal ideation, one-fifth having a suicide plan, and almost 8% had made a previous attempt (Rudd, Goulding, & Bryan, 2011). Finally, qualitative research with OEF/OIF veterans returning to higher education is starting to reveal some transition challenges, including role incongruities, changed relationships with schoolmates, and identity renegotiations (Ruman & Hamrick, 2010).

While the adverse impact of psychiatric problems on occupational functioning is well established (Kessler et al., 2008), there is a dearth of research on the long-term occupational functioning of veterans from previous wars. The small amount of available data raises some concerns. A study of Vietnam veterans 20 years after the war found that those with a lifetime diagnosis of PTSD were half as likely to be employed as those without the disorder; veterans with major depression and anxiety disorders had similar rates of employment as those with PTSD (Savoca & Rosenheck, 2000). A related study of Vietnam veterans with severe or very severe PTSD found that those with more severe PTSD were more apt to be unemployed or not work at all; also, more severe symptoms were related to having a sales or clerical position (Smith, Schnurr, & Rosenheck, 2005). Very little research has examined reintegrating OEF/OIF veterans into the workforce and their work functioning after deployment (Til et al., 2013). Two studies have found that a history of a combat deployment was not related to employment status (Erbes, Kaler, Schult, Polusny, & Arbisi, 2011; Horton et al., 2013). However, some other factors did emerge that are notable. A longitudinal study of Service members found that those with a
diagnosis of PTSD, depression and alcohol problems reported lower levels of work role functioning one year after deployment; further, those with PTSD had greater deterioration in work role functioning over time (Erbes et al., 2011). Similarly, a Millennium Cohort Study found that U.S. Navy and Marine personnel with new-onset, persistent PTSD were twice as likely to miss one or more days of work (Wells, Bagnell, Miller, Smith, Gackstetter, & Boyko, 2014). Examination of retired Service members receiving a pension found that positive screens for depression and panic/anxiety were significantly associated with later unemployment especially among those in poor physical health, women, Blacks, and retirees of lower education (Horton et al., 2013). In sum, research to date has not found a direct negative impact of deployment on subsequent work functioning. However, Service members with emotional problems appear to be experiencing some difficulties in employment after combat deployment, suggesting a more complex relationship between deployment and subsequent employment functioning may exist.

**Relationship Functioning and Family Life**

**Current knowledge.** One domain of Service member functioning after deployment that has received specific attention is relationship functioning, with most of the research addressing marriage and intimate partnerships. Mental Health Assessment Team (MHAT) surveys conducted in theater have found troops describing marital problems, with longer deployments being related to higher reports of marital problems and concerns about infidelity (MHAT-IV, 2006)

Research with soldiers who had returned from combat four months previously found that 37% reported marital problems (Foran, Wright, & Wood, 2013). Post-deployment Health Reassessment (PDHRA) data from a large sample of married Army troops recently home from OEF/OIF deployment revealed that 18% of respondents reported serious interpersonal conflict with spouses, family members, close friends, or coworkers; rates of interpersonal conflict were higher among those with PTSD, depression, and physical health problems (Gibbs, Clinton-Sherrod, & Johnson, 2012).

In the VA reintegrations survey described above, many veterans shared difficulties in relating to others, including 56% having difficulty confiding or sharing personal thoughts and feelings, 44% struggling to make new friends, 45% having difficulty keeping up with nonmilitary friendships, 42% struggling with getting along with spouse/partner, and 35% reporting a divorce or separation since homecoming (Sayer et al., 2010). Another study of OEF/OIF veterans referred for mental health services in a VA hospital revealed that 77% of the married/cohabiting veterans had some family problems in the past week, with many struggling in their role as spouse/partner (Sayers, Farrow, Ross, & Oslin, 2009).

Interpersonal violence is a considerable social concern, and research has documented an increased risk for intimate partner violence perpetration among Service members who have been deployed over six months (McCarroll et al., 2000). PTSD is a known risk factor for relationship violence. Data from one study of veterans with combat-related PTSD revealed approximately one-third of partnered veterans having perpetrated physical aggression and 91% displayed psychological aggression toward their partners in the previous year (Taft et al., 2009). Veterans’ aggression may also impact non-familial relationships. One-year longitudinal research of OEF/OIF veterans with PTSD found that 9% admitted to aggression toward a stranger in the previous year (Sullivan & Elbogen, 2014).

