Postpartum Depression and Its Impacts on the Joint Force

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Abstract: Postpartum depression (PPD) is a major depression disorder occurring within the first four weeks after childbirth. However, throughout clinical practice, a major depression disorder occurring within the first year of delivery is also considered PPD. Signs of PPD vary but may include disturbances in sleep, energy level, appetite, and libido. Studies have shown that nearly 20 percent of newborn mothers suffer from PPD.[1] Positive screens of PPD have associated with increased rates of suicidal ideations.[2] Military servicemembers' families and home life provide the foundation and stability that the U.S. military and Joint force rely on. Not only does PPD affect mothers, but it can also impact the spouse and the development of

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the child. To ensure the readiness of the force, it is essential maintain the integrity of the family's foundation.

Keywords: postpartum depression, PPD, perinatal mood and anxiety disorders, PMAD

Introduction

The New York Times journalist William J. Bennett summed up the importance of the family, writing, "The family is the nucleus of civilization and the basic social unit of society. Aristotle wrote that that family is nature's established association for the supply of mankind's everyday wants."[3] Postpartum depression (PPD) can disrupt these family dynamics and lead to feelings of shame for women and their families as they cope with this unexpected stressor and its consequences.[4]

This experience can be even more challenging within military families, as PPD can be especially stigmatizing and interfere with both family social networks and military readiness. Because of the significant impact that PPD can have on military families, it warrants further investigation. PPD is a major depression disorder occurring within the first four weeks after childbirth. However, throughout clinical practice, a major depression disorder occurring within the first year of delivery is also considered PPD.[5] Although the term *postpartum depression* is often used, there is a wide spectrum of disorders that affect mothers and families both during pregnancy and postpartum, referred to as perinatal mood and anxiety disorders (PMADs).[6] For the purposes of this article, the term PPD will be used, given that it is more prevalent in the current literature.

The life of a military wife and mother can be lonely at times. Picking up and transplanting a family and one's way of life every two to three years can introduce significant challenges. New friends, schools, jobs, and towns, coupled with increased separation from the comforts of a childhood home, is a way of life for military families. Unfortunately, these normal stressors associated with a military lifestyle can be exacerbated during a woman's pregnancy. A 2022 U.S. Government Accountability Office study highlighted work-related and general stigma as barriers to care and treatment for mothers suffering from PPD.[7] Often, the stigma of "happiness" that is portrayed on social media regarding childbirth and the postpartum experience, combined with the negative stigma of receiving mental health care for military servicemembers and their families, can lead mothers to avoid seeking help for PPD and suffering silently. The online blog *Her View from Home* illustrates this struggle as it impacted a military family:

> Not every new mother's journey is happy and bright. Sometimes it is dark, lonely, scary, miserable, and uncertain. The guilt that we self-impose and that society imposes on us is overwhelming. If our journey as a mother isn't daisies and butterflies, we feel alienated and ashamed.[8]

In this blog post, the author recounts a tragic story of her friend, a military spouse, who silently struggled with PPD and ultimately took her own life, leaving behind a daughter and husband. This event represents a microcosm of a larger problem, both inside and outside the military, that affects families throughout the world. The impact that such incidents have not only on military families but also on servicemembers' readiness is unmeasurable,

and it requires closer attention from military leaders. Though PPD diagnoses are as prevalent within military families as they are within civilian families, various stigmas regarding treatment, government programs, and social media potentially preclude military families from seeking the necessary treatment.

To better understand this problem, this study draws from scholarly research and discussions with medical experts related to PPD, both inside and outside the military, to address the following research questions:

1. How do PPD diagnoses among the U.S. military population compare to the nation's civilian population?
2. Within the U.S. Department of Defense (DOD), what protocols are in place to treat mothers and families coping with PPD? Are the current protocols effective in ensuring minimal impact to force readiness and well-being among military servicemembers and their families?
3. What can the DOD do to improve treatment of PPD? Would an education campaign for military leaders across all levels of the chain of command be a useful way to inform policies?

PPD affects up to 20 percent of newborn mothers and families across the DOD.[9] The resulting stigma and education associated with mental health treatment is counterintuitive to establishing the family stability necessary to maintain an effective combat force, potentially resulting in a decrease in force readiness throughout the military. If military leaders are committed to working toward strengthening the family unit, they must first understand the prevalence of PPD, what treatment options are available, and the stigma

associated with mental health treatment. This will ensure not only the continuation of a resilient force but also the well-being of the nation's servicemembers and their families.

The Importance of Family

The well-being of military families is vital to the DOD in ensuring military readiness and mission execution. The National Academies of Sciences, Engineering, and Medicine (NASEM) outline three key elements pertaining to the importance of a servicemember's family. First, the military healthcare system offers servicemembers and their families an enticing benefit that is oftentimes unavailable to them outside the military, thereby creating an essential retention tool for continued service and retaining critical military experience. Second, an independent study group concluded that the family has powerful impacts on military readiness, morale, and motivation. Third, family difficulties detract from the servicemember's ability to focus on the mission and readiness. A healthy and stable household allows servicemembers to continue to seamlessly train and deploy. NASEM further concludes that conflicts between military and family responsibilities are among the top three stressors of military life.[10] PPD can have a detrimental impact on military families and negatively affect the readiness of the Joint force.

