

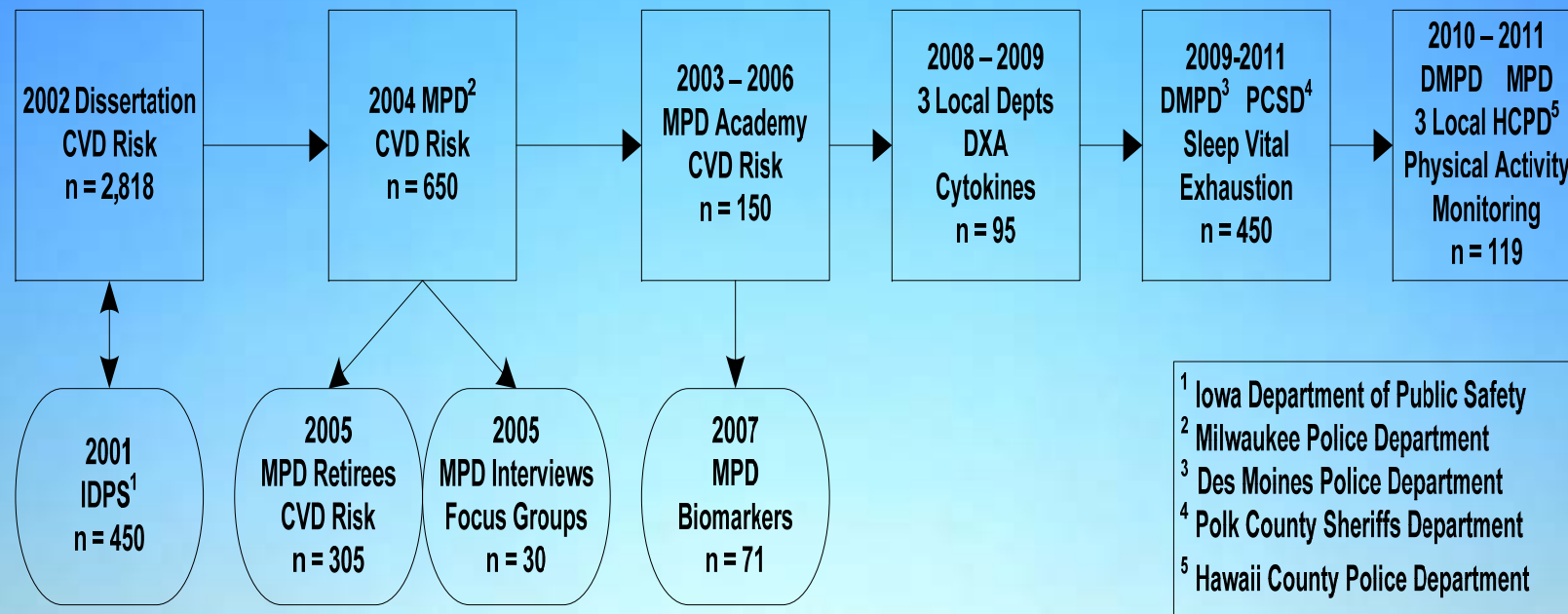
The background of the slide is a dark, blurred image of police lights. On the left, there are red lights. In the center, there are orange lights. On the right, there are blue lights. The lights are out of focus, creating a bokeh effect.

Evaluating Resilience: A Worksite Intervention in Police

Sandra L. Ramey PhD, RN

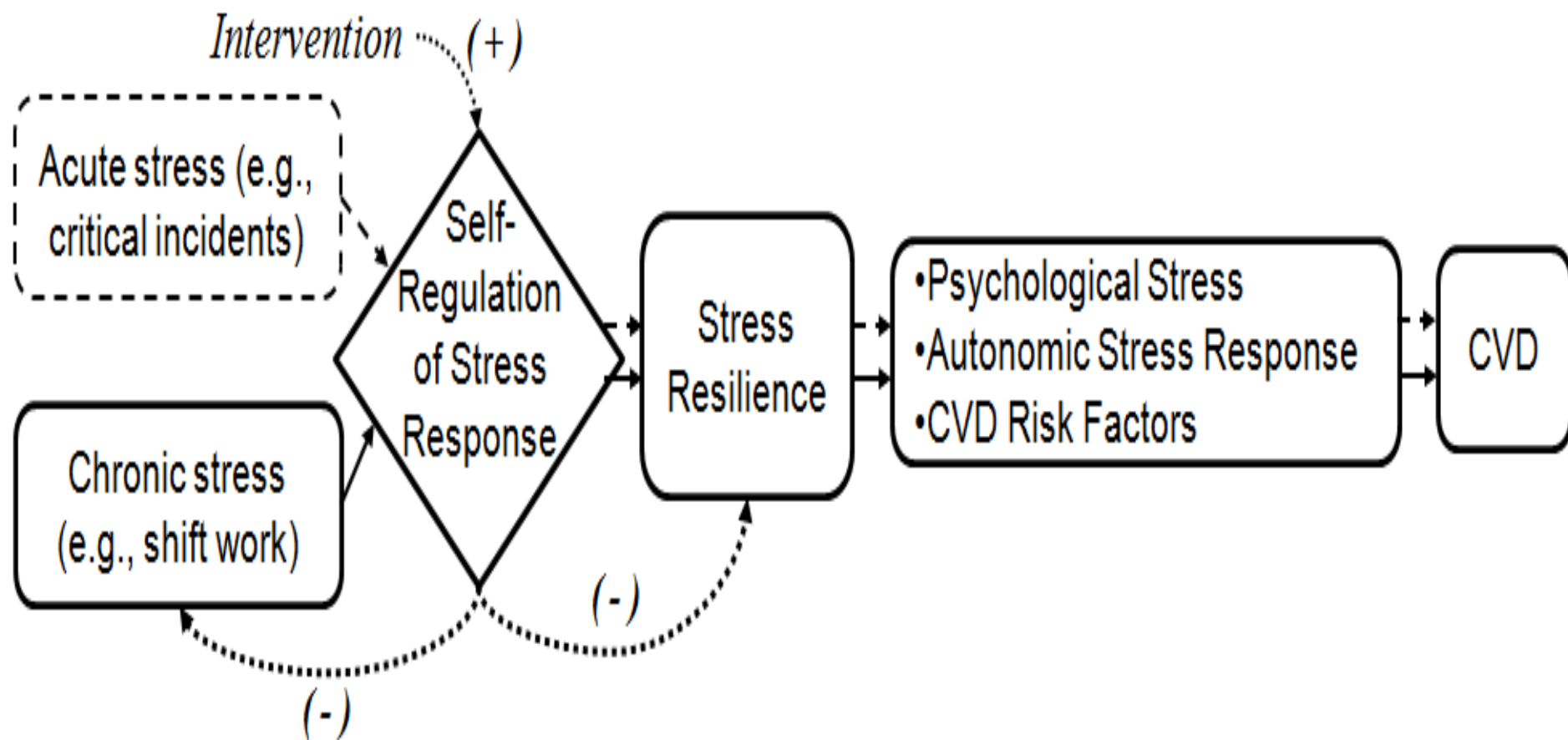
Funded by the University of Iowa Healthier Workforce Center
for Excellence

Figure 2. Diagram of Research Trajectory



Stress and CVD

- Stress related directly to CVD
- Indirectly via effects on
 - Blood pressure
 - Cholesterol
 - Physical activity
 - n=2,850 officers 9 depts. (Ramey, et al., 2002)



Why Resilience?