Thus, across settings, many Service members are citing relationship problems. Research on the relationship between deployment and marital functioning is mixed. Some research has found
that deployment is not associated with marital satisfaction and functioning (Allen, Rhoades, Stanley, & Markman, 2010), while other studies have reported decreased marital satisfaction after deployment (McLeland, Sutton, & Schumm, 2008).

Relationship stability is multi-determined, and extracting the specific influence of combat deployments on marriage is difficult. However, some indicators of growing relationship problems are noteworthy. The MHAT IV report (2006) found that the percent of OEF enlisted troops surveyed who planned to separate or divorce tripled over 18 months, from less than 10% to over 30%. Further, between 2001 and 2007, the divorce rate in the Army more than doubled (Defense Manpower Data Center, 2009). A review of military administrative databases found that deployment increased the risk of divorce among Army enlisted troops, and PTSD symptoms further increased the odds of divorce (Negrusa & Negrusa, 2014).

Longitudinal research is especially helpful in considering the effects of deployment on intimate relationships. An examination of trends in relationship functioning from 2002-2009 among married, male, enlisted soldiers who had deployed to OEF/OIF found declines in marital quality and increases in reports in past-year infidelity and intent to separate or divorce; however the rate of divorce did not change significantly (Riviere, Merrill, Thomas, Wilk, & Bliese, 2012).

Another important domain of relationship functioning is the role of parent. Physical separation during deployment can strain parent-child relationships and create emotional distance. Although modern technology allows for unprecedented communication between deployed personnel and family members, such contact can be unreliable as well as confusing and upsetting for some children (Houston, Pfefferbaum, Sherman, Melson, & Brand, 2013). Service members with young children miss important events in their children’s lives during deployment(s), and re-establishing relationships often takes time and commitment. Some Service members cite difficulties in this process. Almost one-third of veterans in the Sayer and colleagues’ reintegration survey (2011) cited “getting along with children” as a problem during reintegration from an OEF/OIF deployment. Sizable numbers of OEF/OIF veterans in another study of VA users reported being “unsure about their role in the family” (37%) and that their children acted “afraid” or were “not warm toward them” (25%) after returning from a recent combat deployment (Sayers et al., 2009). Contextually, it is also important to note that returning Service members may be re-entering families that have endured considerable strain during deployment (IOM, 2013). Although the experiences of family members are beyond the scope of this review, research has demonstrated elevated rates of child abuse and neglect during deployment and reintegration, perpetrated largely by the at-home caregiver (Gibbs, Martin, Kupper, & Johnson, 2007; McCarroll, Fan, Newby, & Ursano, 2008; Rentz, Marshall, Loomis, Martin, Casteel, & Gibbs, 2007).

Preliminary evidence suggests that OEF/OIF veterans with combat-related PTSD appear to have unique challenges with parenting. In a longitudinal study from homecoming to one year after an OIF deployment, increases in PTSD symptoms were associated with poorer parenting practices among National Guard fathers (Gewirtz, Polusny, DeGarmo, Khaylis, & Erbes, 2010). In a related vein, a study of 434 military couples found that PTSD was associated with decreased parenting alliance (cooperation and communication between the parents) (Allen, Rhoades, Stanley, & Markman, 2010).
In sum, across a variety of indicators, some Service members returning from deployment are struggling in their family relationships. Although the course of relationship functioning over time is uncertain and needs continued evaluation, chronic relationship difficulties may decrease available social support, exacerbate other reintegration difficulties, and worsen mental health and overall well-being.

**Future projections.** The association between marital/relationship functioning and other variables is often bidirectional; specifically, relationship functioning can influence well-being, as well as vice versa. Defining the causal and temporal effects is often challenging if not impossible.

Broadly, a range of adverse effects of relationship discord on both physical (Jeremka, Glasera, Malarkeya, & Kiecolt-Glaser, 2013; Kiecolt-Glaser, Gouin, & Hantsoo, 2010) and mental well-being (Weisman, 2007) are well established in the general population. Thus, psychiatric problems can worsen couples’ relationships, and relationship problems can result in or exacerbate mental health problems. Infidelity, specifically, has been associated with a range of negative outcomes, both individually and on the relationship (Snyder, Balderrama-Durbin, & Fissette, 2012).