The importance of the family bedrock is evident throughout the military. Rarely does a change of command occur during which both the incoming and outgoing commanders do not thank their families for their unwavering support. Outgoing commanders emphasize that the journey in the military is a family process and that much of their success can be

attributed to the family foundation and support. These acknowledgments should serve as a message to all leaders across the DOD that they should encourage and foster the well-being of the individuals and families they lead to promote an effective and resilient force.

What Is PPD?

As stated above, PPD is a major depression disorder occurring within the first four weeks after childbirth. However, throughout clinical practice, a major depression disorder occurring within the first year of delivery is also considered PPD. Signs of PPD vary but may include disturbances in sleep, energy level, and appetite—though these signs may also be normal behaviors associated with parenthood, making PPD diagnosis more difficult.[11] PPD symptoms can include crying more than usual; experiencing feelings of anger; withdrawing from loved ones; feeling numb, anxious, or disconnected from the baby; feeling guilty or incapable of being a good mother; becoming irritable, and experiencing feelings of hopelessness.[12] The importance of receiving a proper diagnosis from a clinical physician is necessary to differentiate symptoms of PPD from normal signs of parenthood.

There are several risk factors that can lead to the emergence of PPD. A history of depression or anxiety, low marital satisfaction, domestic violence, lack of a social support system, and isolation may increase susceptibility to PPD. Additionally, PPD is associated with increased rates of suicidal ideation.[13] When compared to the civilian population in the United States, few studies have been conducted on the prevention of and screening for PPD among active-duty servicewomen in the U.S. military.[14] Beth A.

Lewis et al. note that psychosocial treatments comprised of telephone-based interventions and exercise regimes may prevent PPD among women at risk.[15] Postpartum women coping with PPD have reported poorer social adjustment in the first three to six weeks after childbirth and poorer marital adjustment within the first nine weeks.[16]

Various stigmas associated with mental health treatment exist today, and families suffering from PPD as well as military leaders must be cognizant of the fact that these stigmas create roadblocks to treatment and recovery. As a result, a military lifestyle coupled with these risk factors can exacerbate symptoms of PPD and their consequences.[17]

Stigmas and DOD Policy

There are multiple stigmas that can affect a servicemember or their family's desire to seek help and treatment for mental health disorders such as PPD. These negative stigmas are associated with mental disorders in the military, the Exceptional Family Military Program (EFMP), and social media use. Frequently, medical treatment comes with a perceived notion that seeking help will negatively impact one's military career, limiting advancement and promotion.

Mental Disorders in the Military

To combat the negative stigma associated with mental health disorders, the DOD has released an instruction (*DODI 6490.08*) to address command notification requirements to dispel the stigma often associated with providing mental health care to military servicemembers.[18] It is DOD policy to foster a culture of support for servicemembers seeking voluntary

treatment.

DOD policy also states that healthcare providers shall not notify a servicemember's chain of command when that servicemember obtains mental health care or educational services. Healthcare workers are not required to notify a servicemember's commander unless the servicemember intends to harm themselves, harm others, or harm the mission; is part of a Personnel Reliability Program, is enrolled in a substance abuse treatment program, or is admitted into inpatient care. Furthermore, healthcare workers will only provide the minimum amount of information available to the servicemember's commander, which will include a diagnosis, the impact on duty, duty limitations, and treatment. Most important, healthcare officials will provide a commander with ways that the command "can support or assist the Service member's treatment."[19] DOD policy requires commanders to "reduce stigma through positive regard for those who seek mental health assistance to restore and maintain their mission readiness, just as they would view someone seeking treatment for any other medical issue."[20] Ultimately, *DODI 6490.08* provides direction to mental health professionals and military leaders to ensure that there are no setbacks to the careers of servicemembers who seek mental health assistance, while also eliminating the negative perceptions and stigmas associated with treatment.

According to Donna Moore, Nicholas Drey, and Susan Ayers, approximately 50 percent of women with perinatal mental illness, including PPD, fail to receive the necessary professional treatment despite having regular contact with healthcare professionals. This is partially attributed to the stigmas associated with mental illness, which can become a barrier to

treatment and seeking necessary support.[21] The traits of discipline, collectivism, and hierarchy that are present in the military often result in servicemembers embodying personal restraint and employing masculine coping methods to deal with stressors. This may affect servicemembers' perceptions of PPD during the postpartum period, while potentially leading to the underreporting of these mental health challenges.[22]

The study by Moore, Drey, and Ayers further explains that stigma is divided into external and internal stigmas. An *external stigma* is a negative attitude held by the general public—in this case, the military—toward the individual seeking treatment. An *internal stigma* results from the stigmatized individual succumbing to the external stigma—in this case, impacting their ability to seek out treatment for PPD and other mental disorders. The negative outcomes of this internal stigma can include lower self-esteem, lower life satisfaction, and the avoidance of disclosure and help-seeking behavior.[23] Military leaders should encourage servicemembers to seek treatment for their families who are suffering from the effects of PPD without being concerned by the impact that treatment may have on one's career.

