Perinatal Mood and Anxiety Disorders in the Military

Theresa Nguyen, PMHNP
Alison Reminick, MD
Amber Rukaj, MFT
Semira Semino-Asaro PhD, RN, PMHCNS-BC

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  Cynthia D. Connelly, PhD, RN, FAAN
  Scholars Professor and Director of Research at the University of San Diego Hahn School of Nursing and Health Science Beyster Institute for Nursing Research.
  USD Team: Alexa Perez; Anya Ilfeld

Objectives

• Introduction to the Military and Its Culture

• Describe unique risk factors for PMAD's in military women and military spouses

• Compare the rates of PMAD's in military vs civilian populations

• Understand both barriers and facilitators for care of PMAD's in the military population

• Future Research and Treatment Considerations
UCSD Women's Reproductive Mental Health Program

- History
- Current staff
- Incoming staff
- Interdisciplinary team
- Embedded MFT's
- IOP
- Education: MFT interns, psychiatric residents, psychiatric-mental health nurse practitioners

What are the Numbers?

- 3.5 million total military personnel, with more than 1.3 million active duty military members
### Demographic Variable

<table>
<thead>
<tr>
<th>Variable</th>
<th>DoD Active Duty</th>
<th>Selected Reserve</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Members</td>
<td>1,326,273</td>
<td>831,992</td>
</tr>
<tr>
<td>Ratio of enlisted to officers</td>
<td>4.6 to 1</td>
<td>5.4 to 1</td>
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<tr>
<td>% women / % men</td>
<td>15.1% / 84.9%</td>
<td>18.8% / 81.2%</td>
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<tr>
<td>% minorities</td>
<td>31.2%</td>
<td>25.6%</td>
</tr>
<tr>
<td>% located in U.S. / territories</td>
<td>87.1%</td>
<td>99.1%</td>
</tr>
<tr>
<td>% 25 years old or younger</td>
<td>43.2%</td>
<td>34.3%</td>
</tr>
<tr>
<td>% with bachelor’s degree or higher</td>
<td>20.7%</td>
<td>22.1%</td>
</tr>
<tr>
<td>% married</td>
<td>55.3%</td>
<td>45.3%</td>
</tr>
<tr>
<td>% in dual-military marriages</td>
<td>6.4%</td>
<td>2.6%</td>
</tr>
<tr>
<td>Number of separations</td>
<td>204,556</td>
<td>135,804</td>
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<td>Retired Personnel</td>
<td>1,562,163</td>
<td>755,024</td>
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<tr>
<td>Families</td>
<td></td>
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<tr>
<td>Number of family members</td>
<td>1,802,615</td>
<td>1,084,069</td>
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<tr>
<td>Number of spouses</td>
<td>665,619</td>
<td>381,773</td>
</tr>
<tr>
<td>% with children</td>
<td>42.2%</td>
<td>42.0%</td>
</tr>
<tr>
<td>Average age at birth of first child</td>
<td>25.7</td>
<td>27.8</td>
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<tr>
<td>% of children age 0-5</td>
<td>41.9%</td>
<td>30.1%</td>
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<tr>
<td>Number of adult dependents</td>
<td>10,670</td>
<td>1,811</td>
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<tr>
<td>% single parents</td>
<td>4.7%</td>
<td>9.2%</td>
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</table>

### The Average Soldier (Hsu, 2010)

- Rank: E4
- Age: 22
- Time in Service: 4 years
- Base Pay: $1978.50 / month
- Education: high school graduate
- Marital status: Married with two children
- Race: 60% white/ 40% ethnic minority
- Gender: 85% male/ 15% male
- Average Work day: when the mission is complete

### San Diego (Thomas Jefferson School of Law, 2015)

- San Diego is home to the nation’s largest concentration of military personnel
- There are more than 100,000 active duty service members in San Diego. These active duty service members are split roughly evenly between the Navy and the Marine Corps. The largest installations are:
  - Marine Corps Air Station Miramar
  - Marine Corps Base and Marine Corps Air Station Camp Pendleton
  - Naval Base Point Loma
  - Naval Base Coronado
  - Naval Base San Diego
- San Diego is home to 60% of the ships in the fleet of the U.S. Navy, and 1/3 of the active duty force of the U.S. Marine Corps
What is Military Culture (Hsu, 2010)