- Decrease the high suicide rate
- Reduce risk and CVD morbidity
- Modify response to critical incident and org stress
- Reduce health care and absenteeism costs
- **Reduce Disability related to stress**
- Improve Heart Rate Variability r/t death
- Increase family involvement

Resilience Training Program Reduces Physiological and Psychological Stress in Police Officers

This study explored the nature and degree of physiological activation typically experienced by officers on the job, and the impact of the Coherence Advantage training on a group of police officers from (two high crime) districts of the Milwaukee Police Department, Milwaukee, WI.

N = 20 police officers

Qualified Instructor for Coherence Advantage



IHM can train members of your department to deliver the Coherence Advantage Workshop and sustainability modules.

Short term Goals

- Modify how officers react to stress
 - Improve autonomic response
 - Decrease risk factors for CVD
- Save money on **stress disability**

Long term Issues

- Reduce citizen complaints
- Improve family dynamics
- Reduce fatigue and burnout
- Improve the organizational climate

Study Design Protocols

- Data collection 3 times **Sept/Dec/Feb**
- Heart rate monitor for 3 time points for 24hrs
 - 1 work 1 off day
- **Class** ~ 1 ½ hr
- **tele-mentor** booster class (approx 1 hour)
- Em wave 2 **practice device**



Coherence Advantage Program Objectives

Learn to strengthen operational stress resiliency through research-based tools that help you:

- ✓ Leverage your ability to think clearly under pressure and discern appropriate solutions to problems.
- ✓ Increase your ability to maintain situational awareness.
- ✓ Diminish symptoms of operational stress such as sleep disturbance and fatigue.
- ✓ Improve reaction times and coordination.
- ✓ Increase personal resilience and stress tolerance.

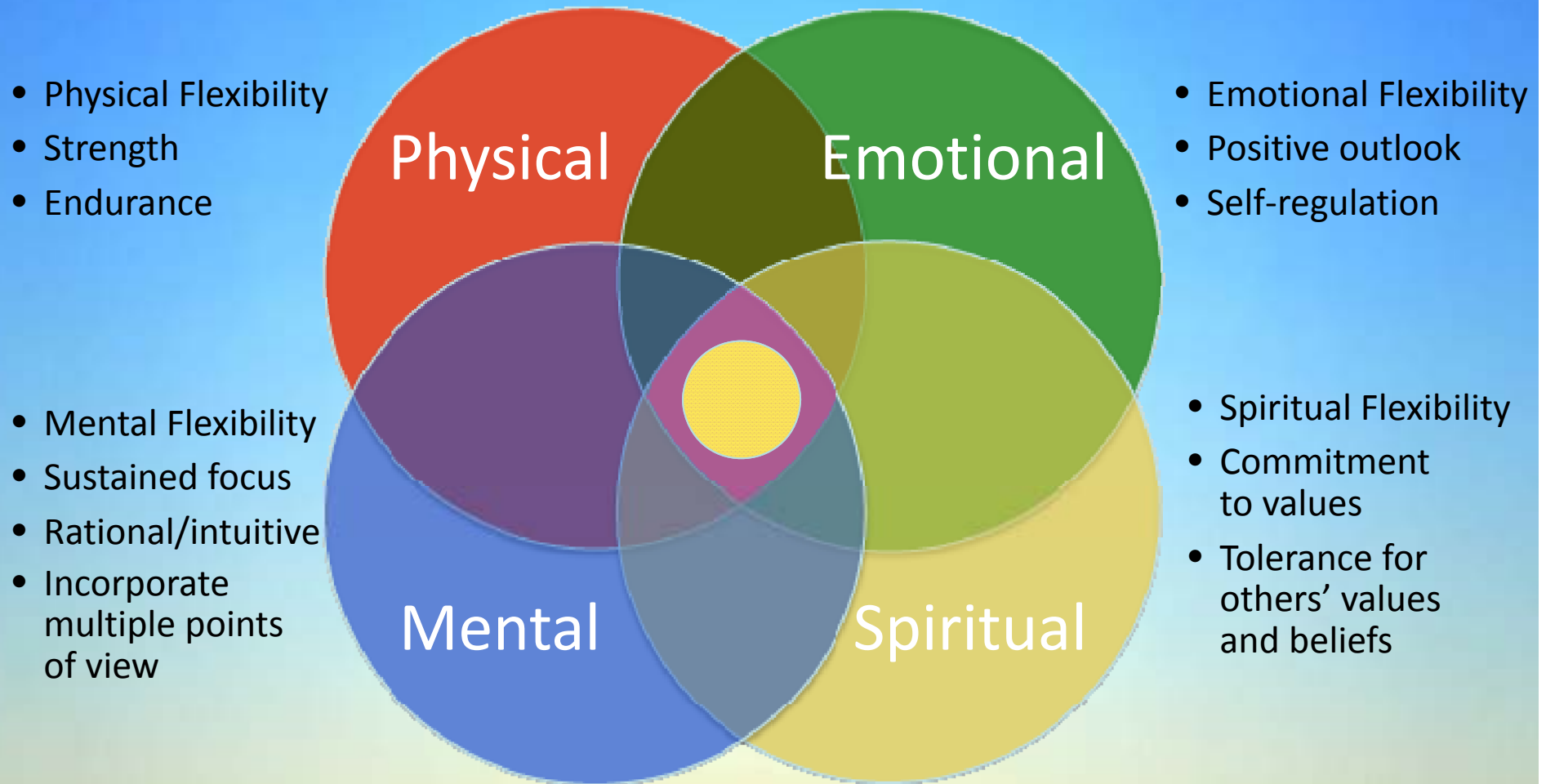
Resilience

The capacity to prepare for, recover from, and adapt in the face of stress, challenge or adversity.

