

# The Veterans Metrics Initiative (TVMI): Veterans and their Mental Health

---

11 November 2020



**PennState**

# Clearinghouse for Military Family Readiness

Our mission is to engage in applied research and evaluation, implementation science, education, and outreach to advance the well-being and health of service members, veterans, and their families.

## Our Services:

- Applied research
- Curriculum development
- Learning solutions
- Program evaluation
- Program implementation
- Program selection

PennState A Penn State Applied Research Center

CLEARINGHOUSE FOR MILITARY FAMILY READINESS

**Sound Science, Strong Families, Stronger Service**

The Clearinghouse is an applied research center created to help professionals identify, implement, evaluate, and improve programs that strengthen military service members, veterans, and their families.

Learn More

Live Chat

Visit our website at [militaryfamilies.psu.edu](https://militaryfamilies.psu.edu)

# Veteran Evaluation and Research Applications Network

## CLEARINGHOUSE FOR MILITARY FAMILY READINESS

A PENN STATE APPLIED RESEARCH CENTER

Our VETERANetwork team at the Clearinghouse includes:

Dr. Daniel F. Perkins

Dr. Keith R. Aronson

Dr. Nicole R. Morgan

Ms. Kimberly J. McCarthy

Ms. Julia A. Bleser



# Acknowledgements and Disclaimer

- The work presented here was funded by a grant managed by the Henry M. Jackson Foundation for the Advancement of Military Medicine, Inc.
- Dr. Perkins was the Principal Investigator from the Clearinghouse for Military Family Readiness at Penn State University.
- Collaborators on the project included the following:

Ms. Julia Bleser (Clearinghouse)   Dr. Laurel Copeland (VA)  
Dr. Katie Davenport (Clearinghouse)   Dr. Erin Finley (VA)  
Dr. Nicole Morgan (Clearinghouse)   Ms. Cynthia Gilman (HJF)  
Dr. Keith Aronson (Clearinghouse)   Dr. Dawne Vogt (VA)

*The views expressed in this presentation are those of the authors and not those of the U.S. Department of Veterans Affairs (VA), the Henry M. Jackson Foundation for the Advancement of Military Medicine, Inc., or the Pennsylvania State University.*

# Study Sponsor Information



The Veterans Metrics Initiative research was managed by the Henry M. Jackson Foundation for the Advancement of Military Medicine, Inc., (HJF) and collaboratively sponsored by the Bob Woodruff Foundation; Health Net Federal Services; Lockheed Martin Corporation; Marge and Phillip Odeen; May and Stanley Smith Charitable Trust; National Endowment for the Humanities; Northrop Grumman; Prudential; Robert R. McCormick Foundation; Schultz Family Foundation; The Heinz Endowments; Veterans Health Administration Office of Research and Development; Walmart Foundation; and the Wounded Warrior Project, Inc.

# The Veterans Metrics Initiative (TVMI) Sample



Vogt, D., Perkins D. F., Copeland L. A., Finley, E. P., Jamieson, C. S., Booth, B., Lederer, S., & Gilman, C. L. (2018). The Veterans Metrics Initiative study of US veterans' experiences during their transition from military service. *BMJ Open* 8(6), e020734. doi:10.1136/bmjopen-2017-020734 <https://bmjopen.bmj.com/content/8/6/e020734>

- 3-year longitudinal study (public dataset will be available in April 2021)
  - Coordinated by the Henry M. Jackson Foundation for the Advancement of Military Medicine, Inc.
- National sample of 9,566 veterans who completed the survey at Wave 1
  - Participants were recruited in the fall of 2016
  - 23% response rate by newly separated U.S. veterans
- Non-response weights were computed to adjust for gender, rank/paygrade, and branch (full population of 48,695 eligible veterans)
- Six waves of data at 6-month intervals

# Research Aims

## Research Aim 1:

- Document veteran well-being in 4 key domains over the first 3 years of the transition from military service to civilian life: **mental and physical health, vocation, finances, and social**

## Research Aim 2:

- Describe programs used by veterans as they reintegrate into civilian life and distill them into their components, identifying common components across programs