The Exceptional Family Military Program

Though the DOD is making significant efforts to dispel the stigma for mental health treatment, the fear of career setback can also exist due to the EFMP. The EFMP is a mandatory enrollment program created by the DOD for military family members with special medical or educational requirements. These special requirements imposed by the EFMP can limit servicemembers and their families' permanent change of station assignments. In 2008, it was

discovered that approximately 70 percent of Marines believed that a negative stigma was associated with an EFMP designation. This negative stigma propagated due to the idea that limited assignment opportunities could result in reduced potential for promotion and advancement.[24] It is possible for military families who are diagnosed with and treated for PPD to be enrolled in the EFMP, thereby limiting future assignments.

Social Media

While *DODI 6490.08* and the EFMP exist to help military families struggling with PPD, the use of social media, both inside and outside the military, may present significant roadblocks for treatment. Social media presents a Catch-22 in addressing the impacts that it has on coping with and seeking treatment for PPD. Undoubtedly, social media and countless blogs that are available online to expecting and new mothers provide ample resources and avenues to seek anonymous help for PPD. However, social media can also distort the realities of pregnancy, childbirth, and motherhood that many families experience. The results of this false reality, often projected as a "highlight reel" that focuses on and skews the positive aspects of motherhood, may preclude a mother and family from seeking the necessary treatment for PPD.

Romper, a leading blog website for millennial moms, provides a voice for many mothers who are affected by the realities of social media stigma and a mother's struggle for perfection. One mother describes her experience with social media following childbirth: "As amazing as that is, there is a darker side to having the ability to 'see inside' other people's lives in this way." She further explains that most images portrayed on social

media “just aren’t real.” Just as many people use social media to fuel their respective careers, they also tend to portray a false reality of motherhood. There is no allure to posting unfiltered photos of crying, colicky babies and sleep-deprived parents on social media. While these photographs surely exist on social media, they are oftentimes buried beneath the scenes of an unrealistic image of motherhood and perfection. The author summarizes the negative stigma between postpartum and social media: “Next time you are scrolling through your feed and you stumble across a photo that makes you feel like the people in it have perfect lives or it makes you feel like you somehow aren’t good enough, remember: people only show you what they want you to see.”[25] The negative impacts that social media can have on mothers and families can propagate the effects of PPD and hinder one from seeking the necessary treatment. Ultimately, social media, coupled with the stigma of mental health disorders in the military, can further exacerbate isolation among mothers and families and a lack of willingness to reach out for help.

PPD Screening

Signs or symptoms of PPD that are reported or observed by close family members can be difficult to distinguish from normal behaviors associated with taking care of a newborn child (e.g., changes in sleep, appetite, and fatigue). This can result in difficulty or delay in diagnosing PPD.[26] The Edinburgh Postnatal Depression Scale (EPDS) is often used by primary care providers in screening and detecting PPD. The questionnaire consists of 10 items related to common PPD symptoms and requires patients to respond based on their experiences during the past week.[27] The answers are ranked

based on emotional and cognitive symptoms of PPD and generate a score from 0 to 30, with a score of 13 or more indicating clinically significant depression.[28] Overall, the EPDS is accepted across the clinical community for reliability. Molly M. Long et al., however, reported that screening rates are both inconsistent and low among healthcare professionals in the United States, with only 55 percent of healthcare professionals assessing for PPD.[29] In 2016, the U.S. Preventive Services Task Force recommended that pediatricians screen mothers for PPD at their one-, two-, and four-month visits. Additionally, all adults should be screened for depression, and systems should be in place to ensure accurate diagnosis and treatment for depression.[30]

Within the DOD, medical records are maintained within the Defense Medical Surveillance System (DMSS). This system tracks various diagnoses of active-duty servicewomen in all the military Services, as well as their dependents, if enrolled in a Tricare health plan. Within the DMSS, certain codes are associated with respective diagnoses. In the study of active-duty servicewomen and dependent spouses, four codes are associated with a case of PPD: major depressive order; recurring major depressive order; depressive order not elsewhere classified; and mental disease postpartum complication. Tai Do et al.'s study of depression and suicidality during the postpartum period for first-time mothers (either active-duty servicewomen or dependent spouses) between 2007 and 2012 showed that 5,267 (9.9 percent) servicewomen and 10,301 (8.2 percent) spouses had been diagnosed with PPD. Overall, the percentages of PPD diagnoses within the U.S. military were within the Centers for Disease Control and Prevention's range for the general civilian population.[31]

Do et al.'s study further revealed additional risk factors among both active-duty servicewomen and dependent spouses who were diagnosed with PPD. Both groups were at higher odds for suicidality compared to their counterparts not suffering from PPD. When compared to dependent spouses, servicewomen were diagnosed with PPD at later stages in their postpartum period. The study highlighted that this discrepancy can be attributed to some servicewomen delaying care or treatment due to lack of knowledge about treatment or fear of reprisal, damage, or adverse impacts to their military careers.[32]

Active-duty servicemembers may hesitate to reveal emotional concerns or struggles with PPD due to occupational repercussions associated with negative mental health stigma. The unwillingness to disclose these disorders can be considered a risk factor in the military demographic and result in undiagnosed and untreated PPD disorders within the military work environment. Additionally, findings by Kathryn Kanzler Appolonio and Randy Fingerhut revealed that parental stress associated with PPD may increase family-work conflict, further decreasing functioning and increasing depression.[33]