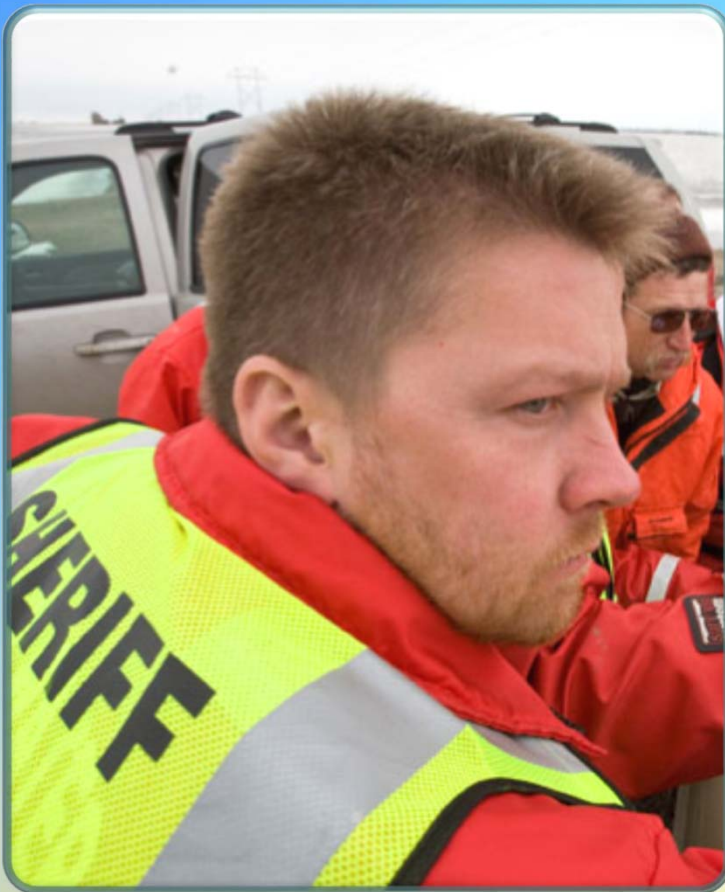
- It's especially important for preventing stress build-up and wasted time and energy.



Dimensions of Resilience



Intelligent Energy Management



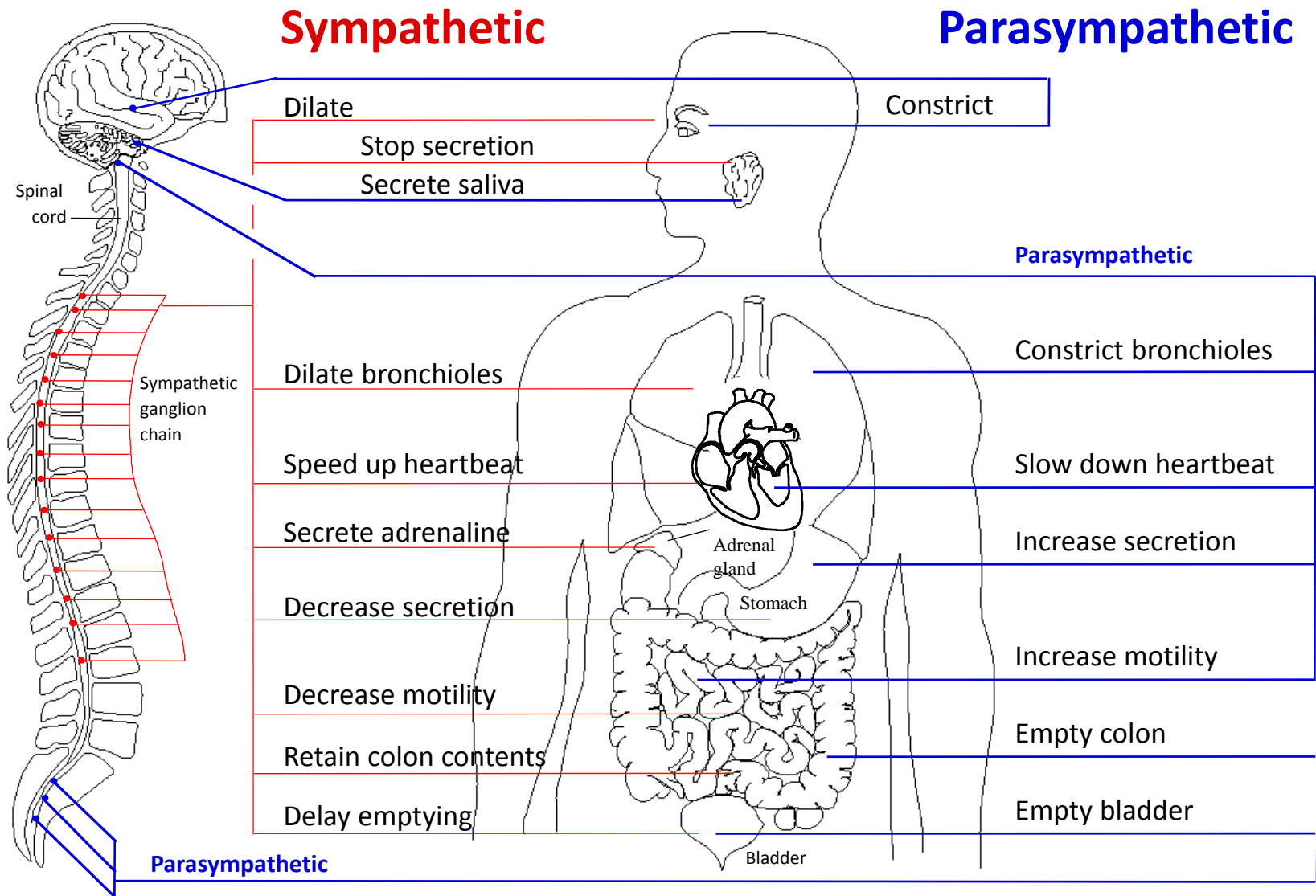
Resilience, optimal performance and health are grounded in the intelligent management of our energy expenditures.