Approximately 40-50% of suicides among active-duty soldiers in recent years were precipitated by the ending of an intimate relationship, further documenting the importance of close relationships to well-being (Department of Defense Suicide Event Reports, 2012, 2011). The ripple effects of a Service member’s suicide can affect not only his/her family and close friends, but other troops as well (Carr, 2011). Thus, due to the negative effects of a range of relationship problems on Service members’ physical and mental health, continued efforts aimed at relationship promotion and supporting strained relationships will be vital.

Research on World War II and Vietnam veterans suggests that combat may have a lifetime adverse effect on interpersonal functioning, largely through its association with PTSD (Cook, Riggs, Thompson, Coyne, & Sheikh, 2004; Koenen, Stellman, Sommer, & Stellman, 2008). A growing research base is specifically exploring the impact of PTSD on close relationship functioning. Key themes that emerged from two recent meta-analyses included positive associations between PTSD symptoms and psychological distress in both partners; intimate relationship discord; and physical and psychological aggression perpetration. A negative association was found between PTSD and relationship quality (Lambert, Engh, Hasbun, & Holzer, 2012; Taft, Watkins, Stafford, Street, & Monson, 2011). Thus, Service members with PTSD are at an increased risk for a range of relationship difficulties and warrant specific attention and support.

The literature on the long-term course of parent-child relationship functioning after deployment is very limited. Most of the available research focuses on correlates of parental PTSD, including distress and behavioral problems among children (Lambert, Holzer, & Hasbun, 2014). Research with Vietnam veterans documented that those with PTSD reported more child behavior problems, greater family violence, and lower parenting satisfaction than their counterparts without PTSD (Jordan et al., 1992). Similarly, Australian male veterans revealed that PTSD was associated with poorer parent–child problem solving, communication, and affective involvement (Davidson & Mellor, 2001). However, follow-up over time of the evolution of these parent-child...
relationships has not been rigorously studied. Although some preliminary evidence from OEF/OIF fathers found an association between worsened PTSD and poorer parenting practices over the first year post-deployment (Gewirtz et al., 2010), this is an unexplored area in need of dedicated longitudinal research.

**Spiritual Functioning**

**Current knowledge.** Consideration of the role of spiritual functioning for Service members is important due to the fact that over half of Americans say that religion is “very important” in their lives (Gallup, 2014) and over 90% of Americans profess a belief in God (Newport, 2011). Religious beliefs can comprise much of people’s ways of making meaning of life, and they can support coping in response to life’s challenges (Park, 2005). Further, spirituality has been linked generally to an increased sense of meaning, purpose, resilience, satisfaction, and happiness (Pargament, Mahoney, Exline, Jones, & Shafranske, 2013).

Long-term separation from family, hazardous living situations, living in real and perceived dangerous situations, and trauma exposure have the potential to spark difficult spiritual challenges among deployed personnel. For believers of Western traditions, people may struggle with the juxtaposition of combat/trauma and the concept of an omnipotent, benevolent Higher Power (Hale, Park, & Edmondson, 2012). Making meaning of this apparent contradiction can evoke significant spiritual distress (Harris, Currier, & Park, 2013).

Little has been written about the impact of OEF/OIF combat deployment on spiritual functioning, but some preliminary findings are noteworthy. The VA reintegration survey described above (Sayer et al., 2010) found that 42% of OEF/OIF veterans reported that they "lost touch with their spirituality or religious life" as part of deployment. The National Post-Deployment Adjustment Survey found that 18% of OEF/OIF Service members had talked to a chaplain/pastor in the past year (Elbogen, Wagner, et al., 2013).

The construct of “moral injury” is still being defined in the scientific literature, but generally refers to situations when traumatic experiences force a person to question core moral or religious principles, resulting in guilt, shame, anger, demoralization, impaired self-care, and loss of meaning or sense of moral direction (Drescher, Foy, Kelly, Leshner, Schutz, & Litz, 2011; Litz et al., 2009). Although consensus has not been reached on the precise nature of this phenomenon or how to accurately measure it, further examination may be important because spiritual distress has been associated with suicidal ideation among OIF veterans (Maguen et al., 2011).