PPD Prevention and Treatment

Understanding the underlying factors and symptoms that contribute to PPD among active-duty mothers can lead to effective prevention, treatment, and intervention. Coupled with the stigma of mental illness across the DOD, understanding risk factors can enhance awareness and, in turn, improve screening of PPD. Early identification and treatment of PPD could improve the quality of life and health care for military servicemembers, while also

improving the quality of work for those servicemembers diagnosed with PPD.[34]

There are several interventions and preventative treatments available for women who show risk factors for PPD or have been diagnosed with PPD: psychotherapy through cognitive behavioral therapy (CBT) or interpersonal therapy (IPT), other supportive interventions such as peer monitoring, prophylactic use of antidepressants, physical activity or alternative therapies, and a health system-level intervention.[35]

CBT is a common form of psychotherapy in which one works with a mental health counselor or therapist in a structured environment. CBT helps patients become aware of negative thinking to view difficult situations clearer, which results in the ability to respond effectively.[36] Specific programs have been developed for perinatal women and their children during the postpartum period. One such program is the Mothers and Babies Program, which consists of 8–17 group sessions during pregnancy and postpartum periods.[37] The program's goal is to create a foundation for a healthy physical, social, and psychological environment for the patients and their infants.

IPT is an evidence-based approach that is employed to treat mood disorders and improve interpersonal relationships and social functioning to assist in reducing stress.[38] There are many IPT programs, such as the Reach Out, Stay Strong, Essentials (ROSE) for mothers of newborns program, which uses interpersonal therapy techniques to treat disorders such as PPD. This program consists of four to six sessions with a focus on developing a social support system, changes associated with role transitions, and interpersonal conflicts surrounding childbirth. Elizabeth O'Connor et al. concluded that

these interventions may be effective in preventing PPD, but their study was limited to mothers with increased risk factors such as a history of depression. A 2013 review found that women who received these types of treatments were 22 percent less likely to develop PPD when compared to those who received only routine care.[39]

The use of antidepressants during pregnancy has revealed mixed results due to the potential for developing adverse events. The use of these medications by pregnant women is complex, and very little evidence is available to determine its effect in preventing PPD.[40] However, antidepressant medication is the most common treatment method for PPD, even though mothers often say they prefer other treatment methods. Trials of antidepressants have shown an improvement of symptoms during an 8-to-12-week period of treatment.[41]

Health system-level interventions, involving home-visit services, were shown to be an effective tool in preventing PPD in settings outside the United States. These services are not widely or routinely available in the United States, but they show the potential to be effective if used.[42] Additionally, there are several other health system-level intervention types in screening for PPD, including education screening, electronic medical records (EMR) screening, and standardized patient exercises. Education screening incorporates material on PPD symptoms, detection tools, treatment options, and impacts on the family. Changes in EMR screening and the implementation of patient exercises have shown positive receptivity among patients and providers. All three of these intervention methods have yielded positive screening results and diagnoses of PPD.[43]

Michael W. O'Hara and Jennifer E. McCabe suggested the use of social

support as a treatment option for women with PPD, highlighting that these support persons do not have to be mental health professionals. Trials have employed visiting health nurses, child health nurses, and case managers with bachelor's degree training. As discussed earlier, these treatment methods would be conducted in the comfort of the mother's home or her choice of location.[44]

Unfortunately, there are roadblocks to treatment due to some mothers' hesitation and reluctance to attend medical appointments for fear of transmission of antidepressant medication to a breastfeeding infant. During a 12-year period, O'Hara and McCabe noted that incidences of depression or antidepressant prescription in the first year postpartum were nearly 14 percent, followed by slow declines to 6 percent and remaining consistent until the participants' children reached 12 years of age. Additionally, women who developed signs of depression in the postpartum period were at increased susceptibility for developing future PPD, but they were not vulnerable to developing signs of depression outside the postpartum period.[45] These findings should be taken into consideration by the DOD as it considers its messaging and education campaigns to prevent, diagnose, and treat military families suffering from PPD.

PPD in the DOD

In a four-year study conducted among active-duty servicewomen and dependent spouses, it was revealed that 9.9 percent of servicewomen and 8.2 percent of spouses received PPD diagnoses during the one-year period following childbirth. Of these cases of PPD, 0.4 percent of servicewomen and 0.2 percent of spouses were diagnosed with incident suicidality.

Servicewomen diagnosed with PPD had 44.2 times the odds of receiving a diagnosis of suicidality compared to their peers without PPD, while spouses with PPD had 14.5 times the odds of a suicidality diagnosis compared to those without PPD.[46]

When compared to the civilian population in the United States, active-duty servicewomen and dependent spouses may experience unique stressors associated with the military lifestyle and environment. Servicewomen may experience stressors such as working longer hours during pregnancy and working longer into their pregnancy as compared to their civilian counterparts.[47] Additionally, servicewomen are susceptible to being selected for a deployment as early as six months following childbirth. First-time mothers who deployed in the first six months after childbirth had a 37 percent higher incidence rate of mental health disorders than mothers whose deployment was much later post-childbirth.[48]

Deployments adversely impact dependent spouses of active-duty servicemembers as well. Spouses coping with upcoming or current deployments scored significantly higher on the EPDS scale when compared to spouses not coping with deployments. Additionally, when a spouse was deployed during early pregnancy, the proportion of women with high-risk depression was nearly double that of those with a spouse in garrison.[49] Dependent spouses face unique challenges, including an absent spouse due to deployments during pregnancy, childbirth, and/or the postpartum period.