10% source & 90% reaction



The Physiology of Optimal Function







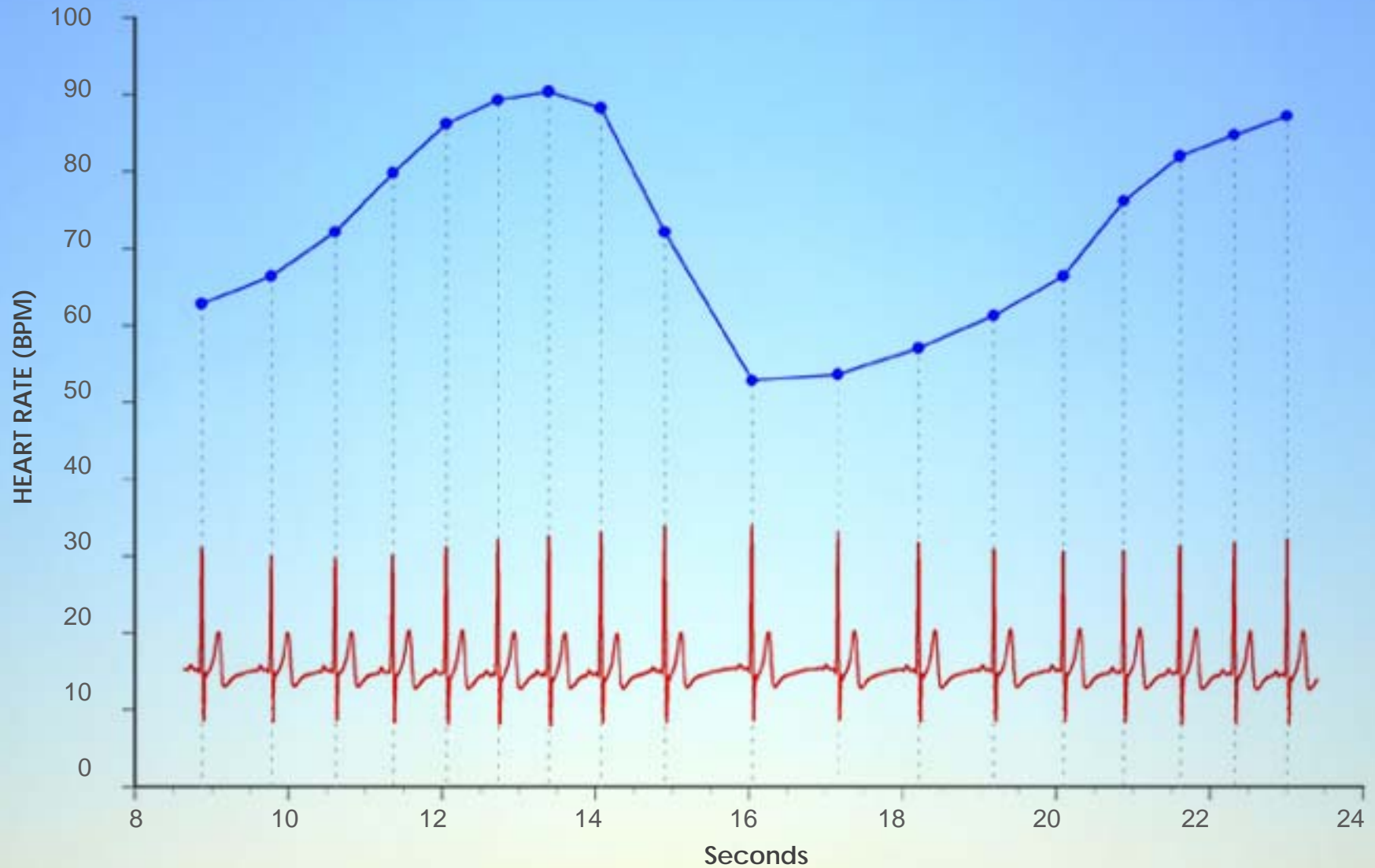
The Heart-Brain Relationship



- The heart has its own complex nervous system – the “Heart Brain”.
- The heart sends far more information to the brain than the brain sends to the heart.
- The heart signals especially affect the brain centers involved in abstract thinking, reaction times, and self-regulation