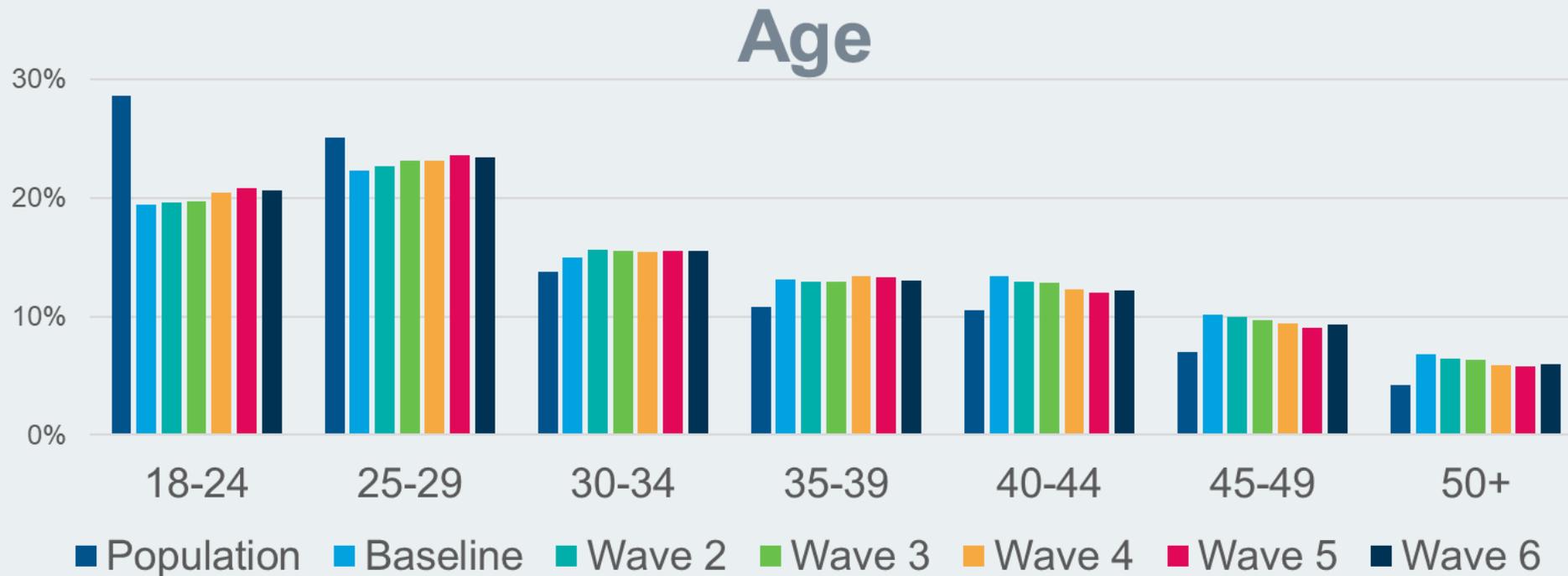
## Research Aim 3:

- Identify program components that are associated with changes in veteran well-being following separation from military service

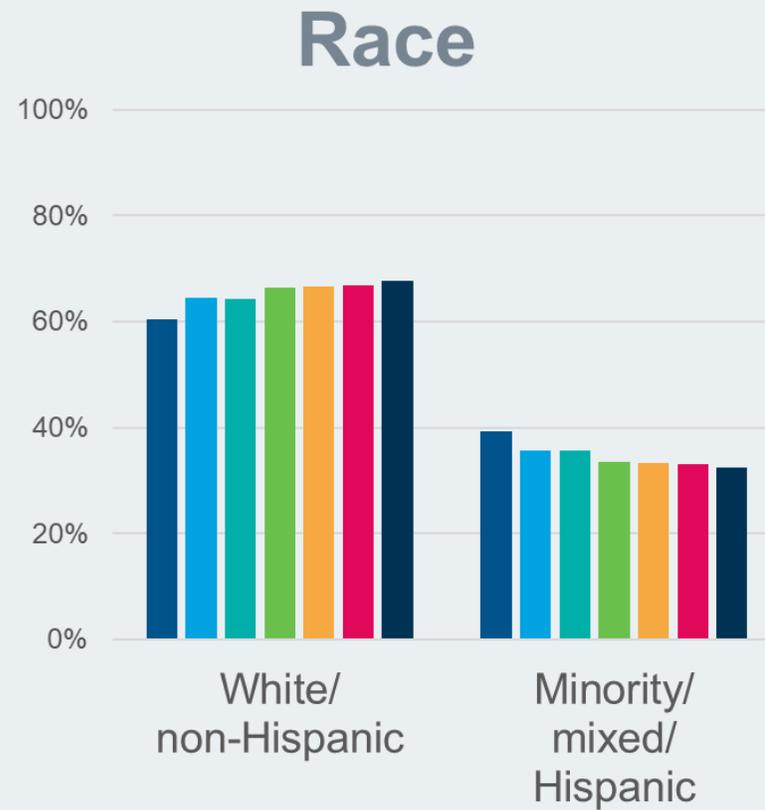
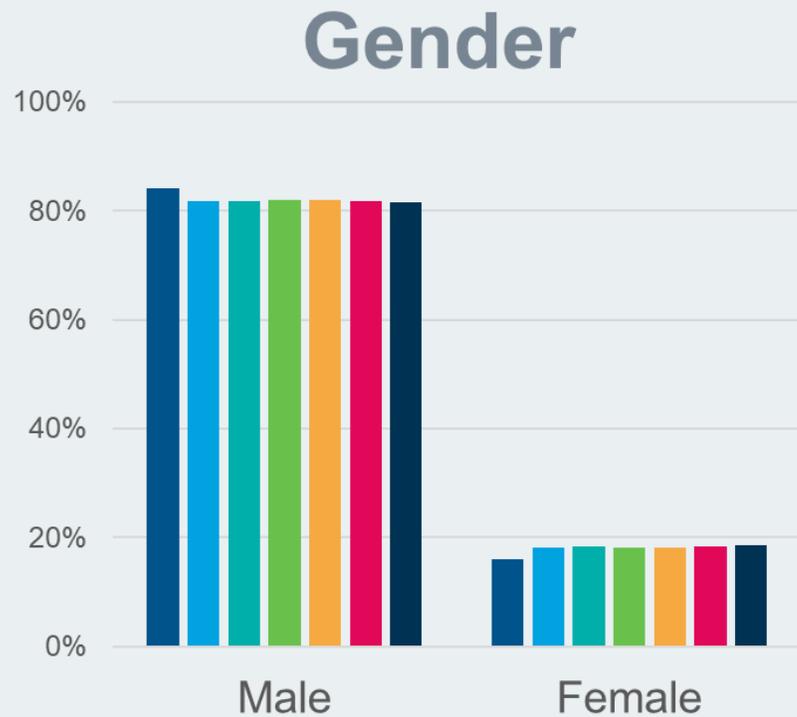
# Sample Representativeness

