

Supporting the contraceptive and menstrual needs of our female troops: Updated systematic review and implications



Sara Vargas, PhD
Centers for Behavioral
and Preventive Medicine
Providence, RI

Women In the U.S. Military

~15% of active duty personnel are women (>200,000 women)

(DoD, 2015; Pentagon, 2015)



In 2013, Defense Secretary Carter announced that all combat positions would be opened to women

- >100,000 positions opened to women since 2013

- >200,000 positions to be opened by tomorrow (Johnson et al., 2015)

The Importance of Readiness

- What is readiness in a military culture?
 - How quickly forces (and the individuals that comprise those forces) are ready to take on their mission (Moore et al., 1991)
- To be effective, military personnel must not only be trained for their role, but also physically and psychologically capable of performing the demands of their mission
(Military Health System Communications Office, 2015)



Menstruation & Unintended Pregnancy

- Managing menstrual and pre-menstrual symptoms can be challenging during training and deployment (Wardell & Czerwinski, 2001)
- Unintended pregnancy and birth impacts both military operations and families (Christopher & Miller, 2007; McNeary & Lomenick, 2000)
 - Negative outcomes for mothers, babies, and families
 - Childcare and support
 - Career concerns for military women
 - Restricts when women are able to be deployed
 - Costly healthcare and medical evacuations



Photo Source: <http://health.usnews.com/health-news/health-wellness/articles/2016-01-28/military-fertility-its-complicated>

Putting the Pieces Together

Holt, Grindlay, Taskier, & Grossman (2011)

- Systematic review (Jan 1990 – Oct 2010) unintended pregnancy and contraception among military women

Military personnel may have higher rates of contraceptive use and higher rates of unintended pregnancy compared to civilians

- Lower rates of contraceptive use on deployment
- *Methodology issue*: prescriptions versus self-reports (e.g., Enewold , 2010)

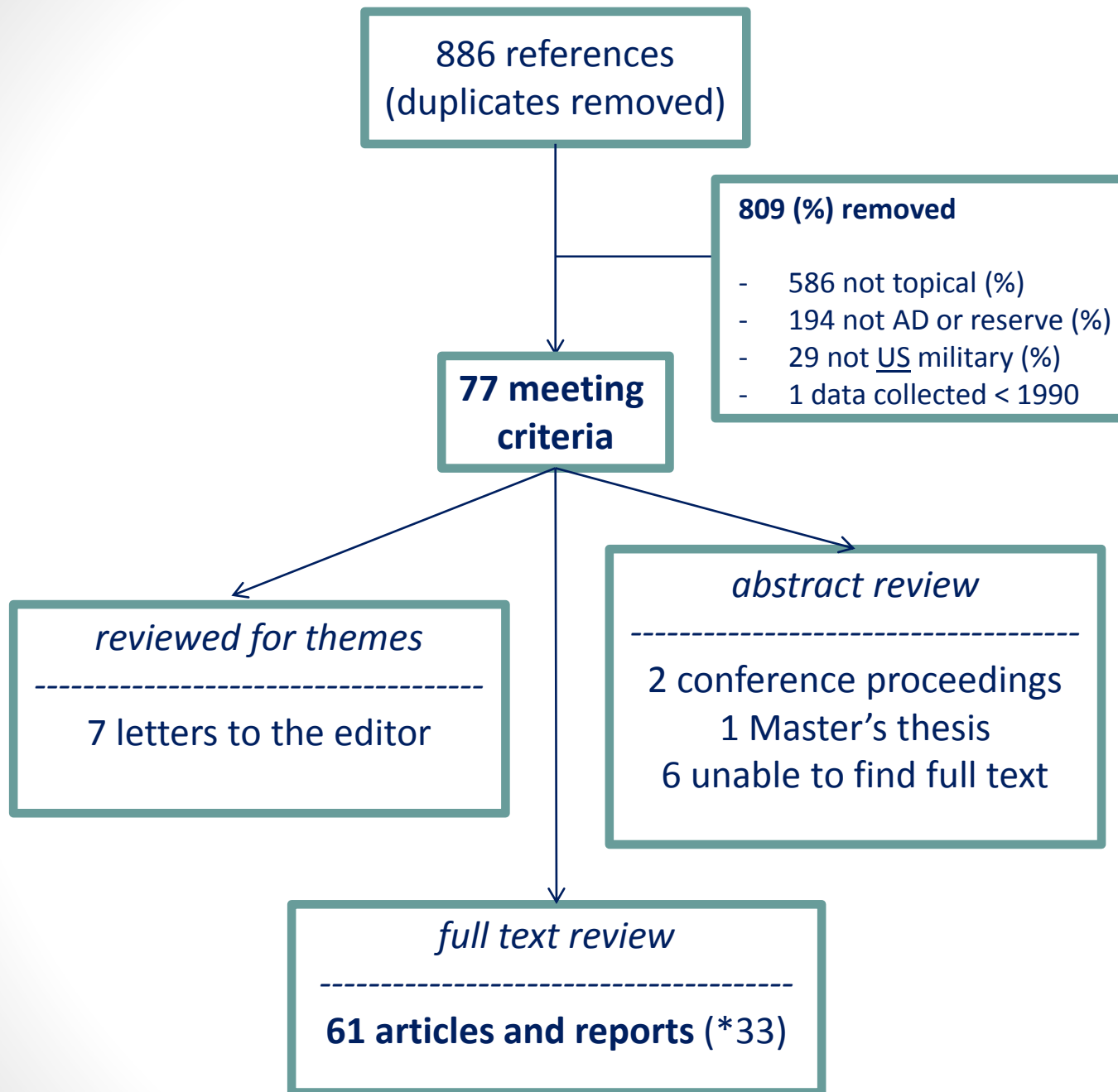
Interest in menstrual suppression is higher than actual practice