• “Duty, Honor, Country”
• The military emphasizes discipline and hierarchy, prioritizes the group over the individual, uses specific ceremonies and symbols to convey meaning and culture
• Military law requires commanding officers and those in authority to demonstrate virtue honor, patriotism and subordination in all that they do
• Uniformity, anonymity, expendability, teamwork, camaraderie, stoicism, orderliness
• Subcultures: type of unit (e.g. fighting squadron), branch (e.g. infantry), and war fighting community (e.g. submarine, special forces)

Army

Motto “this we’ll defend”
7 core values (LDRSHIP)
• Loyalty – Bear true faith and allegiance to the U.S. Constitution, the Army, your unit, and fellow Soldiers.
• Duty – Fulfill your obligations. Accept responsibility for your own actions and those entrusted to your care.
• Respect – Treat others as they should be treated.
• Selfless Service – Put the welfare of the nation, the Army, and your subordinates before your own.
• Honor – Live the Army Values.
• Integrity – Do what’s right, both legally and morally.
• Personal Courage – Face fear, danger, or adversity, both physical and moral.

Navy

• Motto: Semper Fortis “Always Courageous”
• Core Values: Honor, Courage, Commitment

Marines

• Semper fidelis “Always Faithful”
• Same as Navy: Honor, Courage, Commitment
Airforce
- Motto: Above All
- Core Values:
  - Integrity
  - Service before Self
  - Excellence in all we do

US Coast Guard
- Motto: Semper Paratus “Always Ready”
- Core Values:
  - Honor
  - Respect
  - Devotion to Duty

Military Culture Help vs Hinderance (Thiam, et al.)
- Military lifestyle can both be a help as well as a hindrance.
- Individuals are usually located away from family of origin and have to continuously re-develop friendship.
- Military has a close knit form of support, and relationships with other military families become a support network.
- Military culture provides sense of job security that civilians families may not have.
- Military also provides health care regardless of rank/social status.
- Paternity and Maternity leave

Military Culture Stressors
- Frequent moves
- Spousal Psychiatric Co-morbidity
- Deployments

PMADs in the Military
Moving with the Military (Segal et al, 2011)

The Deployment Cycle and Military Families (Verdeli et al., 2011)
- Pre deployment
- Deployment
- Reunion
- Post Deployment

Deployment and Mental Health (Verdeli et al., 2011)
- Spousal ability to cope based on amount of notice
- Multiple and prolonged deployments are associated with increased anxiety and depression in military spouses
- Longer deployment = higher prevalence of depression
- Often remits when husband returns
PMADs in the Military

Service Member Mental Health
(APA, 2007; RAND, 2008)

• Wounded Warriors
• One-third of service members returning from Operation Enduring Freedom (OEF) and Operation Iraqi Freedom (OIF) have reported symptoms of mental health or cognitive problems
• Institute of Medicine reports that prevalence of TBI is 19.5%-22.8% for TBI and up to 20% for PTSD
• 14% prevalence depression rates
• According to the Armed Forces Health Surveillance Center, since 2010 suicide has been the leading cause of death in US service members

Rates of PMAD’s in the Military (Thiam et al.)

• Rates vary, there are few studies
• Most studies look at active duty women and/or dependent spouses
• Many studies have found increased likelihood of perinatal depression when an active duty service member deployed during pregnancy (Robrecht, Millegan, Leviens, Crescitelli, & McLay, 2008; Smith et al; Spooner, Rastle, & Elmore, 2012)
• Other studies went further to determine if postpartum depression (in correlation with spouse deployment) led to increased risk of antenatal complications such as preterm birth and small birth size (Spieler, 2012; Tarney, et al., 2015).

Rates of depression and suicidality (Do et al 2012)

• 6 yr surveillance period
• 2 cohorts: active duty service women of all branches
• Dependent spouse of active duty, all branches
• Reviewed medical records searching by icd 9 codes
• Completed and attempted suicide
• 9.9% of postpartum active duty vs 8.2 % dependents dx’ed with PPD during 12 mos PP
• Incidence of PPD higher in Army spouses, lower in Marines
• Both active duty women (0.4%) and dependent spouses (0.2%) had higher odds for suicidality compared to women without PPD
• Overall PPD rates similar to civilian population
Depression in active duty (AD) women
(Appolonio, 2008)