	Population (n=48,965)	Wave 1 (n=9,566)	Wave 6 (n=5,258)
<b>Male</b>	84.1%	81.8%	81.5%
<b>Female</b>	15.9%	18.2%	18.5%
<b>Army</b>	32.1%	32.9%	31.0%
<b>Navy</b>	18.8%	19.2%	19.3%
<b>Air Force</b>	13.5%	19.0%	19.9%
<b>Marines</b>	17.2%	15.9%	16.6%
<b>National Guard/Reserve</b>	18.4%	12.9%	12.4%
<b>E1-E4 Junior Enlisted</b>	41.4%	27.5%	28.5%
<b>E5-E6 MidGrade Enlisted</b>	29.5%	30.0%	29.9%
<b>E7-E9 Senior Enlisted</b>	13.4%	17.9%	16.7%
<b>W1-W5 Warrant Officers</b>	1.1%	1.6%	1.5%
<b>O1-O3 Junior Officers</b>	6.4%	8.4%	9.0%
<b>O4-O10 Senior Officers</b>	8.1%	14.7%	14.5%

# Maintaining Representativeness: Age



# Representativeness: Gender and Race/Ethnicity





# Overarching Recommendations

---



***Although most veterans navigate the transition from military to civilian life well, some veterans have difficulties. The following recommendations aim to bolster programs, services, and resources available for successful veteran reintegration.***

# Overarching Recommendations

**Almost all veterans use transition resources in the first two years after military separation.** Beyond two years, those in high-risk categories (e.g., problematic financial status, post-traumatic stress disorder (PTSD), and cumulative trauma experiences) need continued supports.

1. Establish a universal screener and link it to a navigation infrastructure (e.g., AmericaServes) thereby identifying risk factors early and providing targeted supports, interventions, and components.
2. Utilize proven engagement and marketing strategies to increase program/service use by veterans, and especially target those who are high risk or less likely to utilize programs/services (e.g., junior enlisted paygrades).
3. Incorporate the identified evidence-based components into program/services to promote effectiveness.

# Well-being Recommendation #1

**Advance a narrative through tailored communications, storytelling, and data visualizations to communicate that the majority of transitioning veterans are resilient and doing well during their civilian reintegration.**