Need representative, prospective, and qualitative studies

Where are we 5 years later...?

Updated and Expanded Review

- Search terms: unintended pregnancy, contraception, and menstrual suppression among female U.S. military personnel (active duty and/or reserve)
- Databases: PubMed, CINAHL, POPLINE
- Dates: January 1990 – January 2016



Describing the Studies

- ~30% focused on menstrual suppression
 - Mixed military branches
 - Mostly related to deployment and field experiences
- ~70% on unintended pregnancy, contraception, or both
 - Most are Army, Navy, or mixed
 - All interventions (n=4) were Navy or Marines
 - 8 qualitative or mixed method studies
 - 4 related to managing menstrual and genitourinary issues
 - 2 primarily focused on health care access / policies
 - 2 explored unintended pregnancy, contraception, and contraceptive decision-making



Take Homes

- Many recurring themes
 - Continue to have high rates of unintended pregnancy
 - ~7% among active duty, ~10% on deployment (Grindlay & Grossman, 2015)
 - Risk factors include younger age, enlisted status, Navy & Marines > Air Force
 - More interest in menstrual suppression than actual suppression
 - Largely attributed to education deficits (Powell-Dunford et al., 2009)

Calls for Access and Education

- Improved access to (and increased variety of) feminine hygiene products and contraceptives
- Increased education and knowledge among both users and providers



Addressing These Needs

- Promotion of long-acting reversible contraceptives
 - Among 1.7 million women in TRICARE Prime, annual initiation of LARC was 4-5% for IUDs and 0.01-2% for implants (Chiles et al., 2016)
 - Increasing LARC use among military personnel – even by small amounts – would be both cost effective and reduce the number of unintended pregnancies (Heitmann et al., 2014)
 - SHARP (Navy/Marines) is working with ARHP to support LARC training for military providers
 - Education and skills-based training



What else we need to know

- The impact of these trainings on LARC uptake, continuation, and unintended pregnancy rates – the OUTCOMES!
- Family planning strategies for those who are unable or unwilling to use LARC methods

Of 329 women at a military treatment facility, 33% wanted LARC postpartum, and 31% were using LARC by 12 weeks postpartum (Dahlke et al., 2012)

Method Match Comparison Chart

[« Back to full list of birth control methods](#)

Source: <http://www.arhp.org/methodmatch>

	<u>Hormonal IUD</u> (Mirena and Skyla)	<u>Implant</u> (Nexplanon)	<u>Pill</u>	<u>Male Condom</u>
				
Cost	\$250-\$950 up front (lasts up to 7 years)	\$400-\$800 up front (lasts up to 3 years)	\$15-\$50 a month	About \$1 each
Effectiveness	Extremely Effective (99%)	Extremely Effective (99%)	Very Effective (92%)	Effective (85%)
Requires healthcare provider visit	Yes	Yes	Yes	No
Timing of use or replacement	Effective for 5-7 years	Effective for 3 years	Take daily	Use and dispose of with each act of intercourse
Protection from STDs/STIs	No	No	No	Yes
Quickly reversible	Yes	Yes	Yes	Yes
Private (not detectable by partner)	Yes	Yes	Yes	No
Possible side effects	Irregular or no...	Irregular or no...	Nausea, headaches, breast...	Irritation from latex...