**Future projections.** Anticipating the trajectories of spiritual wellness and its correlates is very difficult due to the paucity of literature in this area. Research with Vietnam veterans found that while some draw upon their faith in managing traumatic stressors, others turn away from their faith when confronted by trauma (Fontana & Rosenheck, 2004). In a study of Vietnam veterans, 74% had difficulty reconciling their religious beliefs with their experience in combat, 51% had abandoned their religious faith in Vietnam, and 50% reported that guilt about experiences in Vietnam caused their religious faith to diminish (Drescher & Foy, 1995). Further, veterans that lose their faith during combat use more mental health services over the course of their lives (Fontana & Rosenheck, 2004). Thus, given the very early data about disrupted spirituality among OEF/OIF deployers (Maguen et al., 2011; Sayer et al., 2010), the historical findings from
Vietnam veterans, and the associations of healthy spirituality with positive well-being, further exploration of this facet of well-being will be useful.

Physical Health

Current knowledge. With some notable exceptions, relatively little research has examined the physical health correlates of deployment compared to other domains of functioning. One prospective study of OEF/OIF troops prior to and following deployment found clinically significant declines in both physical and mental health functioning (McAndrew at al., 2013). Other research drawing solely on self-report data has revealed a range of physical health concerns among OEF/OIF veterans after deployment, including musculoskeletal pain (33%), fatigue (32%), and back pain (28%) (Toblin, Riviere, Thomas, Adler, Kok, & Hoge, 2012) and chronic, widespread pain (Helmer, Chandler, Quigley, Blatt, Teichman, & Lange, 2009).

Longitudinal research has documented associations between deployment to Afghanistan or Iraq and both smoking initiation and smoking recidivism, especially among Service members with multiple or prolonged deployments and combat experiences (Hermes et al., 2012; Smith, Ryan, Wingard, Slymen, Sallis, & Kritz-Silverstein, 2008). Similarly, the risk for self-reported respiratory symptoms was elevated among troops who deployed to OEF/OIF in a Millennium Cohort Study (MCS) study; however, there were no significant elevations in risk for self-reported asthma, bronchitis, or emphysema (Smith, Wong, Smith, Boyko, Gackstetter, & Ryan, 2009). The lack of elevated rates of bronchitis or asthma was also documented in a large population-based survey of OEF/OIF veterans, but this study found that deployed veterans were 29% more likely to be diagnosed with sinusitis during and since 2001 than nondeployed veterans (Barth, Dursa, Peterson, & Schneiderman, 2014).

The Millennium Cohort Study has also specifically examined the role of combat exposure and physical health among Service members. Deployers with combat experiences have been found to have an increased risk of a new diagnosis of coronary heart disease than deployers without combat exposure (Crum-Cianflone et al., 2014). Similarly, deployers who had multiple combat exposures were 1.3 times more likely to report hypertension in comparison to noncombat deployers (Granado et al., 2009). Relatedly, deployers who experienced combat had significantly higher odds of a new-onset headache diagnosis than nondeployers, but deployers without combat exposure did not have this elevated headache risk (Jankosky et al., 2011). Similar results have been found in the VA setting with PTSD-affected newly returning OEF/OIF veterans having higher rates of headaches than those without a PTSD diagnosis (Afari et al., 2009).

Some research has specifically examined the contribution of PTSD to physical health problems among recent OEF/OIF returnees. For example, a review of VA records of OEF/OIF veterans who used primary care services found that PTSD was associated with both increased prevalence and an earlier onset of physical disease (hypertensive, circulatory, digestive, nervous, and musculoskeletal disease) within the first five years after military service compared to those without PTSD (Andersen, Wade, Possemato, & Ouimette, 2010). In sum, these studies highlight the potential additive contribution of combat exposure and PTSD to the later development of physical health problems.

