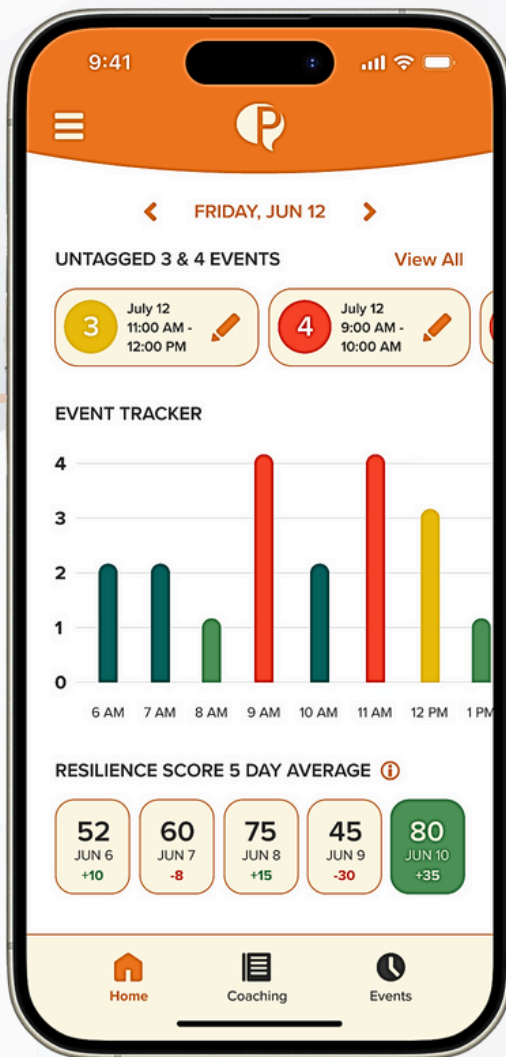


RESILIENCE UNDER PRESSURE:

HOW BIOMETRIC INTELLIGENCE HELPS FIRST RESPONDERS STAY SHARP IN HIGH-STAKES MOMENTS



THE CHALLENGE.

First responders face extreme stress on and off the job. Decades of research show that law enforcement and fire personnel experience higher rates of chronic stress, sleep deprivation, depression, and burnout than nearly any other profession. But operational stress is only half the story. The other half, often ignored, is the mental carryover load officers bring to work: family strain, administrative friction, and emotional fatigue that drain their cognitive reserves before they even start their shift.

National surveys indicate police divorce rates range from 15%–60%, with many experts linking higher risk to emotional withdrawal, irregular hours, and cumulative trauma. Organizational stressors like internal politics, inconsistent leadership, and administrative burden are now recognized as equal or greater sources of pressure than field danger itself (National Policing Institute, 2024). Chronic stress impairs decision speed, emotional regulation, and judgment under pressure, directly affecting safety and performance (NIJ Report 2024; PMC Review 2019). When responders show up mentally fatigued, even routine calls can escalate. The human brain, like any muscle, performs worse when overloaded. The result: slower reaction times, tunnel vision, and avoidable errors in high-risk moments.

WHY EMOTIONAL INTELLIGENCE TRAINING ISN'T ENOUGH ANYMORE.

For decades, police and fire departments have invested in emotional intelligence (EQ) training programs designed to improve awareness, empathy, and communication under stress. But traditional EQ training relies on self-reporting and memory not real-time biological awareness. It teaches people what to do after reflection, not how to recognize when to act in the moment.

In the high-stakes world of first response, the gap between theory and physiology can be the difference between clarity and chaos. You can't manage what you don't perceive and you can't perceive what your body isn't signaling clearly to you.

Emotional intelligence starts with awareness. Biometric Intelligence™ makes that awareness measurable, real-time, and coachable.

Pulse by Fierce represents the next evolution moving from conceptual intelligence to biological intelligence. It merges physiological data (like heart-rate variability) with structured coaching and communication models so officers can detect stress as it happens, understand its source, and make corrective decisions in the moment, not after the incident report.

This is not a rejection of emotional intelligence. It's an upgrade. EQ taught people how to empathize. Biometric Intelligence™ teaches them how to stay conscious, composed, and decisive under pressure.



“Emotional intelligence showed us the importance of awareness. Biometric Intelligence gives us the instrument panel. It turns awareness into data and data into action.”

— *Edward J. Beltran, CEO, Fierce Inc.*

THE HYPOTHESIS.