Heart Rate Variability: The Heart's Rhythm

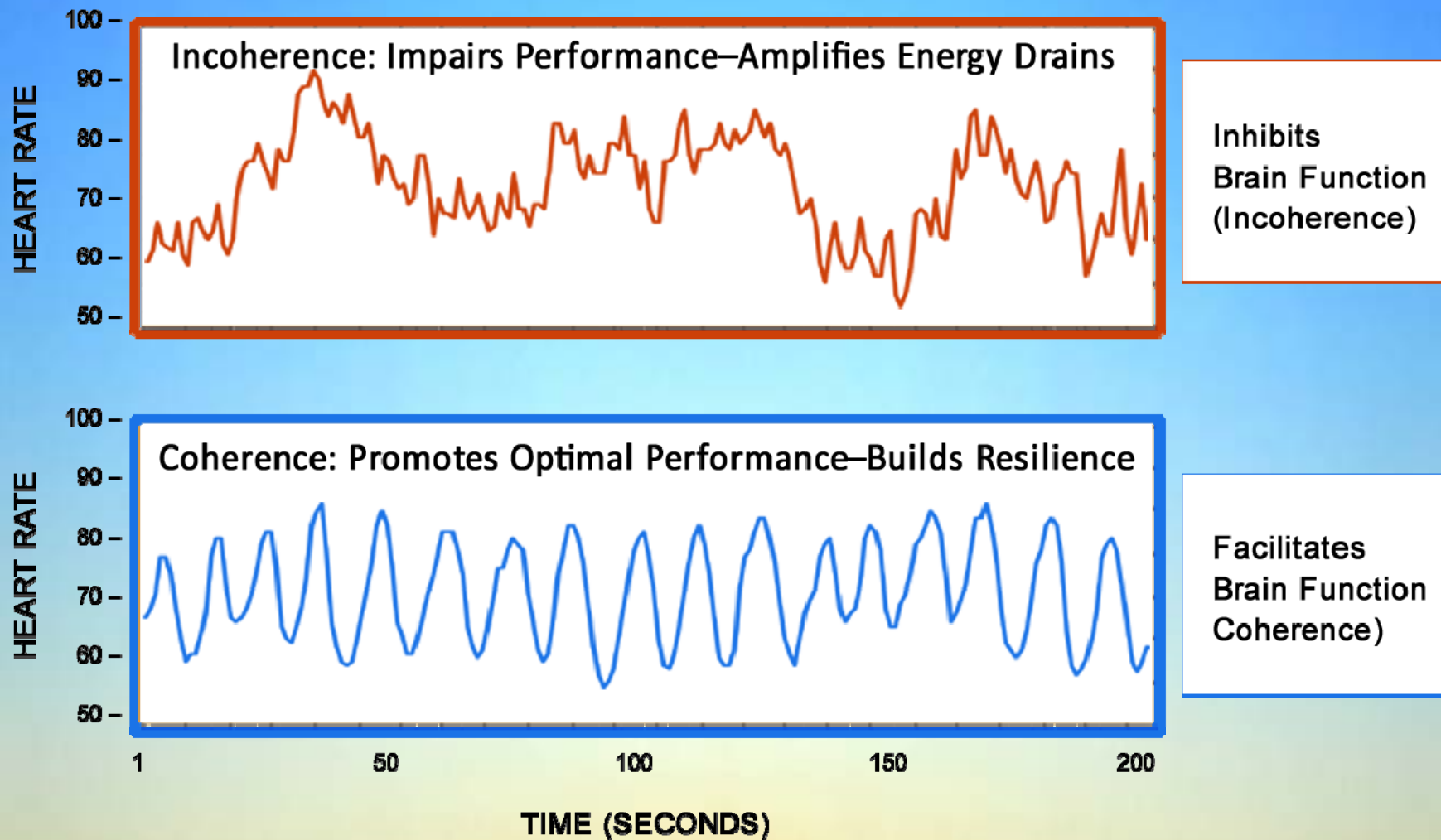




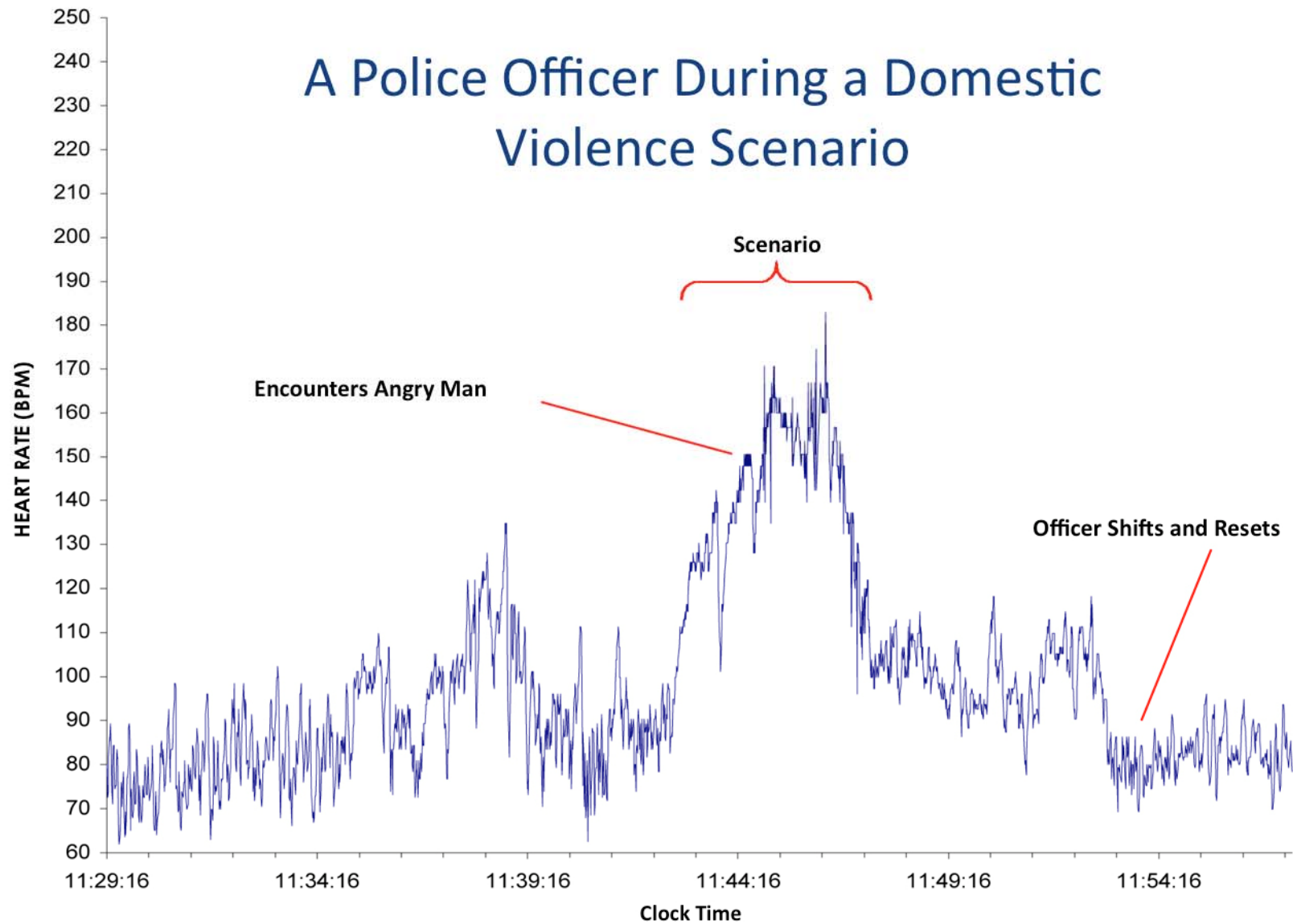
Heart Rate Variability (HRV)

- Abnormally low HRV, is a strong and independent predictor of future health and behavioral problems.
- HRV is an important indicator of psychological resiliency and ability to adapt to stress.
- Higher level of resting HRV are associated with superior performance on tasks requiring executive functions.
- HRV coherence: used for optimal state training to support learning of the self-regulation tools and improved mental functions.

Heart Rhythms



A Police Officer During a Domestic Violence Scenario





Coherence Significantly Improves Brain Function

- Increased ability to self-regulate *(Bradley, 2010; Bedell 2010)*
- 40% improvement in long-term memory
- 24% improvement in short-term memory *(McCraty, 2010)*
- Increased ability to focus *(Lloyd, 2010; Ginsberg, 2010)*
- Increased ability to process information *(Ginsberg, 2010)*
- Increased reaction times *(McCraty, 2010)*
- Higher test scores *(Bradley, 2010)*
- Improved ability to learn *(Bradley, 2010)*

The Coherence Advantage Program in the Military

“I had the opportunity to visit with our Sailors in Afghanistan last fall and the leadership told me that the program is clearly helping the Sailors that use it and they had a number of compelling examples. A common theme was improved sleep, and ability to sustain their composure in high stress interactions with the detainees.”

— *CAPT Laraway*
Operation Stress Control Officer, US Navy



The HeartMath[®] Tools

The HeartMath techniques induce a coherent physical and mental state which increase mental clarity and emotional stability, especially in challenging situations.

The process of shifting into a coherent state is facilitated by assistive technology—the emWave.





emWave 2 is a portable resilience-building technology that provides immediate feedback on coherence levels



emWave2

Mobile and small enough to fit in your pocket.



global coherence

INSTITUTE OF HEARTMATH
Connecting Hearts and Minds

Inner Balance App

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Activating the Intuitive Heart: Creating a Heart-Centered Global Community

The Three Keys to Building Resilience

- **PREP** to be more coherent and reduce stress reactions before upcoming events or going on duty.
- **Sustain** your coherence throughout the day by establishing regular practices and remembering to refresh your composure in between activities.
- **Reset** by shifting to a coherent state as soon as possible after a stress reaction so you minimize the energy drains.