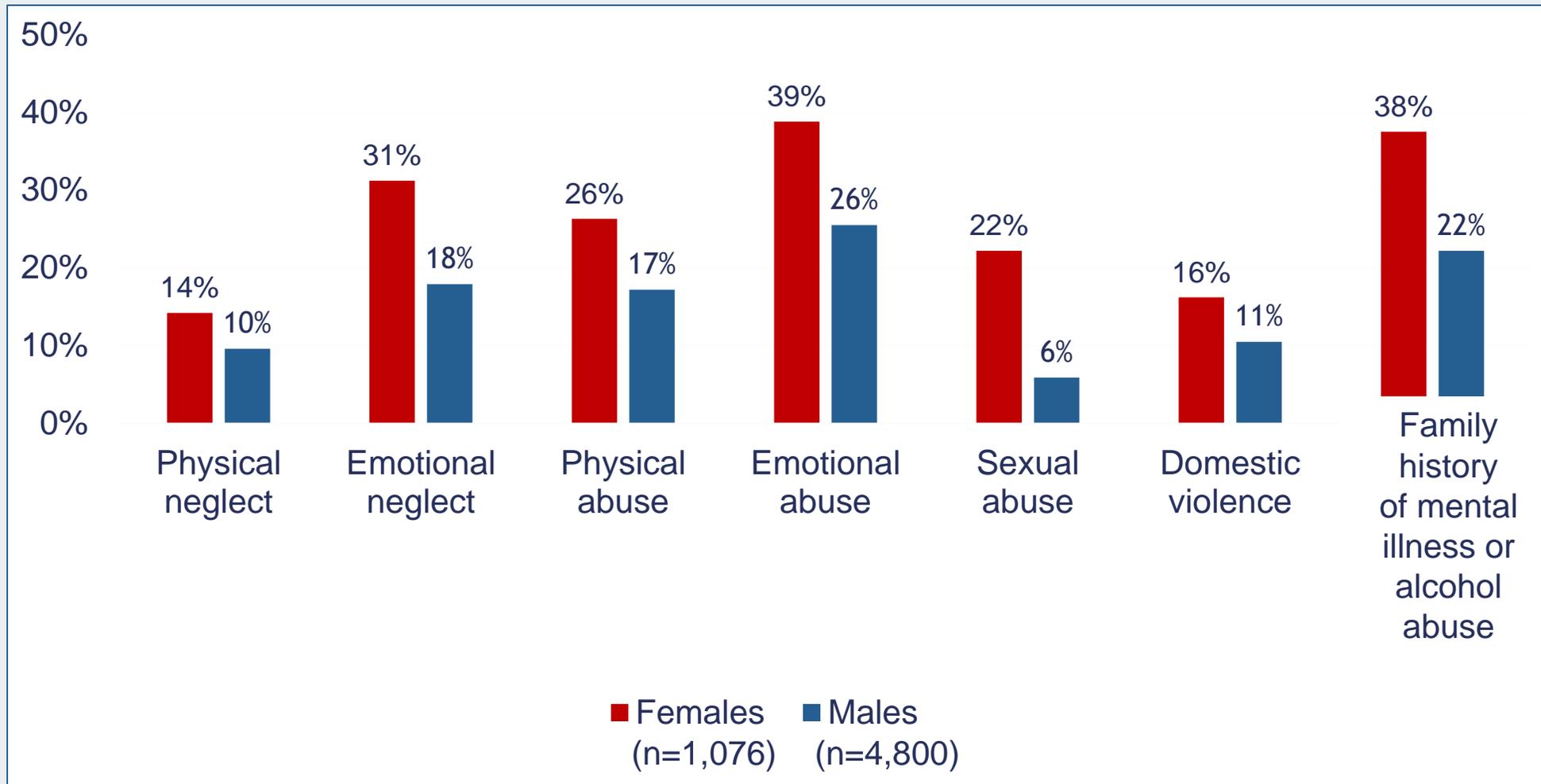
- 90% of the veterans indicated they were not socially isolated.
- Among veterans who were not full-time students, 56% were working full-time and 26% were looking for work in Wave 1. Forty-eight percent of the veterans found a full-time job in Wave 2 and approximately 70% were working full-time by Wave 6 (3 years out).
- 27% of the veterans reported possessing high resilience.