Deployments disrupt customary marital support systems, which results in greater vulnerability to PPD.[50] Research has reported that rates of PPD symptoms among active-duty servicewomen range from 11 to 20 percent, while the civilian population range is from 8 to 15 percent. Suicidal

ideations resulting from PPD were found to be significantly higher in active-duty servicewomen (15.4 percent) compared to the civilian population (5.3 percent).[51]

A 2020 study conducted by Juliann H. Nicholson et al. supports the aforementioned research and validates the need for continued research on PPD within the U.S. military population. Servicewomen represent approximately 16 percent of active-duty enlisted personnel and more than 10 percent of all military personnel who have deployed since 2001. Due to the increasing number of servicewomen in the military, the DOD's Defense Advisory Committee on Women in the Services has identified postpartum policies an area of concern across all Service branches. Nicholson et al.'s study revealed that PPD incidence rates increased between 2001 and 2018, further highlighting the importance of research to inform policy, education, and interventions to support U.S. servicemembers.[52]

Child Impact

If only the male spouse suffers from PPD, studies show that the mother reacts to her partner's depression with a compensatory attitude. Additionally, studies show the negative impacts that paternal PPD can have on the child. Child behavioral difficulties can be associated with paternal depression and negative parenting. PPD coupled with the associated symptoms can negatively impact the ability to parent.[53]

Maternal PPD can also impact parenting style. Similar to the effects of major depression that can occur at other times in a woman's life, PPD is challenging to cope with and can diminish a mother's ability to function effectively in many aspects of daily life. The significant difference in

postpartum women is the increased responsibility for infant care while coping with the effects of depression, which can interfere with parenting and thereby negatively impact the child, both in the short and long term. Studies have revealed that depressive symptoms have been associated with more difficulties in detecting affective cues, including infant cues.[54] The result of this can have a varying degree of consequences on a child's development, resulting in increased stress on the family's stability.

The severity of depression that is experienced by mothers during the postpartum period has been associated with child behavioral problems. These behavioral problems have been shown to exist from early childhood through adolescence. Aside from child behavioral problems, PPD has shown to affect language and intelligence quotient (IQ) development throughout childhood and adolescence. Finally, there is evidence linking PPD to a decline in the child's physical health. If a mother were to disregard her caretaking behaviors, to include consistent breastfeeding and attending child well-visits, her infant's health may suffer as a result.[55]

Additionally, studies and literature indicate that women who suffer from depression and anxiety may display more difficulties in recognizing facial emotional expressions. Mothers with PPD are less accurate in identifying happy infant faces and respond differently to sad faces, when compared to mothers not suffering from PPD. In essence, mothers diagnosed with PPD may have difficulty interpreting the emotions of their child. PPD can result in increased negative bonding between a mother and child. Karen Blanc Friedman et al. indicated that impaired bonding during the postpartum period is a significant factor in the relationship between symptoms of depression and the mother's more negative perception of her

child's mood and temperament. Additionally, the severed bonding reduces the mother's ability to interpret her child's needs and emotions.[56] The impacts of PPD on the entire family highlight the importance and necessity of identifying signs of PPD early in pregnancy and postpartum health.

PPD, the Male Partner, and Impacts on the Joint Force Environment

Maternal depression has an influence on the behavior of the male partner, which may impact the family dynamic and foundation. The resulting marital relationship coupled with the mother's PPD can have a negative impact on the child's development and interactions with the outside world. Mothers who had stronger social support from their partners during pregnancy were shown to have lower distress postpartum, and as a result, their children were reported to be less distressed.[57] Anna de Magistris, Mauro Carta, and Vassilios Fanos further conclude that a relationship that is not "firm" (i.e., strong) before pregnancy is unlikely to be strengthened postpartum. For example, the physical appearance of a woman undergoes significant changes during pregnancy, and these changes oftentimes need the support and reassurance of the woman's partner. If the partner is unable to provide this support, the woman may struggle to accept the changes in her shape and size, feeling embarrassed by her appearance. These changes potentially contribute to the onset of male PPD and shake the marital foundation.[58]

The news of pregnancy comes with a wave of emotions, ranging from excitement to happiness to anxiety. De Magistris, Carta, and Fanos ascertain that emotions occurring in the early stages of pregnancy are more stressful for the male partner than those occurring in the period following birth; and for male partners with a weak psychic equilibrium, they can be a factor for

exposing underlying vulnerabilities. The effects of pregnancy on the male partner can be further exacerbated by the military lifestyle and contribute to PPD and distress during pregnancy. Some gender-specific risk factors include a weaker support network around the child's father as compared to the mother and a greater increase in responsibility in the workplace concerning the financial aspects resulting from a growing household.[59]