- Active duty women work longer hours into pregnancies compared to dependent spouses
- May feel especially torn demands of family and career
- May fear revealing that they are struggling due to fear of repercussions
- This study included all active duty women who gave birth at Wilford Hall Medical Center at Lackland Air Force Base in San Antonio, TX
- Completed 3 questionnaires (EPDS, Postpartum Depression Inventory- Revised (PDI-R) and a demographic questionnaire
- EPDS cutoff score of 12
- >500 postpartum women were invited to participate, 92 responded

Depression in AD women- Results

- 84% were married or partnered, and of those 55% were dual military
- 39% reported medical complications
- PPD rate was 20% which is higher than civilian but comparable to other AD rates
- May be because this was a hospital that takes more medically complicated pregnancies
- Income levels, unplanned pregnancy and marital status were NOT associated with an increased rate of PPD
- Interestingly, military specific stressors like women who were facing upcoming deployment, spouses who were deployed and upcoming moves were not related with an increased risk

PPD as it relates to timing of deployment
(Spooner, 2012)

- several studies examining this
- Looked at EPDS scores at Naval Hospital Camp Pendleton
- Spouses of active duty who received OB care in family medicine and OB/GYN
- EPDS completed at initial visit, 28-32 weeks gestation and 6 week PP
- EPDS > 14
- Compared to deployment status (none, preparing to deploy, currently deployed, recently returned)
- > 3800 EPDS scored included
PPD and Deployment - Results

- Prevalence of positive screens was 4.6% at initial, 4.5% at 28-32 wks, 4.7% at 6-wks PP
- At initial visit, scores higher for those whose husbands were deployed
- At 28-32: no difference in any deployment status
- At 6 weeks PP, scored positive scores if husband preparing to deploy or deployed
- Low overall rates of perinatal depression
- More supportive services than other bases?
- Maternal Infant Support Team: case managers, social workers, lactation consultant, nurses, professionals from Armed Services YMCA, Navy Relief Society, and other programs

More on PPD rates and Deployment (Levine, 2015)

- Data collected from Department of Defense Birth and Infant Health registry
- Deployment data from electronic personnel records
- Deployment before, during or after delivery
- Military spouses whose husbands were deployed at any point between conception and 6 mos PP we more likely to suffer from antepartum depression/anxiety and use tobacco compared to those who did not deploy
- Prevalence of PPD among wives whose husbands were deployed at any point bw conception and 6 mos PP was 17.6% compared 15.7% among those who did not deploy

Results (Levine, 2015)

- Timing of deployment:
  - Deployed during delivery had highest prevalence (18.4%) followed by deployment after delivery (17.3%) and before (16.5%)
  - Wives without a n antepartum anxiety/depression diagnosis were at increased risk of PPD compared to those WITH an antepartum diagnosis
  - Increased deployment length was not associated with increased odds of PPD
Deployment and Birth Outcomes (Tarney, 2015)

- Prospective cohort study of primi-gravid women delivering at Womack Army Medical Center in Fort Brag, NC
- Deployment of a spouse to a combat zone during entire pregnancy associated with a 3.24-fold increased risk for preterm delivery and a 3.01-fold increased risk for PPD compared to women whose spouses were not deployed at any point
- Women whose spouses are deployed are more stressed and increased stress is associated with preterm labor and LBW
- They suggest group prenatal care for those "deployed" wives

Barriers and Facilitators to Treatment of Perinatal Mood and Anxiety Disorder in Military Spouses
Research Aims

• I: To identify barriers and facilitators to the treatment of perinatal mood and anxiety disorder in military spouses
• II: To identify how mental health treatments can be tailored to meet the needs of military spouses

Inclusion Criteria

• Women carrying a diagnosis of perinatal mood and anxiety disorder (postpartum depression, perinatal panic, OCD)
• Women ages 20-45
• Married to an active duty military member
• English speaking
• Currently in treatment with psychotherapist and/or psychiatrist

Exclusion Criteria

• Medical illness that prevents the ability to sit comfortably for an hour
• Psychotic or severely mentally ill

Research Designs and Methods

• UCSD Biomedical IRB and USD
• Partnership with University of San Diego Hahn School of Nursing
• Took place at the UCSD Women’s Reproductive Mental Health Program in La Jolla
• Recruitment through clinician referral
• MFT’s, PHA members, Naval Med Ctr OB/peds social workers, Naval Center PPD support group
• Invited spouses
Research Design and Methods (con’t)

• Guided Interview Format
• Collected demographic data and mental health history survey
• Introductions and ground rules especially re: confidentiality
• Noted body language and other nonverbal cues after group
• We provided childcare and a $25 gift card

Questions Asked

• Did you have knowledge about postpartum depression before it was diagnosed?
• What was your experience in getting care for your PMAD?
• What did you see as barriers to getting treatment?
• What made it easier to get treatment?
• How do you think being a part of the military has affected your treatment and recovery?
• How did your PMAD affect your spouse?
• If you were to develop a treatment program for military spouses, what would it look like?