# Adverse Childhood Experiences (ACEs) Defined



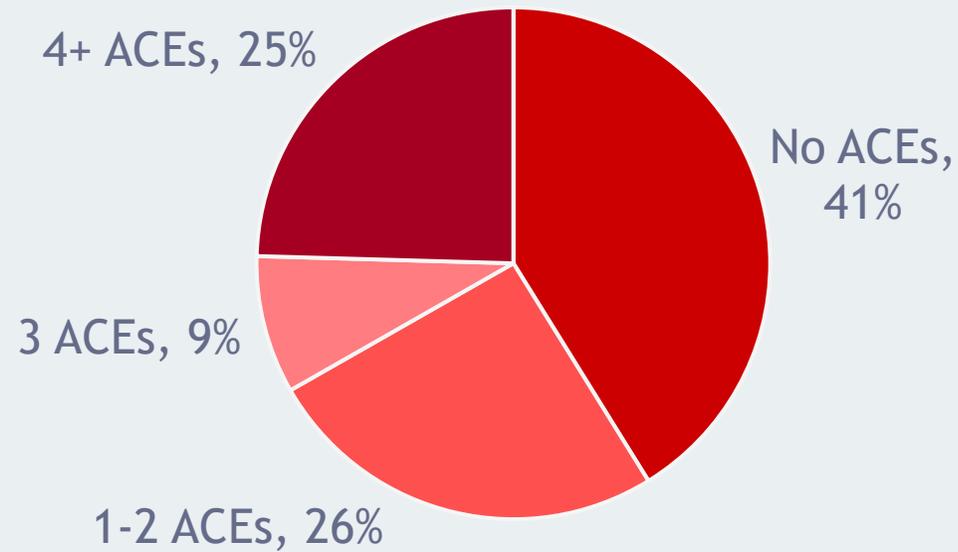
- Exposure to abuse or neglect (e.g., psychological, physical, sexual, emotional), observing violence, and living in toxic family and contextual environments early in life
- Correlated with the development of depression, anxiety, aggression, suicide attempts and completions, alcohol and drug abuse, smoking, criminal activity, and unsafe sexual practices (Chapman et al., 2004; Turner, Finkelhor, & Ormrod, 2006; Wright, Carter, & Cullen, 2005)