Future projections. As summarized above, Service members who deployed to OEF/OIF are reporting elevated rates of numerous health problems, including musculoskeletal pain, fatigue, back pain, coronary heart disease, and hypertension, as well as increased rates of smoking
initiation and smoking recidivism. There is some preliminary evidence that physical health problems may worsen over time for some OEF/OIF veterans, even independent of PTSD (Falvo, Serrador, McAndrew, Chandler, Lu, & Quigley, 2012). Although the precise course of Service members’ physical health over time is difficult to predict, several of these health issues have well-documented adverse effects on functioning. For example, a 2014 Surgeon General report found that smoking causes diminished overall health, including self-reported poor health, increased absenteeism from work, and increased health care utilization and cost (U.S. Department of Health and Human Services, 2014). In addition, musculoskeletal pain can have far-reaching consequences for health, work, and healthcare utilization over time (Brooks, 2006; Picavet & Schouten, 2003); longitudinal research with Service members found that pain that interfered with work functioning at enlistment increased the risk of frequent back/neck pain eightfold twenty years later (Hellings & Bryngelsson, 2000). Research focused on lower back pain documents a chronic course for most patients, with 62% reporting pain one year after onset, 60% experiencing relapses, and 33% having relapses resulting in work absences (Hestbaek, Leboeuf-Yde, & Manniche, 2003; Lemeunier, Leboeuf-Yde, & Gagey, 2012). A study of administrative and clinical databases of OEF/OIF veterans enrolled in VA care in their first seven years after deployment found that the prevalence of painful musculoskeletal conditions increased each year after deployment, perhaps reflecting increasing numbers of veterans struggling with pain over time (Haskell et al., 2012). Finally, both coronary heart disease and hypertension are known risk factors for increased mortality (Rutan, Kuller, Neaton, Wentworth, McDonald, & Smith, 1988). More generally, worsening of physical health can have a negative impact on marital quality (Booth & Johnson, 1994).

Some research has examined veterans’ concerns about their physical health, with considerable numbers describing worsened health after deployment (Milliken, Auchterlonie, & Hoge, 2007; Seal et al., 2010). Further, some OEF/OIF veterans report poorer health over time after deployment; a longitudinal study found that the number of veterans who rated their overall health as fair or poor doubled from the time of the initial post-deployment assessment to six months after homecoming (Milliken et al., 2007). Another approach to considering the long-term physical health of deploying Service members is to study past mortality data. For example, the Centers for Disease Control (CDC) compared Vietnam veterans to veterans who served in Germany, Korea, or the United States, and found the total death rate for Vietnam veterans was 17% higher than for veterans who served in other countries (CDC, 1987). The elevated mortality (especially from motor vehicle accidents, suicide, homicide, and accidental poisonings) occurred primarily in the first five years after military discharge. This excess in postservice deaths due to external causes among Vietnam veterans is similar to that found among troops returning from combat after both the Korean War and World War II. A three-year follow-up in this study found that deaths from all causes were slightly higher among Vietnam veterans than their non-Vietnam counterparts (Catlin, Flanders, McGeehin, Boyle, & Barrett, 2004). The specific contributors to these elevated mortality rates are uncertain, but the physical health risks noted above as well as the mental health factors described previously may be important to consider.
In sum, the physical health problems and health-related behaviors (e.g., smoking) that some reintegrating Service members are experiencing have documented long-term negative effects on wellness and mortality. Early intervention and treatment may minimize the course of some of these difficulties and potentially prevent them from being chronic, disabling conditions. Educating service providers about these conditions will be important in ensuring screening and treatment protocols appropriately assess, monitor, and treat these domains.

Financial Well-being

**Current Knowledge.** Although Service members are generally well paid, some still experience financial stress, especially those among the junior enlisted ranks (Hosek & Wadsworth, 2013). Additional economic challenges arise when spouses struggle with steady employment and academic/career trajectories due to the frequent family geographic moves. Concerns about money may have mounted during the Service member’s OEF/OIF deployment. While the additional deployment pay may increase the Service member’s income during deployment, some individuals (especially those in the National Guard or Reserves) experience a reduction in income when away from well-paying jobs. Upon homecoming, adjusting to a decreased income and tighter budget can be challenging for some military personnel. Despite the protections in place for job security for National Guard members and Reservists, some face challenges in securing employment after deployment (Burnett-Zeigler, Valenstein, Ilgen, Blow, Gorman, & Zivin, 2011). Thus, finances can change across the deployment cycle and beyond, placing additional stress on the Service member and his/her family.

While some Service members use the additional deployment pay income to reduce debts and save for college, others make large purchases upon homecoming (Hosek, Kavanaugh, & Miller, 2006). Some individuals purchase expensive, new motorcycles, cars, or boats to try to re-create the adrenaline rush that they sometimes experienced and enjoyed during deployment. However, these lavish purchases can create financial problems for the family, resulting in considerable debt and difficulties adhering to a budget (Slone & Friedman, 2008).