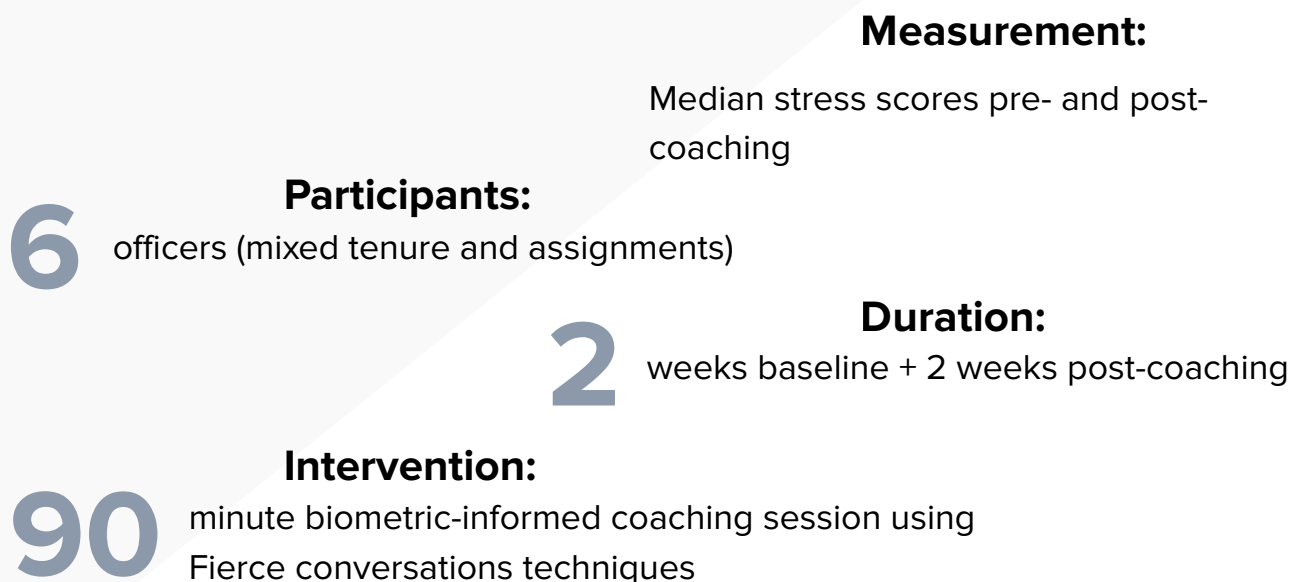
If first responders can become biologically aware of stress patterns, not just during crises, but throughout daily life. They can make better, faster, and safer decisions when it counts. By pairing real-time biometric data with Fierce conversation frameworks, responders can offload personal and organizational tension before it compromises mental clarity.

In essence: mental acuity is preserved when stress is addressed, not suppressed.

THE STUDY.

An anonymized Western U.S. law-enforcement agency partnered with Fierce, Inc. to test the impact of the Pulse platform, a biometric intelligence system that measures stress and resilience, in combination with a single 90-minute Fierce coaching session.

DESIGN OVERVIEW.



Coachee	Pre-Coaching (Median)	Post-Coaching (Median)	Δ Stress
Coachee 01	43	60	27% ↓
Coachee 02	28	34	17% ↓
Coachee 03	71	72	2% ↓
Coachee 04	44	54	19% ↓
Coachee 05	27	29	9% ↓
Coachee 06	25	35	28% ↓

Average Improvement 17% ↓ average stress

THE INSIGHT: SHARPENING MENTAL ACUITY.

While every participant improved, the deeper story lies in what changed. Officers reported greater mental clarity, emotional control, and communication composure following the intervention. Many described moments where they recognized their stress spike before it turned into reaction.

This confirms that stress awareness precedes behavioral control, and even a single 90-minute biometric-driven coaching session can create measurable improvement in resilience.



“These findings demonstrate that when officers become aware of their physiological state and are given structured tools to process it, their stress levels drop and their decision sharpness rises.”

— **Dr. Gabe De La Rosa, Chief Behavioral Science Officer, Fierce Inc.**

FROM AWARENESS TO ACTION: THE FIERCE CONVERSATION BRIDGE.

Pulse doesn't just measure; it empowers action. Each officer received in-app or coach-guided prompts using Fierce Conversations frameworks to transform awareness into productive dialogue both internally and externally.

They learned to:

- Get curious, not defensive.
- Pause when stress spikes and explore its cause.
- Confront with clarity and compassion.
- Address issues early, at home or at work, before they compound.
- Hold self and others accountable.
- Use data as a mirror for growth, not punishment.
- Engage proactively.
- Reconnect with purpose and peers to release tension and restore focus.



“When officers learn to manage the stress they bring into the job, not just the stress they encounter on it, they show up sharper, calmer, and more capable of making the right call.”

— **Edward J. Beltran, CEO, Fierce Inc.**

IMPACT: A NEW PARADIGM FOR OFFICER READINESS.

Stakeholder	Benefit
Departments & Leadership	Reduced incidents, improved decision quality, data-driven officer wellness.
Unions & Associations	Proof of proactive wellness investments and reduced stress claims.
Officers & Firefighter	Better focus, healthier relationships, sustained mental energy, and improved long-term resilience.

CONCLUSION.

This study demonstrates that Ethical Biometric Intelligence™, when combined with Fierce Conversations, can help first responders reduce physiological stress by an average of 17% in just two weeks. The result is more than wellness. It's mental readiness: the ability to think, decide, and act with precision when every second counts.