# Types of ACEs by Gender (n=5,875)

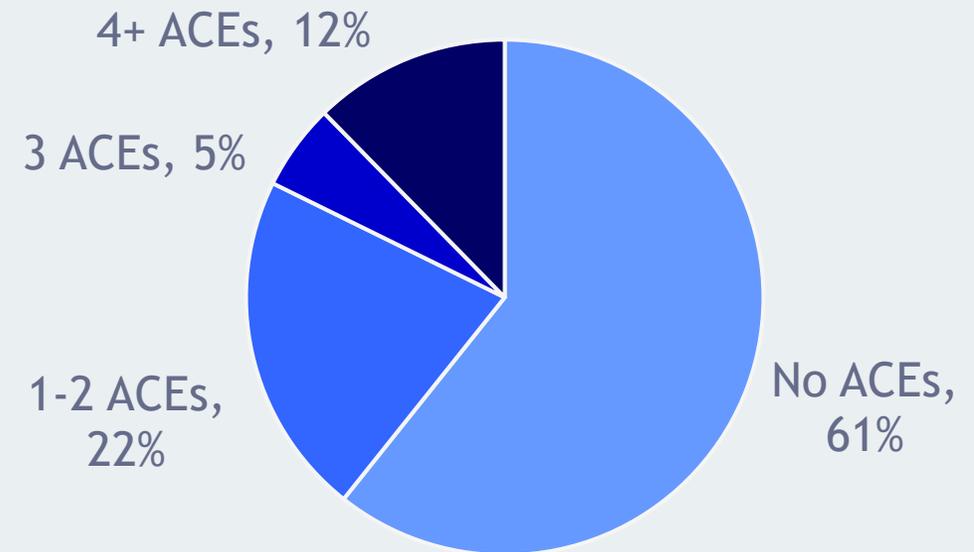


# Number of Reported ACEs

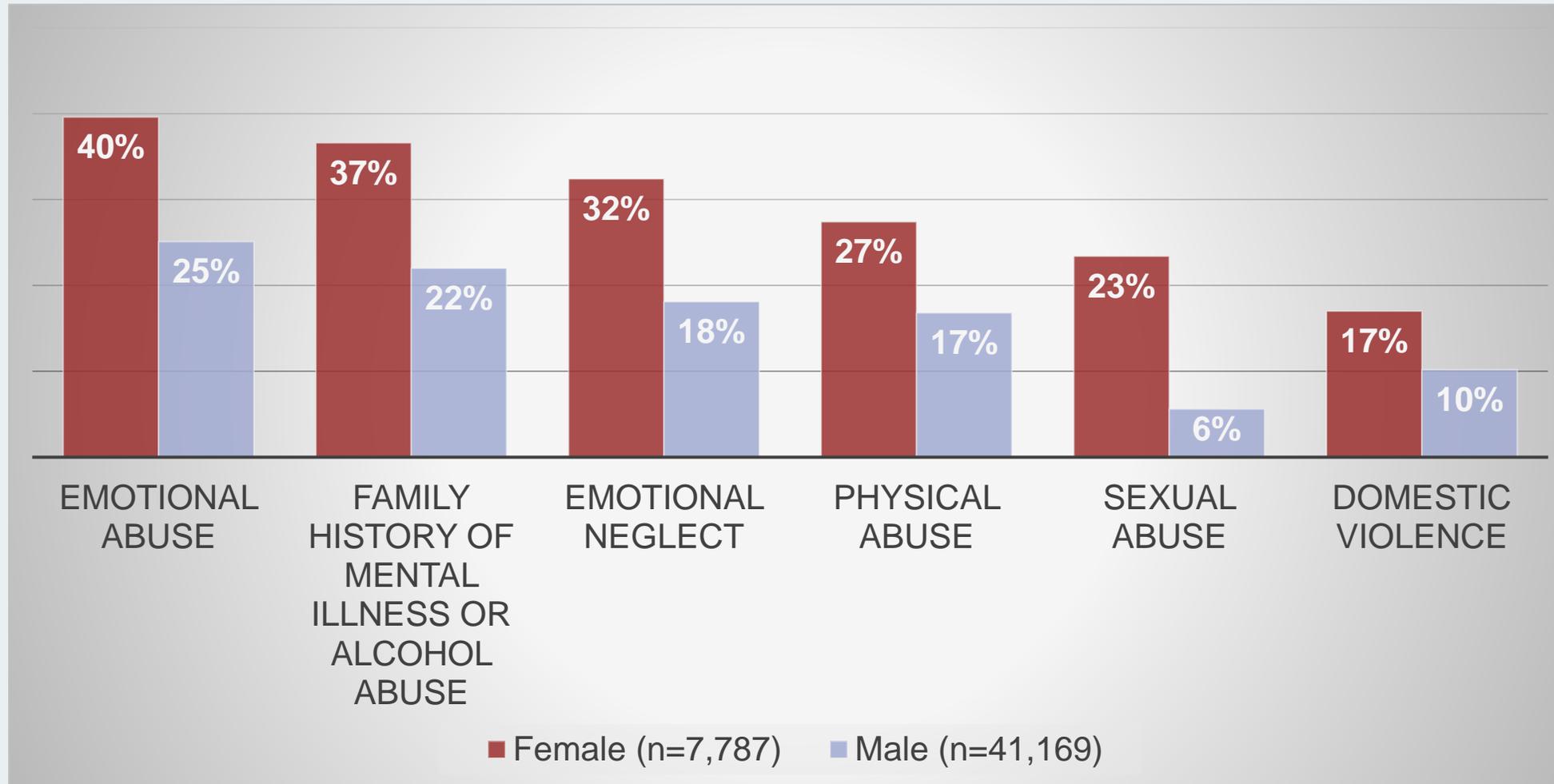
## Females



## Males



# Types of ACEs by Gender

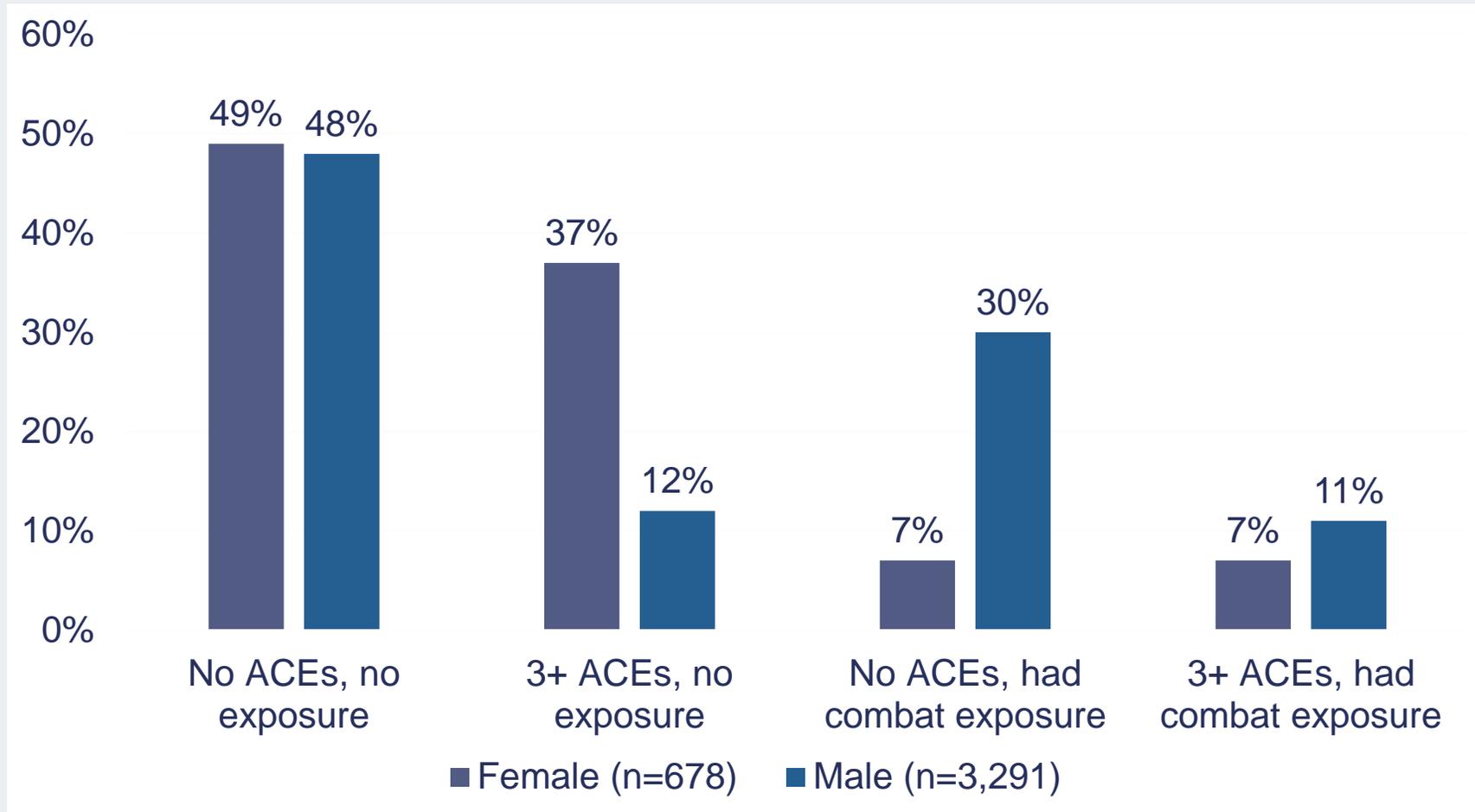


# Military Warfare Experiences

- **Combat patrol event** items included encountering land or water mines, booby traps, and roadside bombs and firing your weapon at enemy combatants
- **Corollaries of combat** items included seeing civilians after they had been severely wounded or disfigured or personally witnessing a fellow unit member or an ally being severely wounded or disfigured



# Interaction Between ACEs and Combat Exposure



# Combination of Combat Exposure and ACEs: Predicting *Probable Post Traumatic Stress Disorder*

	Female Veterans	Male Veterans
High resilience	84% less likely	82% less likely
No ACEs, no combat patrol events, no corollaries of combat (reference group)		
1-2 ACEs, no combat patrol or corollaries	Not significant	--
3+ ACEs, no combat patrol or corollaries	3x more likely	3x
Only among veterans exposed to corollaries of combat		
No ACEs, corollaries of combat	--	2x
1-2 ACEs, corollaries of combat	--	3x
3+ ACEs, corollaries of combat	5x	6x
Among veterans who experience both combat patrol events and corollaries of combat		
No ACEs, both combat and corollaries of combat	11x	5x
1-2 ACEs, both combat and corollaries of combat	5x	7x
3+ ACEs, both combat and corollaries of combat	6x	10x