Although a recent poll, using a convenience sample, performed by Blue Star Families revealed approximately two-thirds of military families reporting financial stress (Blue Star Families, 2013), data collected within the DoD using rigorous scientific sampling methods reflects a more positive outlook for financial well-being among Service members and spouses. The DoD conducted the 2013 Quick Compass of Financial Issues Survey to better understand the financial conditions of Active duty Service members. The survey collected data from a representative sample of Active duty members from all four Service branches (Army, Navy, Marine Corps, and Air Force). Approximately two-thirds of Service members (67%) described their financial condition as comfortable, 24% reported that they “occasionally have some difficulty making ends meet,” and 10% responded that they were not comfortable with their financial condition. Furthermore, 80% of respondents indicated that their financial condition was better (44%) or the same (36%) as it was 12 months prior; only 20% reported that their financial condition had declined in the preceding year.

In a DoD survey of spouses of Active Duty service members (2012 Survey of Active Duty Spouses), 64% of spouses described their financial condition as being “comfortable,” 22% reported “some difficulty,” and 13% reported feeling “not comfortable.” Spouses of junior enlisted (E1-E4) were the most likely to report being not comfortable with their financial condition (21%).
As concluded in the DoD’s 2014 Report to Congress, “Enhancement of Protections on Consumer Credit for Members of the Armed Forces and Their Dependents,” most Service members indicate that they manage their finances effectively; however, 12-25% of enlisted Service members may experience emergency shortfalls and report problems with financial management. Data from the National Post-Deployment Adjustment Survey of OEF/OIF veterans similarly revealed that 30% reported mismanaging money in the past year, such as forging or bouncing a check, going over credit limit, or falling victim to a money scam (Elbogen, Sullivan, Wolfe, Wagner, & Beckham, 2013). Education and services to support Service members’ financial well-being and money management will be important as they transition to a post-war footing.

**Future Projections.** Over the coming years, potential reductions in force and the tightening financial climate in the DoD may exacerbate financial stress among Service members. Thus, although the majority of military families are not reporting great difficulty in managing finances at this time, these concerns may change in the years ahead. Financial problems and worry about money can have ripple effects on well-being, role functioning, and relationships.

As OEF/OIF Service members transition out of the military, unprecedented numbers are applying for and receiving disability. As of the late spring 2012, 45% of OEF/OIF veterans had applied for service-connected disability compensation for medical problems (both psychiatric and nonpsychiatric), and 28% had already secured it (Marchione, 2012). In contrast, only 21% of Gulf War veterans submitted disability after their wartime service in the early 1990s. Further, OEF/OIF veterans are claiming an average of eight to nine ailments, twice the average number of conditions for which Vietnam veterans are currently receiving disability. The short- and long-term impact of this disability income on OEF/OIF veterans’ families is difficult to predict. Although the additional money may reduce financial stress for some families, the uncertain duration of the income, the consequent limitations on securing full-time employment for some personnel, and the significant stressors associated with money management may create other challenges. Monitoring the financial wellbeing and challenges faced by OEF/OIF personnel as they transition out of the military will be important, and may highlight the potential benefits of education and financial planning for these families.

**Looking to the Future**

Numerous supports and infrastructures are already well established by the DoD and other organizations to prevent distress, promote resilience, and address difficulties of both Service members and families. Significant resources have been dedicated to these efforts for many years, reflecting the joint commitment to promote wellness and minimize distress and impairment across the deployment cycle and beyond. As summarized in the Institute of Medicine report (2014), a range of programs and services are available, such as the Comprehensive Soldier Fitness program, the Families OverComing Under Stress
(FOCUS) Project, online assessments and resources, and many more. As emphasized in the IOM report, some of these programs lack a strong empirical foundation; therefore, the selection, implementation, monitoring and evaluating of evidence-based services will continue to be important in the years ahead. As the DoD makes projections and plans for the future, it may be useful to draw upon emerging theoretical models about resilience among military personnel and survey instruments focusing on the reintegration process.

Several theories have emerged to explain how military stressors impact Service member functioning, including ways to promote resilience. Relevant theory can guide the development of both assessments and prevention efforts and interventions. For example, Nash and colleagues (2011) define three types of resilience among military personnel including operational resilience (performing military job duties well despite challenges, including but not limited to deployment), post-deployment resilience (resuming broader role functioning after deployment), and psychological resilience (adapting holistically to operational stressors without developing psychological problems). Nash’s stress continuum model places stress states on a continuum with four colored zones: ready (green), reacting (yellow), injured (orange), and ill (red). The “ready” zone includes adaptive behaviors, the “reactive” zone is characterized by mild and temporary distress, and the “injured” zone includes more persistent and severe dysfunction. The “ill” zone includes diagnosable mental disorders. These constructs have been incorporated in some prevention models (such as the FOCUS program, Lester et al., 2011), as the concepts are non-stigmatizing and easy to understand for both Service members and families.