Officer Feedback

- All the feedback was **positive**
- Changes in B/P at 3 months
- Shared the device with **family members**
- “I think I am calmer now”
- “I can mentally step back”
- Applies to family stressors, **money , time mgt**
- Awareness of “**just how stressful one really is**”



Officer Feedback

- “I used **before sleep** to help get more uninterrupted sleep”
- “**Before working out** to cultivate intensity”
- “I used on the off days to **help stop thinking**”



Pre lim Results

(Post Intervention Physiological Variables)

- **B/P** improvement
- **LDL** decrease (significant change)
- Significant Correlations with amount of change in coherence BMI and Waist Circumference

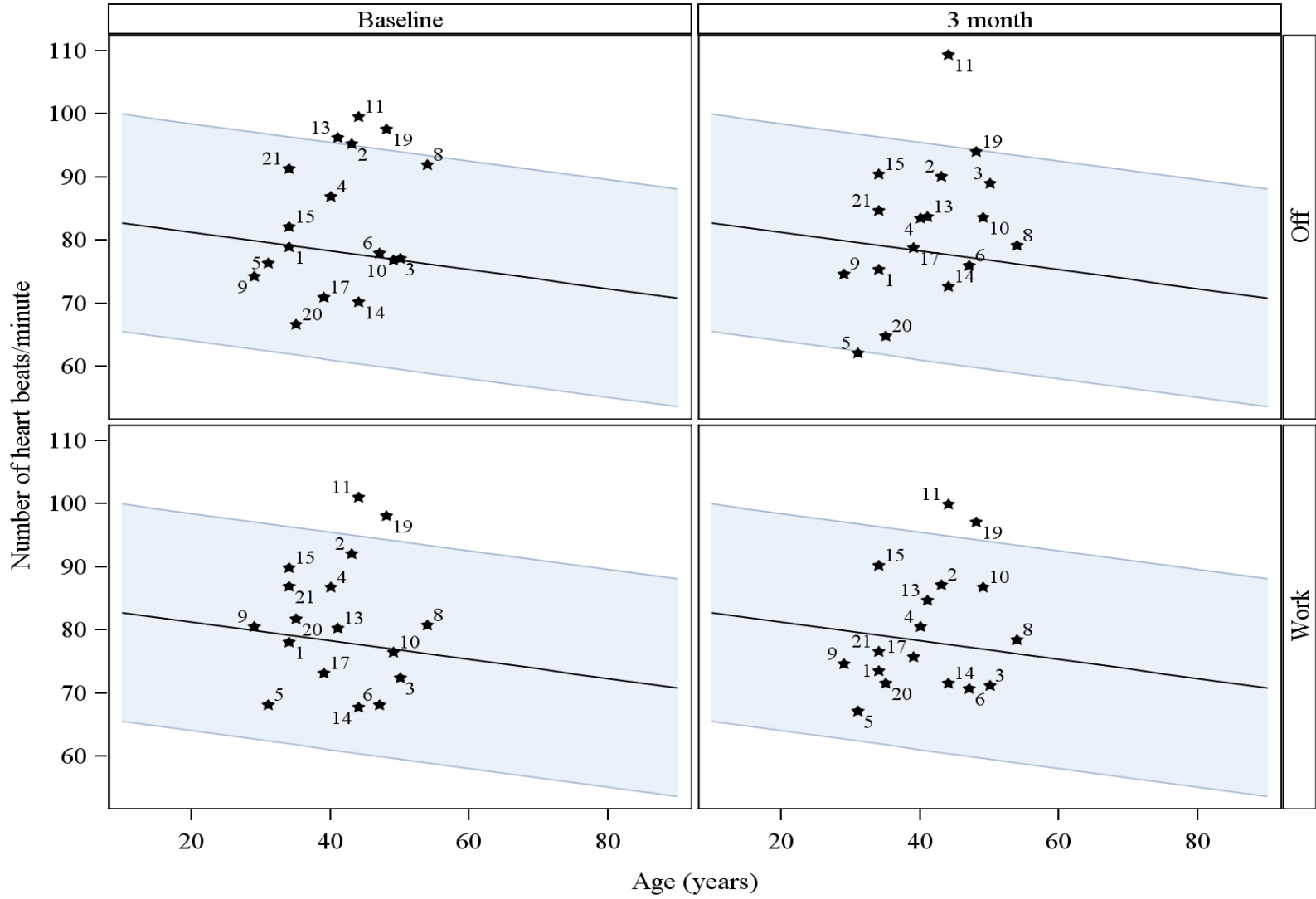


Prelim Results (Con' t)

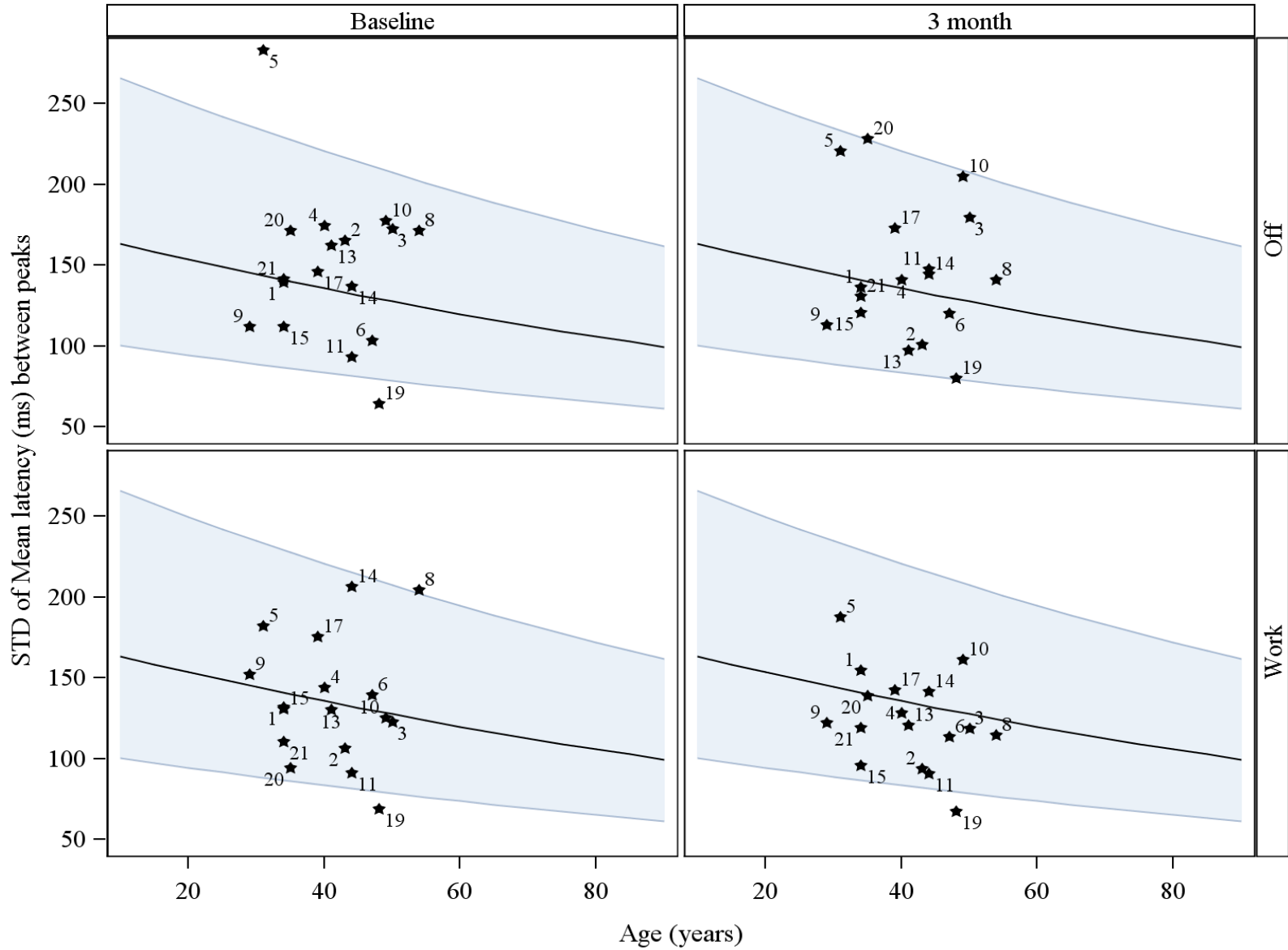
Post intervention Psychological Variables