# Combination of Combat Exposure and ACEs: Predicting *Probable Depression*

	Female Veterans	Male Veterans
High resilience	86% less likely	82% less likely
No ACEs, no combat patrol events, no corollaries of combat (reference group)		
1-2 ACEs, no combat patrol or corollaries	--	1.6x more likely
3+ ACEs, no combat patrol or corollaries	3x	3x
Only among veterans exposed to corollaries of combat		
No ACEs, corollaries of combat	--	1.6x
1-2 ACEs, corollaries of combat	3x	2x
3+ ACEs, corollaries of combat	3x	4x
Among veterans who experience both combat patrol events and corollaries of combat		
No ACEs, both combat and corollaries of combat	5x	3x
1-2 ACEs, both combat and corollaries of combat	5x	3x
3+ ACEs, both combat and corollaries of combat	6x	4x

# Combination of Combat Exposure and ACEs: Predicting *Probable Anxiety*

	Female Veterans	Male Veterans
High resilience	77% less likely	83% less likely
No ACEs, no combat patrol events, no corollaries of combat (reference group)		
1-2 ACEs, no combat patrol or corollaries	--	2x more likely
3+ ACEs, no combat patrol or corollaries	2x	3x
Only among veterans exposed to corollaries of combat		
No ACES, corollaries of combat	--	2x
1-2 ACES, corollaries of combat	Not significant	2x
3+ ACES, corollaries of combat	3x	3x
Among veterans who experience both combat patrol events and corollaries of combat		
No ACES, both combat and corollaries of combat	3x	3x
1-2 ACES, both combat and corollaries of combat	3x	3x
3+ ACES, both combat and corollaries of combat	3x	5x