Beyond Access and Education

- Is increasing knowledge enough? (Pazol et al., 2015)
- Greater understanding of the “whys” Why do women initiate any particular contraceptive method? (Dis)continue? Switch?
 - One qualitative study of 10 women (aged 19-24) at a Navy military treatment facility identified the following factors in contraceptive decision-making:
 - Personal goals, family values, support system, knowledge, and effectiveness of the method (Chung-Park, 2007)
- Utilize contraceptive decision aids integrating unique experiences and needs of military personnel (e.g., highlighting menstrual suppression) (Grindlay et al., ; Krulewitch, 2016)
 - Decision aids can be used with or without health care interaction

Provider Counseling and Communication

- Greater understanding of the provider communication styles that military personnel experience (Dehlendorf et al., 2014)
 - How can we support providers to motivate and engage patients?
 - Which styles work best?
- Consistency of messages across military providers, trainings, and consistency of messages for those who seek care from civilian providers
 - Do the civilian providers “get” their unique concerns?
- Tailoring of message to an individual’s culture as well as the specific environment (e.g., deployment, training) (Wardell et al.,)

Message Specificity

APPENDIX A

Key Points in Preparing Women for Menstruation During Deployment

(Trego et al., 2007)

1. Inform women of the challenges imposed by characteristics of the deployed environment, particularly by heat and dirt, on menstrual hygiene
2. Advise women that they may alter their use of menstrual products in the deployed environment
3. Encourage women to make a plan for packing and maintaining menstrual hygiene supplies during deployment (i.e., menstrual products, baggies, baby wipes, and hand sanitizer)
4. Offer options for menstrual cycle control such as traditional use OC, extended or continuous use OC, medroxyprogesterone acetate, or the levonorgestrel-releasing intrauterine system

Note. OC = oral contraceptives.

Future Methodology Considerations

- Innovative approaches to conducting high-quality studies in a mobile population with high turn-over and many demands
 - Creating impactful, sustainable interventions that can reach many people each year
 - Utilizing technology (e.g., mobile apps (Mangone et al., 2016))
- Overcoming barriers to engagement in research
 - Concerns that findings might be used to suggest that women are not fit for the military (Wardell et al., 2001)

Research Opportunities

- Need access to funding to yield improved research and outcomes
 - Many articles do not cite any funding sources
 - TriService Nursing Research Program
 - Private foundations
 - DoD or NIH grants



In Closing

- It has *never been more important* that we bring together expertise in both the military and civilian sectors
 - Multidisciplinary efforts to address the contraceptive and menstrual health needs of our female troops.

Thank you...

My co-authors

Melissa Guillen

Melissa Getz

Kate Guthrie

Miriam Midoun

The military and VA providers who have helped me gain a fuller understanding of reproductive and health care issues among female servicewomen

The women of our Armed Forces – and their families – for their commitment and sacrifices

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MOST RELEVANT REVIEWS

- Holt et al., 2011: systematic review
 - Topics: contraceptive use & unintended pregnancy (47 articles) and abortion (0 articles) among US military women
 - Years: Jan 1990 – Oct 2010
 - Sources: PubMed, CINAHL, and Popline
- Goyal et al., 2012: review
 - Topics: unintended pregnancy, contraceptive use active duty and veterans
 - Years: N/A
 - Sources: N/A
- Braun et al., 2016: systematic review
 - Topics: pregnancy health, deployment and preventive health, STIs, contraceptive services, and sexual violations (82 articles)
 - Years: Jan 2008 – Dec 2014
 - Sources: PubMed, PsycINFO, Embase
- Krulewitch et al., 2016: review
 - Topics: unintended pregnancy, contraceptive use, pregnancy outcomes
 - Years: N/A
 - Sources: N/A