Studies conducted on expecting fathers during and post-pregnancy reveal results that can impact the military force and readiness. These results show that during pregnancy, male partners were more depressed and irritable, drank more alcohol, and had more negative sentiments. Twenty percent of new fathers do not develop an immediate attachment to their newborn child, and the resulting anxiety of being unable to love their child can cause the fathers to undergo a crisis. In the postpartum period, some fathers develop increased levels of nervousness, lack of concentration, fatigue, insomnia, and irritability. If coupled with maternal PPD, the impacts and pressures on the male spouse are significantly greater when compared to a mother not suffering from PPD.[60]

A depressed mother can result in the development of a father's protective behavior. As time progresses, the father may be unable to sustain this behavior and may fear that the care for the child will become solely his responsibility due to the mother's struggle with PPD. If the father is able to successfully cope with this additional responsibility of assuming a greater role of childcare, it may lead the mother to believe that she is incapable of raising her child.[61]

Furthermore, the outcome could also lead the father to blame the mother, thereby creating a ferocious cycle of ineptitude and magnifying the

depression for both parties. Those impacted by this cycle may suffer from increased cases of addiction to drugs and alcohol, coupled with hypercriticism and violence. Furthermore, mothers afflicted with PPD tend to experience poorer dyadic adjustment (measures perception of an intimate relationship) resulting in less spousal satisfaction, approval, and support. The combination of these effects does not necessarily cause separation amongst couples, but they can aggravate issues that existed between the couple prior to pregnancy. Very few studies have been conducted on PPD in men, but most agree "that partners of depressed mothers run a risk 2.5 times higher than controls of developing postpartum depression." Living with a depressed mother can be difficult, and partners may feel less supported in their daily lives; often, these spouses experience fear, confusion, frustration, helplessness, anger, poor family stability, and uncertainty of the future.[62]

PPD not only concerns the mother but also impacts the partner and child, which can negatively impact the family unity and, in turn, military readiness. The importance of providing a support network for military mothers and spouses is imperative. The ability to take paternity leave strengthens the relationship between father and child while also providing support to the mother.

Summary of Research

The DOD's current medical infrastructure is capable of diagnosing and treating PPD for military families. However, the most recent study on PPD cases and diagnoses within the DOD concluded in 2020. Due to the negative stigma associated with mental health disorders and treatment, a potential

exists for an increased likelihood that PPD among active-duty servicemembers and dependent spouses may be underreported. To overcome these negative stigmas and provide the necessary treatment to military families, it is essential that military leaders are equipped with PPD education and treatment options provided by the DOD healthcare system.

The solution would require a two-fold approach, including informing changes to DOD policy and educating the military leaders and commanders who interact daily with men and women who may be unknowingly suffering (or living with someone unknowingly suffering) from PPD. Education for military leaders could provide the enhanced awareness, resources, support, and treatment necessary for those military members and families struggling with PPD. To sustain and not disrupt military Joint force readiness, commanders and supervisors must have a solid foundational knowledge of PPD, including screening, treatment, stigmas, and impacts on the family. Both clinical and leadership recommendations for the content of this educational intervention are outlined in the following sections.

Recommendations

Screening, Education, and Treatment

Across the DOD healthcare system, mothers typically only have one postpartum visit at around six weeks post-delivery and may not be seen by a provider again until their annual wellness check-up.[63] Long et al. illustrated that screening rates for PPD across the United States are inconsistent and low, with only 55 percent of healthcare professionals assessing for signs of PPD.[64] These numbers may not necessarily correspond to DOD practices, but they emphasize the limitations with regard to PPD assessment and

referral to treatments.

The last DOD-wide study regarding PPD prevalence among active-duty servicemembers and dependent spouses was completed in 2011. Do et al. described how PPD is tracked throughout the DOD healthcare system. As mentioned previously, the DMSS tracks various diagnoses of active-duty servicemembers and their dependents if enrolled in DOD Tricare health plans. Researchers used the DMSS to gather data and identify personnel diagnosed with PPD. Furthermore, they identified cases of PPD based on the following codes occurring within one year of childbirth: mental disorder-specific diagnoses indicative of single major depressive disorder; recurring major depressive disorder; unspecified episodic mood disorder; depressive disorder not elsewhere classified, and mental disease postpartum complication.[65] To effectively track and monitor the prevalence of PPD and the effectiveness of PPD treatment throughout the Joint force, it is necessary to conduct routine analyses of cases throughout the DOD by using the inputs into DMSS across the DOD healthcare system. The DOD study highlighted the five disorders equating to a PPD case. It is recommended that the DOD standardize the DMSS inputs to a single code equating to PPD, which would result in ease of tracking and monitoring across the DOD. Additionally, Appolonio and Fingerhut generated information that may help identify families suffering from PPD, which alludes to a potential disparity in treatment across DOD healthcare facilities. This disparity may lead to particularly high rates of undiagnosed and untreated cases of PPD throughout the DOD, resulting in the unnecessary suffering of mothers, families, and servicemembers.[66] To accurately diagnose, treat, and monitor PPD across the Joint force, it is imperative the DOD standardize how

diagnoses are inputted within the DMSS.