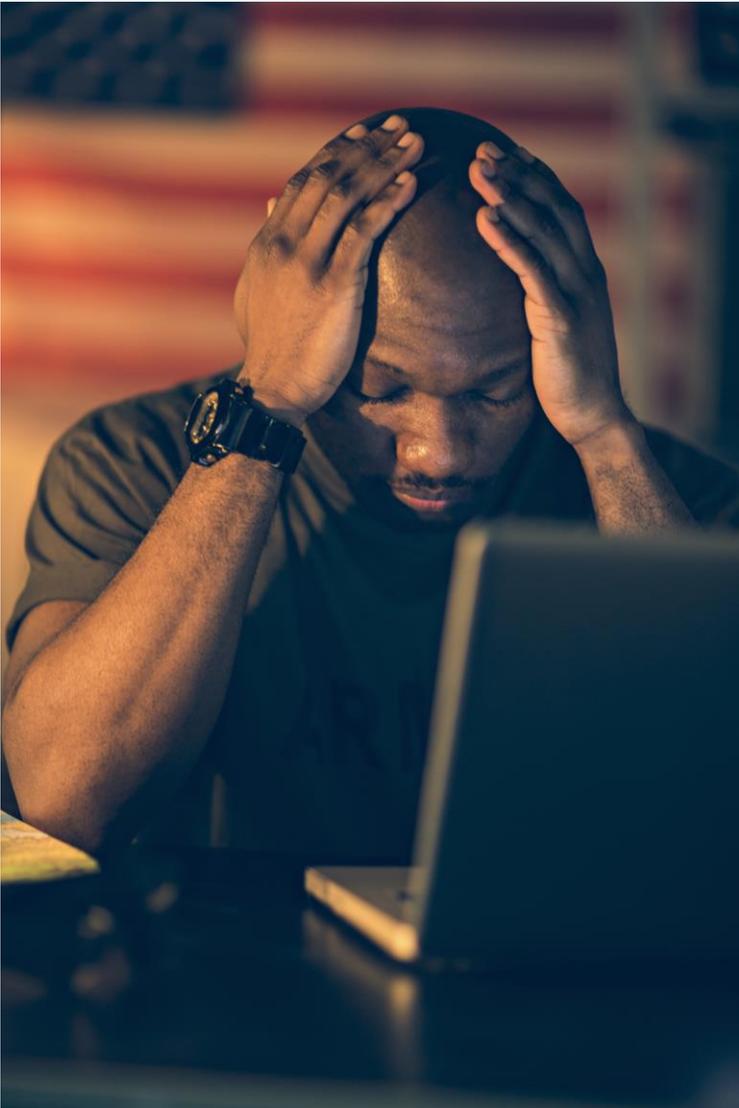
# Combination of Combat Exposure and ACEs: Predicting *Probable Suicidality*

	Female Veterans	Male Veterans
High resilience	86% less likely	86% less likely
<b>No ACEs, no combat patrol events, no corollaries of combat (reference group)</b>		
1-2 ACEs, no combat patrol or corollaries	3x more likely	2x
3+ ACEs, no combat patrol or corollaries	5x	3x
<b>Only among veterans exposed to corollaries of combat</b>		
No ACES, corollaries of combat	--	Not significant
1-2 ACES, corollaries of combat	--	Not significant
3+ ACES, corollaries of combat	5x	4x
<b>Among veterans who experience both combat patrol events and corollaries of combat</b>		
No ACES, both combat and corollaries of combat	9x	3x
1-2 ACES, both combat and corollaries of combat	9x	2x
3+ ACES, both combat and corollaries of combat	8x	5x

# Summary of Traumatic Exposure Results

- ACEs, by itself, predicts poor outcomes at Wave 1.
- Cumulatively, ACEs and warfare experiences dramatically increase the likelihood of issues: PTSD, anxiety, depression, suicidality.
- Moral injury impacts adjustment to civilian life; however, the degree varies by gender.
- A large portion of veterans have a growth outlook as a result of a trauma or crisis they experienced.

# Engaging Veterans in Services -- Matters



- Only 8% or less of the veterans used any health programs, even when they screened positive for mental health problems.
- Veterans who used counseling services for mental health improved their depression symptoms in the following assessment across the 6 waves.

# Thank You

---

## Contact Us:



[militaryfamilies.psu.edu](http://militaryfamilies.psu.edu)

[veteranetwork.psu.edu](http://veteranetwork.psu.edu) – Coming soon!



[VETERANetwork@psu.edu](mailto:VETERANetwork@psu.edu)

Dr. Daniel F. Perkins: [dfp102@psu.edu](mailto:dfp102@psu.edu)



**PennState**