Other theoretical models that may prove useful focus on functioning more broadly, considering the Service member in a larger relational and societal context. For example, several models examine family stability (Sheppard, Malatras, Weil, & Israel, 2010), family resilience (Chapin, 2011), relationship turbulence (Theiss & Knoblach, 2013), and family attachment (Riggs & Riggs, 2011) as related to deployments. A broader ecological framework has also been applied to the impact of deployment on military families, considering the effects on the multiple relationships within families, and the impact of the larger context in which the family lives (Paley et al., 2013).

Another growing body of literature that will likely behove the DoD to monitor is the development of promising measurement instruments regarding the reintegration and transition process. Although some scales have included sections about postdeployment stressors and support (e.g., Deployment Risk and Resilience Inventory (DRRI), King, King, Vogt, Knight, & Samper, 2006), some measures are explicitly focusing on the reintegration process. The Military to Civilian Questionnaire (M2C-Q) (Sayer et al., 2011) assesses community reintegration post-deployment, defining this process as achieving satisfying functioning at home, work, in relationships and community. The Combat to Home Reintegration Scale (Adler et al., 2011) examines both positive and negative aspects of returning home from combat; this scale includes four factors: Benefit (believing the deployment was worthwhile), Appreciation (valuing what they have and a sense of personal maturity), Anger/Alienation (feeling impatient, detached from others, and angry), and Guilt/Remorse (second-guessing behaviors, feeling grief and guilt). A Canadian measure, the Army Post-Deployment Reintegration Scale (Blais, 2009) measures attitudes toward personal reintegration, reintegration back into family life, work reintegration, and cultural reintegration. Finally, the Community Reintegration for Service Members (CRIS) scale (Resnick, Plowe, & Jette, 2009) focuses on reintegration issues for injured troops. These scales have been developed within the last five years and lack large-scale validation or norms at this time; however, they may prove to be useful for research and practice to assess Service members’ reintegration experiences.
Distinct Populations

Similar to the broader United States population, considerable diversity exists within the military forces. Several segments of the OEF/OIF military population deserve specific attention due to their unique experiences and subsequent needs.

In light of the unprecedented utilization of National Guard and Reserve personnel in these wars and their distinct culture and background, the DoD can continue to monitor and support these troops as they reintegrate after a high-operational tempo. Research has documented that the experiences of “civilian warriors” may differ from active duty personnel across deployment, reintegration, and longer-term functioning, and therefore warrant explicit attention (Werber et al., 2013). Similarly, given the sizable number of women who have deployed in support of these wars and some documented differences for female Service members in past wars (Vogt, Pless, King, & King, 2005), attention to gender differences in functioning and effective modes of promoting resilience will be important (Street et al., 2013).

At the time of this brief, over 52,000 troops have sustained serious physical injury in OEF/OIF/OND (http://www.defense.gov/news/casualty.pdf), a large percentage of which are due to improvised explosive devices (Belmont, Schoenfeld, & Goodman, 2010). Due to advanced medical care and effective body armor, many more Service members are surviving serious injuries than in previous wars, resulting in a cohort of veterans living with significant physical limitations (McNally & Frueh, 2013). The demands on caregivers of wounded, ill, and injured warriors can also be great (Ramchand et al., 2014). Further, estimates suggest approximately one-fifth of deployed OEF/OIF troops experience mild traumatic brain injury, a condition that frequently co-occurs with both depression and PTSD (IOM, 2014). Although these domains are beyond the scope of this review, projections and focused attention to functioning and quality of life issues for our wounded warriors will be important.

Research has clearly documented that family members are also impacted by Service member deployment, and these challenges can be exacerbated by short- and long-term reintegration problems with the Service member (Creech, Hadley, & Borsari, 2014; IOM, 2013). Given the importance of family to the DoD and to Service members themselves, understanding the family experience and providing appropriate supports will continue to be vital. Families can play an essential role in supporting the troops as they reintegrate after over a decade of deployments; continued research on the family experience could shape programmatic and policy efforts.

Conclusions and Implications

As the wars in the Middle East move toward an end, it is a time to not only reflect and maximize “lessons learned,” but also look forward to the landscape ahead for Service members. Drawing upon knowledge of previous wars can inform our response to the current situation, and our learning from the wars in Iraq and Afghanistan can help prepare our leadership, forces, and families for future wars and conflicts.