The importance of preventative treatment, including screening early and often, is paramount, and the military healthcare system provides these opportunities for expectant mothers. Appolonio and Fingerhut suggest screening all pregnant women both before delivery and six weeks after delivery, while allowing doctors and nurses to begin making necessary referrals to behavioral health specialists.[67] Additionally, the importance of educating expectant mothers and families on the risk factors associated with PPD throughout the pregnancy may help healthcare providers effectively identify women who are at increased risk for PPD.

The period immediately following childbirth and prior to discharge from the hospital presents an opportune time to provide psychoeducation regarding PPD. Prior to discharge, some hospitals require the mother and spouse to watch educational videos on newborn behaviors. Hospitals across the DOD have an opportunity to show families an educational video detailing information about the signs, symptoms, and effects of PPD. This video can also outline resources and treatment options available to families who may begin to show signs of PPD. Oftentimes, a spouse may not have had the opportunity to attend pregnancy appointments and screenings with their pregnant spouse, and so these videos may be the first time the spouse is exposed to PPD education. It is equally important for a spouse to be aware of and knowledgeable about the signs and symptoms of PPD. These videos should include information about the prevalence of PPD, signs and symptoms of PPD, the impacts of PPD on the family, dispelling stigma with mental health treatment, and avenues for help. The Pacific Post Partum Support Society and KidCareCanada have released a six-part informational

video addressing the various aspects of PPD, to include stories of spouses also impacted from PPD.[68] Whether the DOD produces its own informational video or uses the media published by these organizations, the time spent in the hospital prior to discharge provides an exceptional opportunity to provide families this beneficial information on PPD.

Preventative treatment begins with military servicemembers recognizing risk factors and notifying healthcare professionals. Servicemembers must set aside perceived stigmas that are associated with mental health treatment in the military and fear of work-related repercussions in order to receive the help necessary to treat this disorder. Prevention methods and early treatment not only reduce government costs resulting from lost work but, more important, also prevent disruption to the family foundation servicemembers need to remain an effective and resilient component of the Joint force.

Military Leaders

Equally important to individual knowledge of risk factors and preventative treatment is the role that military commanders and leaders have in ensuring that suffering families receive the help they need to combat PPD. In his book on leadership, John MacArthur illustrates the role of a leader, which many commanders and leaders throughout the military should and do aspire to:

> A leader is not someone who is consumed with his own success and his own best interests. A *true* leader is someone who demonstrates to everyone around him that their interests are what most occupy his heart. A real leader will work hard to make everyone around him successful. His passion is to help

> make the people under his leadership flourish. That is *why* a true leader must have the heart of a servant.[69]

This quotation illustrates the importance of leadership and providing for the men and women one leads. Not only should leaders develop their subordinates, but they should also care for them. This includes the well-being of the individuals—and, by extension, their families. One way for military leaders to do so would be to encourage a healthy work-life balance with their servicemembers and to provide them with the time needed to strengthen their family foundations.[70] As mentioned earlier, a solid foundation and family stability afford servicemembers the work-home balance necessary to be an effective warfighter. PPD has the potential to disrupt the work-home balance and impact unit cohesion and the readiness of the Joint force.

Military leaders and commanders possess the ability to create and foster an environment within their organizations to educate servicemembers about PPD. All the U.S. Service branches have their respective "preparation for command" courses to prepare commanders for potential leadership challenges. Similar courses and opportunities exist for senior enlisted leaders as well. Additionally, and equally beneficial in combatting PPD, the Services have established courses for "key spouses" of future commanders and senior enlisted leaders.[71] Service commands can schedule behavioral health professionals to conduct presentations on mental health issues, including PPD, and their associated stigmas. These platforms offer an exceptional opportunity to provide military leaders with a PPD educational foundation. With the knowledge gained at these courses,

leaders will be able to return to their units aware of how to identify and address signs of PPD within their organizations. To create this environment, commanders must adhere to *DODI 6490.08*, which addresses mental health treatment and stigmas in the DOD, while fostering an environment of open dialogue on mental health treatment and awareness.

To increase awareness among the greater population of the U.S. military, the DOD should promote computer-based training (CBT) that is available and easily accessible to servicemembers. This CBT should not have a mandatory requirement for servicemembers, but it should instead be used as an informational tool for military leaders and commanders to establish open communication with the men and women they lead regarding mental health disorders, including those during pregnancy and the postpartum period. Not only will this demonstrate a military leader's understanding of the potential problems impacting families and the force, but it will also allow leaders an opportunity to dispel stigmas associated with mental health treatment in the DOD.[72]

Policy

During the last several years, the DOD has adjusted its Military Parental Leave Program (MPLP), and each Service has incorporated various changes to its respective policies. The MPLP includes nonchargeable leave following a qualifying birth event (QBE) or adoption (QA) and includes maternity convalescent leave, primary caregiver leave, and secondary caregiver leave. Maternity convalescent leave is authorized following a QBE, to a birthparent suffering a miscarriage, or if a baby is given up for adoption. The primary caregiver is designated as the parent with primary responsibility for the

child and is usually the parent who physically gives birth. The secondary caregiver is the parent not designated as the primary caregiver and may be approved for an unmarried parent.[73]

The Departments of the Navy, Army, and Air Force have approved 42 days of non chargeable maternity convalescent leave immediately following the birth event and discharge from the medical facility. Additionally, 42 days of primary caregiver leave is authorized; this can be used within one year of the birth event or adoption and may be taken immediately following maternity convalescent leave. Secondary caregiver leave differs among the Services. The Departments of the Army and Air Force have authorized 21 days of secondary caregiver leave, which may be used up to one year following a birth event or adoption.[74] The Department of the Navy, on the other hand, has authorized 14 days of secondary caregiver leave for members of the Navy and Marine Corps.[75] Current parental leave policies across all Service branches must be taken in a single increment and may not be broken up. Additionally, if this leave is not used within the first year following the birth event or adoption, all leave will be forfeited.