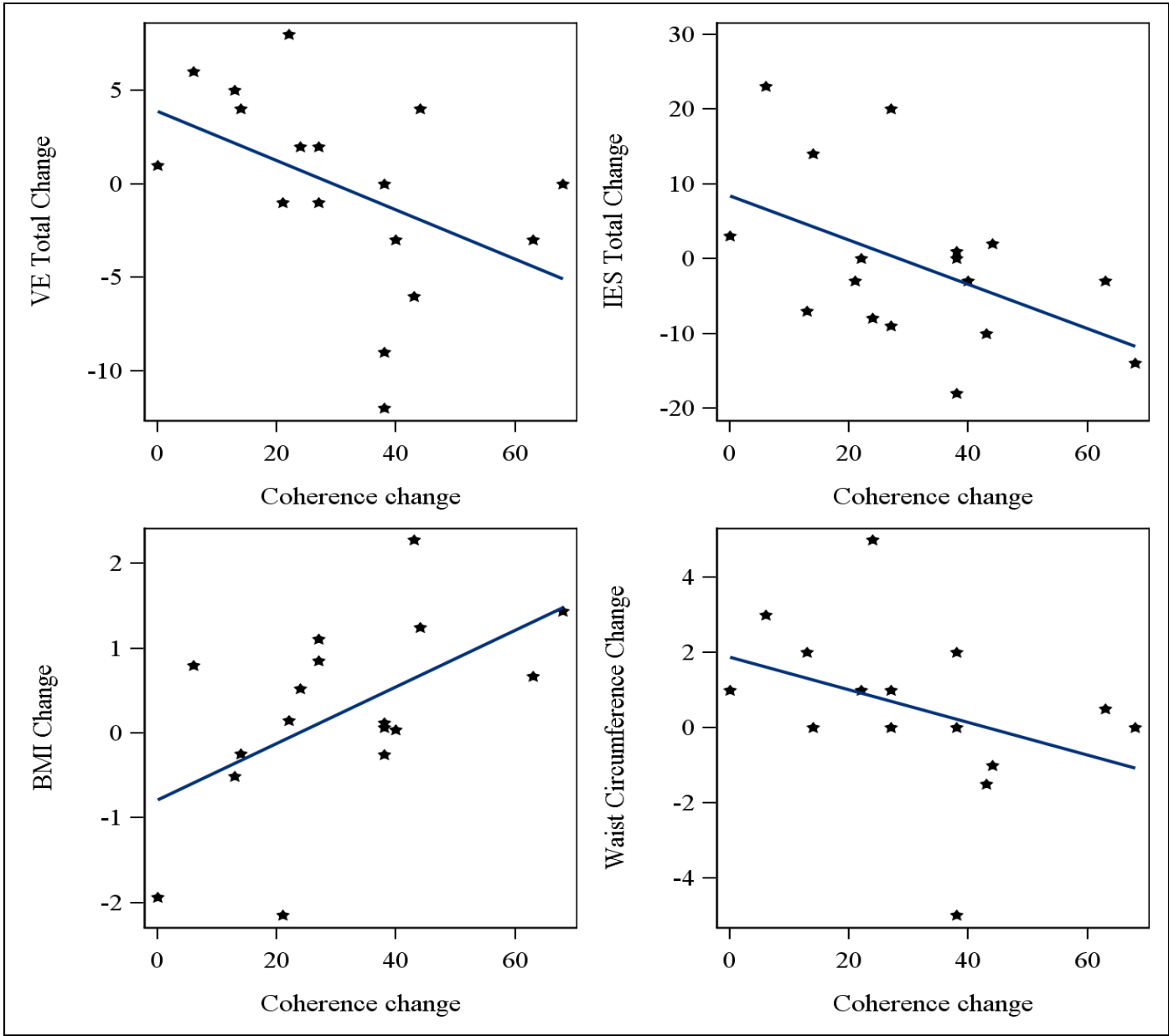
- **Perceived Stress** Scale 21.2 to 19.5
- **Emotional Stress** (POQA)
- **Physical Stress** (POQA)
- Correlations with coherence improvement
 - Impact Events (PTSD)
 - Vital Exhaustion