Although a majority of Service members are resilient and we do not anticipate that they will develop long-term difficulties, this review has summarized research on a range of increased risks for Service members across six domains, namely mental health, social functioning,
relationships/family life, spirituality, physical health, and financial well-being. Risk factors and future trajectories vary across these domains, but psychiatric difficulties are a consistent predictor of a worsened course, including but not limited to PTSD. Supporting Service members in role functioning (in the classroom, in the family, and in the workforce) is anticipated to be an important component of fostering wellness.

Given the unique nature of the wars in Iraq and Afghanistan, it is difficult to extrapolate from past wars and make definite predictions. Re-evaluation of Service member functioning over time will be very important. However, it is likely that some Service members will have a chronic course of physical, emotional, relational and social difficulties. Treatment of mental health problems can be a considerable expense; for example, from 2001-2011, the DoD spent $4 billion on mental health treatment for active duty personnel and over $450 million on activated National Guard and Reserve members (Blakeley & Jansen, 2013). Although the precise course of mental health functioning and the costs of treatments are unknown, it is suspected that the DoD will continue to dedicate part of its budget to fostering wellness/resilience as well as funding prevention and treatment efforts. Exploration of a range of supports, including peer networks, may be useful and cost effective for Service members reintegrating after deployment (Hinojosa & Hinojosa, 2011).

Stigma surrounding mental health problems and asking for help will likely continue to affect military families in the years to come. This barrier to seeking care is a broad societal problem, but may have unique components in the military (Hoge et al., 2004; Vogt, 2011). Large-scale laudable efforts at many levels are dedicated to decreasing this stigma, including education, normalizing psychiatric problems, senior leadership encouraging help-seeking behaviors, testimonials, and media campaigns (Ben-Zeev, Corrigan, Britt, & Langford, 2012). However, the effectiveness of these activities is difficult to assess. As the DoD strives to anticipate needs and support military families, continued efforts to combat stigma and empower Service members and their families to seek help will be important.

Although the strategies for addressing these projected needs are beyond the scope of this report, it will undoubtedly continue to be a broad effort, drawing upon resources from not only the DoD and VA healthcare system but also state, local and community organizations; private sector healthcare systems; school systems and programs of higher education; faith-based communities; businesses, advocacy organizations; and others. First Lady Michelle Obama and Dr. Jill Biden are urging Americans to engage in efforts to support military families through the Joining Forces Initiative. Organizing and coordinating effective community responses are challenging yet very important tasks, and some helpful models exist (e.g., Straits-Troster et al., 2011).
To meet the diverse needs of the population, efforts will continue to span a range of modalities, including face-to-face services, online programs, mobile-phone applications, social networking, telephone-based coaching, and others. An important component of these efforts is ensuring they are responsive to military culture. Numerous programs now exist to educate community members, ranging from programs for mental health professionals (e.g., Center for Deployment Psychology; Indiana’s Star Behavioral Health Providers program; National Council for Behavioral Health’s Serving Our Veterans Behavioral Health Certification) to primary care providers (e.g., Citizen Soldier Support Program) to child-focused providers (e.g., Military Child Education Coalition); many community leaders develop and provide grassroots efforts to respond to the needs of their local military families as well.

Several online resources can also support Americans who want to understand and help military families, including the University of Minnesota’s Military REACH (https://reachmilitaryfamilies.umn.edu/); Penn State’s Clearinghouse for Military Family Readiness (http://www.militaryfamilies.psu.edu/); and the “How to Help Military and Veteran Families” pamphlet series for various community groups by Purdue University and the National Military Family Association (https://www.mfri.purdue.edu/publications/how-to-help.aspx).

The ongoing longitudinal research cited in the introduction should prove informative as the DoD strives to anticipate and support Service members during this transition to a non-deploying phase. Continued re-assessment of functioning across all domains, mental, social, relational, spiritual, physical, and financial, will be important in making strategic plans for the future well-being of our force.
Military Members Transition to a Post-War Mission

References


Military Members Transition to a Post-War Mission


Military Members Transition to a Post-War Mission


Military Members Transition to a Post-War Mission


Military Members Transition to a Post-War Mission


Military Members Transition to a Post-War Mission


Military Members Transition to a Post-War Mission