Focus Groups: Data Gathering & Analysis Process

• Focus groups were audiotaped and then transcribed, supplemented with observational behavior
• Using grounded theory method
• Read through transcripts individually to identify themes
• Consensus of themes reached as a group
• Currently being analyzed in nVivo software
FOCUS GROUPS

- FG 1: 3 Participants; 1 male spouse
- FG 2: 2 Participants
- FG 3: 2 Participants
- FG 4: 2 Participants

SAMPLE: Demographic Data

AGE: average age 31.3; Range 27-43 years
Marital Status: 100% Married
Number of children: 88% 2 or more children
Number of children under 5 years: 100% (55% with 2 children under 5)
Race/Ethnicity: 100% White
Place of Birth: 88% USA
Education: 100% H.S. or above; 44% college educated
Income: 66% over $60K/year; 44% over $80K/year
Employment: 33% FT; 22% PT; 22% Homemaker; 22% unemployed/looking for work
Military Branch: 88% Navy; 11% Army

SAMPLE: Mental Health Diagnoses and Treatment

- 33%: Postpartum Depression & Anxiety
- 22%: Postpartum Anxiety
- Other: 11%: ADHD & Depression; 11% Bipolar Disorder & Anxiety;
  • Missing data: 22%
  ▶ 50% of participants diagnosed with a mental health condition unrelated to the perinatal period
  ▶ 44% of participants reported treatment with both medication and psychotherapy (individual, couples and/or group); 11% just med; 11% just counseling
  ▶ Treatment duration: Range of 1 month to 3 years
Did you have knowledge about postpartum depression before it was diagnosed?

- Previous episode
- School: nursing school, baby education classes, baby books
- Integrated care model, flagged due to high EPDS

“I didn't understand it until I felt it myself, I thought these people are being wimps and dramatic until it hit me and I was like ‘Oh my god, I'm losing my mind, I'm going crazy’.”

What was your experience in getting care for your PMAD?

- Integrated care- midwife or OB
- New parent support program
- Referral from inpatient social worker

“My midwife shared with me that she had experienced similar things and she said ‘do you want to go right away?’ and I got an appointment with the therapist.”

“I was having panic attacks and they sent in the social worker and she gave me a packet with resources.”

What did you see as barriers to getting treatment?

- Active duty: referral process and wait time
- Insurance: confusion, co pays,
- Access: finding a specialized provider
- Childcare- don’t trust
- Stigma- don’t want to worry husband
- Fear being discharged

“There's no one to catch you if you fall”

“He was kicked out of his platoon because I needed him at home”
“Who is not going to be depressed moving and crossing the United States multiples careers, and losing your career and everything. Depression should be covered!”

“I got a bill that said "$300" and I thought, oh hell no, we need to pay for other things.”

“If they are worrying about you at home, then it makes them not mission ready”

“He was kicked out of his platoon because I needed him at home”

“He’s afraid he’ll lose his clearance”

“It’s a belief of mine that I got from the military, you can get injured and break your arm and be okay but if something is wrong with your brain and you’re depressed and it’s like ‘oh you want to kill yourself?’ it’s a major liability that makes you ineligible to serve.”

“It’s hard to develop a relationship with people in such a short amount of time, we have been here a long time but we don’t have money. If I am not able to pay top dollar, I’ll just go without. I’m not going to take the bottom of the barrel.”

What made it easier to get treatment?

- Integrated care
- Friends, lactation consult, supportive command, supportive spouse
- Bringing children

“It took me six months to come out to my supervisor, I would sit outside my car and not be able to get out. He was understanding and made me feel it was okay to have this issue”

How do you thinking being a part of the military has affected your treatment and recovery?