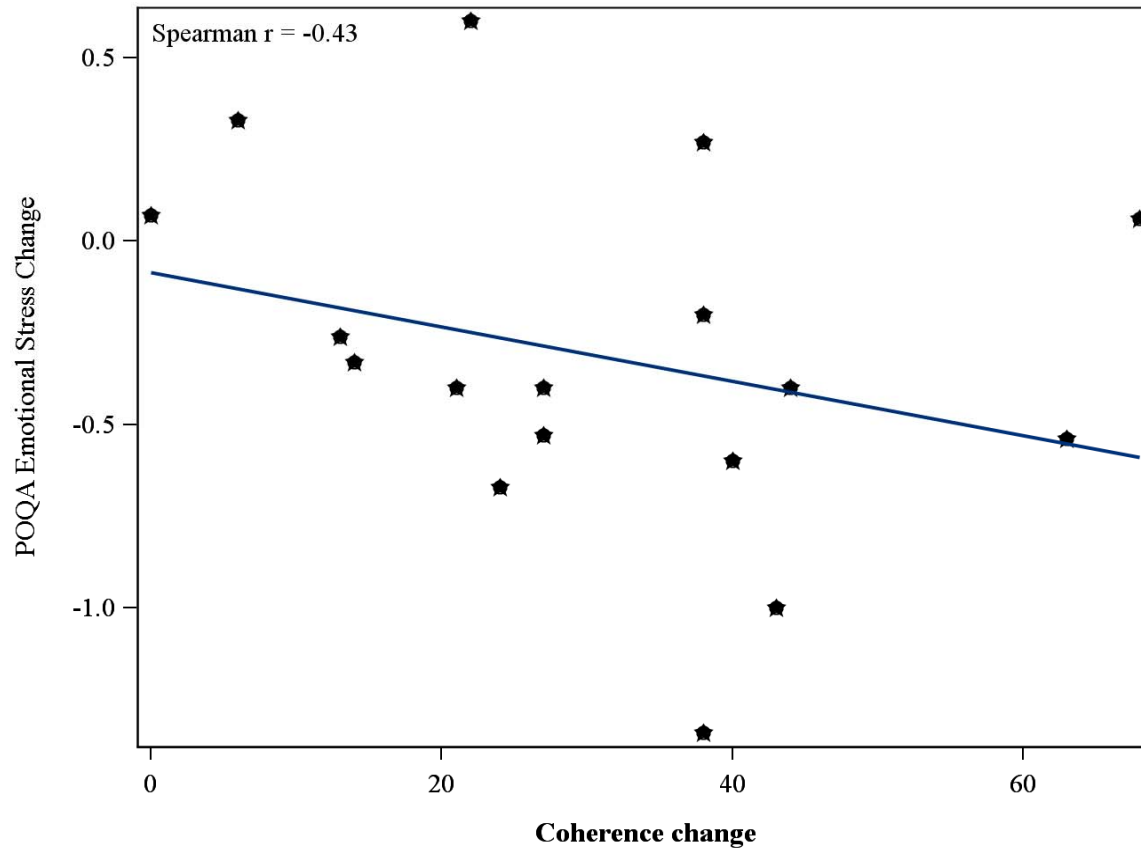
Heart Rate



SDNN









A Comprehensive and Sustainable Approach

- ✓ Community Capacity (after the researcher is gone)
- ✓ Leadership Mentoring (Sgt. Level)
- ✓ Pocket Guides for police
- ✓ Personal Resilience Mentoring
- ✓ **Cost savings if as few as 1-3% modify one risk factor**
 - \$1,500 to \$2,000 per year per officer**
 - (\$50-100K for 1 disability case)**
- ✓ Resilience Building Resources for Family Members



Increasing Coherence in the Work Environment

- Enhances teamwork and performance
- Improves communication and shortens meeting times
- Reduces stress, drama and energy drains





Resources for Families

The screenshot shows the Institute of HeartMath website's "Military Resources" page. The header includes the logo, navigation menu (Research, Education, Training, Free Services, Get Involved, Store, FAQs, About Us, Media), and a sign-up/login button. The main content area features a breadcrumb trail, a search bar, and a sidebar with navigation options like "Military Resources Home", "Veterans, Service Members & Spouses", and "Families With Kids". The main heading is "Free Resources for First Responders and Their Families". Below this, there is a "We Welcome You." section with a welcome message and a photo of a man in an FBI uniform. Two columns of resource highlights are shown: "Resources for First Responders and Their Spouses" with a photo of a police officer and a "READ MORE" button, and "Resources for Families With Kids" with a photo of a soldier and a "READ MORE" button. A sidebar on the left promotes a "HeartMath Education and Resilience Training DVD" and a webinar by Dr. Jane Nelson.

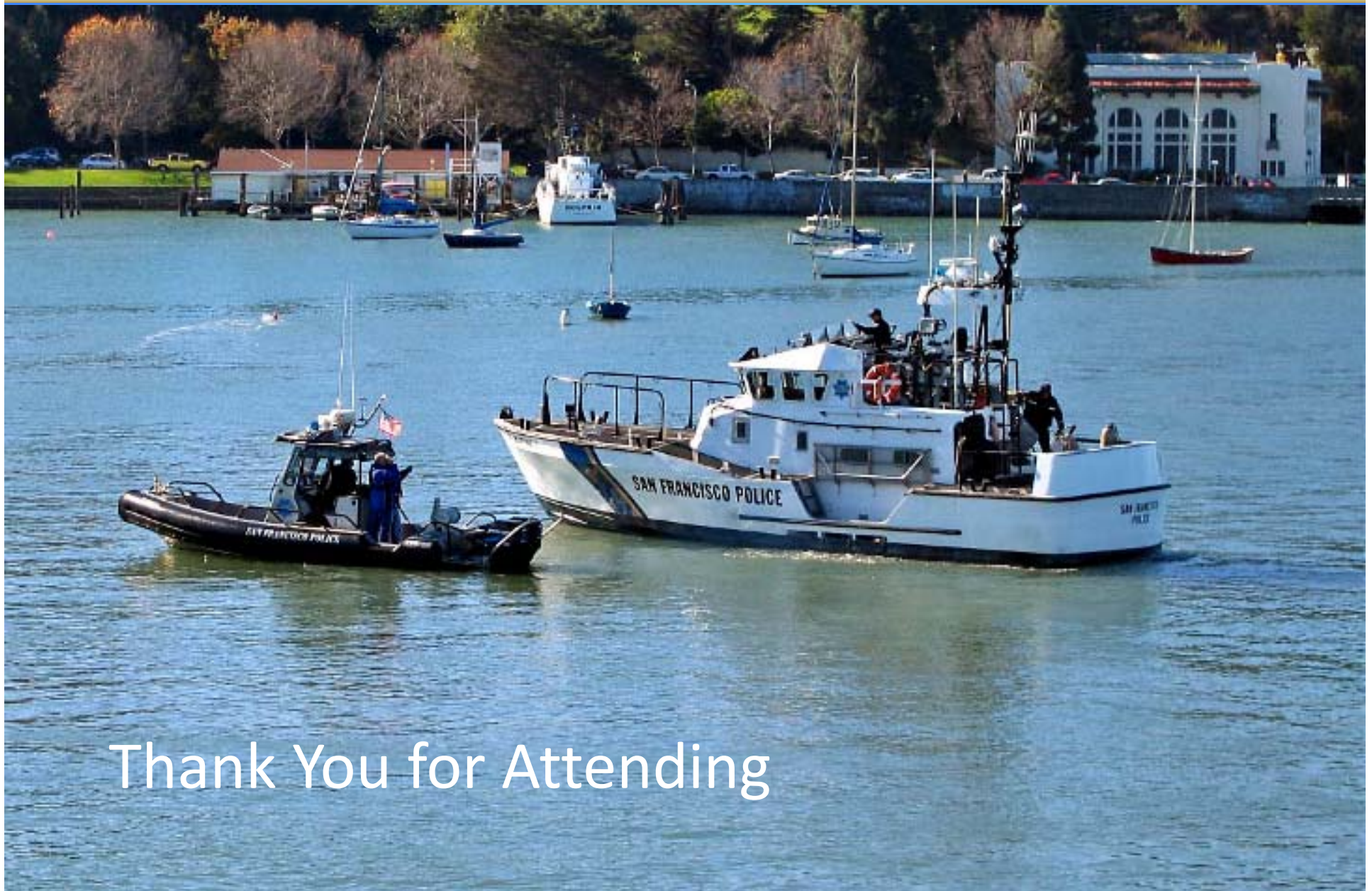
This special section of our website is currently being shared with service members, veterans and their families.



Current Projects with Resilience

- San Diego CA **similar results**
- Army & Navy **positive results**
- Saudi Arabia **clinical trials (n = 2,000)**
- **Army trained *Wellness Centers* (2014)**
- **Will reach > 200,000 soldiers**

WHY NOT POLICE?



Thank You for Attending

QUESTIONS



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