Research has indicated that PPD may not occur immediately following childbirth and can develop up to a year following childbirth.[76] However, as mentioned above, the ability to separate primary and secondary caregiver leave is currently prohibited in each of the Service branches. There is currently no data that supports the rationale behind this policy. The Services should adjust the policy, allowing servicemembers to use their leave in incremental periods as necessary, ensuring that families are able to receive the necessary support if one or both parents are diagnosed with PPD later in the postpartum period. Additionally, as the support provided to both the

mother and child by the secondary caregiver is equally important for family stability, the Department of the Navy should extend its secondary caregiver leave to 21 days.

Conclusion

PPD affects up to 20 percent of families across the DOD, potentially resulting in detrimental impacts to families, unit cohesion, and readiness.[77] Cases of PPD within the DOD closely resemble the prevalence of cases outside the military, but the potential of a higher prevalence exists due to undiagnosed cases throughout the military Services. To accurately assess the impact that PPD has on the DOD, military leaders must ensure that the stigmas associated with mental health treatment are discussed, addressed, and dispelled. To address these various stigmas, the DOD must employ an informational campaign across all ranks and Services to educate leaders of all ranks. To provide support and treatment to families suffering from PPD, it is imperative that the DOD standardize its assessment methods to accurately identify PPD across the Joint force. The DOD is well-suited and equipped to provide healthcare treatment for mothers and families suffering from PPD, and the solution lies within a Service-wide informational campaign that helps dispel stigmas relating to mental health treatment in the Joint force. The family foundation, support structure, and work-personal life balance must be maintained to preserve the integrity and readiness of the Joint force. Therefore, leaders should continue to prioritize the well-being of men, women, and families throughout the DOD, to include those suffering unknowingly from PPD.

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Appendix A

Postpartum Depression Educational Videos (KidCareCanada PPD Series)[1]

1. Postpartum Depression: Not the Baby Blues
   http://postpartum.org/videos/video/postpartum-depression-baby-blues/
2. New Mothers Need Support
   http://postpartum.org/videos/video/new-mothers-need-support/
3. The Myth of Motherhood
   http://postpartum.org/videos/video/myth-motherhood-kidscarecanada-ppd-series/
4. Treatments: An Introduction
   http://postpartum.org/videos/video/treatments-introduction-kidscarecanada-ppd-series/
5. Group and Phone Support
   http://postpartum.org/videos/video/group-phone-support-kidscarecanada-ppd-series/
6. Treatments: Self-care
   http://postpartum.org/videos/video/treatments-self-care-kidscarecanada-ppd-series/
7. Allen's Journey (Male Spouse's Struggle with PPD)
   http://postpartum.org/videos/video/allens-journey

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Appendix B

Leadership Guide to PPD 101

Postpartum depression (PPD) is a major depression disorder occurring within the first four weeks after childbirth. However, throughout clinical practice, a major depression disorder occurring within the first year of delivery is also considered PPD. Signs of PPD vary but may include disturbances in sleep, energy level, appetite, and libido. Studies have shown that nearly 20 percent of newborn mothers suffer from PPD.[1] Positive screens of PPD have associated with increased rates of suicidal ideations.[2]

1. Military servicemembers' families and home life provide the foundation and stability that the U.S. military and Joint force rely on. Not only does PPD affect mothers, but it can also impact the spouse and the development of the child. To ensure the readiness of the force, it is essential maintain the integrity of the family's foundation.
2. Many stigmas exist in today's society and military complex that may preclude mothers from seeking necessary treatment for PPD. These include social media, the Exceptional Family Military Program (EFMP), and mental health disorder stigmas within the Department of Defense (DOD). Military leaders should be familiar with *DODI 6490.08*, which addresses command notification requirements to dispel stigmas in providing mental health treatment to servicemembers.
3. The DOD healthcare system is well-equipped and staffed to provide the necessary treatment and support to families suffering from PPD. Military leaders, including commanders, senior enlisted leaders, and key spouses should be familiar with treatment options to educate servicemembers and

their families on the avenues of PPD support.

4. PPD can be exacerbated by military service due to the negative stigmas associated with mental health treatment in the DOD. Leaders of all ranks should establish open communication channels with new mothers and families and discuss available treatment options. The path to preserving the family foundation lies in an education campaign and the ability to detect the signs and symptoms of PPD as early as possible. To remain an effective and cohesive unit free from disruptions in force readiness, the DOD should be informed about PPD, how to dispel stigmas, and effective assessments and treatment options for servicemembers and their families.

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