- Husbands long work hours
- Dependent on command
- Deployment: bonding, not worry
- Moving: trust, support
- Self care is very difficult

“I put him in a box on a shelf and don’t think about him. If he calls, I take him out of the box and he is all pretty and shiny. Then I put him back”

“I am the mistress, like he is married to the Navy and not married to me.”
“They have a lot of resources, it’s not something that is just thrown at you, you have to investigate a little bit.”

“If the navy wanted you to have a family, they would have issued it in the sea bag”.

“Everything would change and I understood the interaction with the kids would have to change. That bedtime would have to change, everything changes when Daddy is home. And you understand that. But at the same time, when you are feeling the way that you are feeling, and he does not quite understand what is going on. That was the hardest part you readjust and then the same thing would happen again three months later”

“I was alone, I didn’t know anybody, instead of going home to be with family I got a job and powered through it.”

“He is an E6, there are 40 in his command, he is the guy they all come to. He has told them that I have problems, and they are still like ‘whatever’, it’s a man worlds in that place”

“Basically all they care about if it affects his ability to work, so if your wife is having problems? Well that sucks but you still have to go to work”

“His command does care, they have events and stuff, they want to make sure all of the families are involved. When I had the baby, they sent a care package with a pacifier and a little blanket.

If you were to develop a treatment program for military spouses, what would it look like?

• Follow up calls
• Groups and individual
• Meal planning, budgeting, nutrition
• Coffee
• Meditation
• Homey environment
• Reading other moms stories
• Support messages
• no negativity, or drama!
• Babysitting club
How did your PMAD affect your spouse?

“I am dealing with postpartum anxiety myself and my husband with some PTSD that he deals with. And the transition when he goes away to combat and he has a certain mindset that he is in when he comes back, trying to get out of that mindset but be able to help me at the same time is difficult”

“He supported me, we are pretty open, but I don’t put everything on him because I feel it’s not fair, he has enough to deal with”

“Dad’s need time to help the moms”

“I walked in and he was talking to his brother and crying and upset, he was having a hard time with me having a hard time.

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EMERGING THEMES:
Preliminary Qualitative Data Analysis

Lack of Trust
- Relating to other military spouses
- Childcare assistance (“can’t trust others to care for my children”)
- Healthcare providers (insensitive to recognizing and adequately PPD, Postpartum Anxiety etc)

Not Connected to Other Military Spouses
- Other military spouses not seen as a source of comfort or aid; perceived as “catty,” “dramatic,” “fighting and cheating,” and engaging in “gossip”
- Seen as the “crazy one” by them

Stoicism
- Expect to navigate family transitions alone

Loss of control/ loss of independence
- Displacement (frequent moves, no family nearby, feeling alone)
- Routines change when husband comes home—happy to have him back but extra work adjusting home life to include him just to have him leave again and readjust

EMERGING THEMES (con’t)

Being “bound”
- Natural transitions such as parenting bound up with military

Military vs family duty
- Balancing and prioritizing family’s needs with Command’s needs
- Price to pay for prioritizing family (“he will have to take crap for it”)

Difficulty Navigating System
- Knowing what resources exist
- Accessing resources
- Confusion about who to call and what eligible for
LIMITATIONS of STUDY

Homogeneous Sample
- Minority women’s voices missing
- Primarily Navy spouses

Group Format
- While in many ways appeared to be therapeutic for women to share experiences, some may have been inhibited by concerns over confidentiality
- Socially Desirable Responses

Small Sample Size
- Recruitment challenges and time constraints contributed to small groups
- Missing the voices of spouses (which had hoped to explore)

Next Steps: Future Research
- Feasibility considerations: resource intensive; hope/plan to continue collaboration between UCSD and USD

Future directions for research
- Continue to recruit: aim to recruit more diverse sample
- Build on emerging themes to explore new questions based on the concerns expressed by the women that were not fully captured in previous round of questions
- Consider creation of a specific questionnaire based on qualitative data and pilot test for reliability and validity so as to be able to conduct further research with a larger and more diverse sample across the risk spectrum

Ultimate Goal: Build on existing evidence base and additional investigation for future treatment planning, interventions that meet the unique needs of this population
Treatment Considerations

- Psychotherapy interventions
- COMMUNITY OF CARE - subspecialty within perinatal mental health providers
- Group prenatal care, matched on deployment status
- “on call” telephone support
- Follow up phone calls when at risk families identified
- Embedded mental health services in OB and pediatric offices
- Cross talk bw military and civilian medical centers
- Doula service for all at risk wives whose spouses are deployed
- Specialized IOP track

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