



Squad Overmatch Study - The Human Dimension FY14 Final Report Executive Summary

1. Objective/Issue:

Today's Soldiers encounter many stressors in a complex, unpredictable and fluid operational environment. Since 2006, mental disorders account for more hospitalizations of U.S. service members than any other major diagnostic category¹. The objective of this CSA G-8 Office sponsored study was to evaluate training methodologies and technologies that could potentially reduce the magnitude of Post Traumatic Stress (PTS), PTS related suicides, and improve Soldier performance, resilience, and readiness.

2. The Study Team:

The study team of PEO STRI, Army Maneuver Center of Excellence (MCoE) at Ft. Benning, GA, Army Research Laboratory-Human Research & Engineering Directorate (ARL-HRED), The MITRE Corporation, Cognitive Performance Group (CPG), Walter Reed Army Institute for Research (WRAIR), Office of Naval Research (ONR), Federal Law Enforcement Training Center (FLETC), and other recognized institutions developed a graduated Stress Exposure Training (SET) methodology that integrated cognitive and situational awareness skills training into existing warrior skills training programs across the Soldier training continuum, using adult learning strategies with facilitated and self-guided After Action Reviews (AAR). This methodology was based on extensive research and experimentation conducted across the armed services and law enforcement organizations over the past ten years.

3. The Study Construct and Scenarios:

The current Army 24 month basic training to deployment cycle focuses primarily on warrior skills development with little emphasis on the Human Dimension (HD). To address this gap, the study team developed a storyline that connected stress-based scenarios to create opportunities for Soldiers to learn and practice Advanced Situational Awareness (ASA) and HD resilience skills in classroom, gaming, virtual, and live environments. The team received Soldier feedback on the approach by conducting four identically structured two-day events, each supported by a different infantry squad.

The study team designed the scenarios to provide progressively more complex situations for practicing recognition of human behavior patterns, predictive analysis, and cognitive skills using existing training aids. Eight of the top WRAIR combat stressors were designed into these scenarios and were executed in the PEO STRI gaming (VBS3), virtual (DSTS), and live (CACTF) programs of record training systems. Training environment realism was enhanced using technologies that significantly improve sensory stimulation – examples include interactive avatars that enable realistic interactions, scents, haptic devices, and lifelike casualty and explosive effects. Typical post scenario warrior skills AARs were supplemented with facilitated and self-guided ASA and resilience discussions, reinforcing previously learned skills.

4. Study Feedback and Results:

Each squad provided positive feedback on the learning approach, scenario realism, and the training value they received. They added that this type of training would have prepared them well for their deployment and the realities of war. Some Soldiers had as many as three to five deployments. Each squad felt they were a more cohesive unit and more competent after the study exercises and they had fun in the process. As a testament to the training value added, one platoon leader tried to insert additional squads from his unit into the exercise.

¹ Armed Forces Health Surveillance Center, Medical Surveillance Monthly Report, Vol. 20, Number 7, Page 4 (July 2013)

The Squad Overmatch Study out-brief attendees were equally supportive of the graduated SET learning methodology and integrated training strategy. The attendees were: TRADOC; TCM-ITE; NSC Futures; NSC - TCM Gaming and Virtual; TPO LVC-IA Maneuver; ARCIC Aviation & Soldier Division; ARCIC S&T; ARCIC Human Dimension Task Force; HQDA DCS G-8 ASPMO Director; FLETC; WRAIR; USASOC S&T; MEDCOM; MCoE Directorate of Training & Doctrine; MCoE Infantry School; 75th Ranger Regiment - Performance Enhancement Center.

5. Bottom Line:

Implementing an integrated training strategy across multiple mission training areas requires a paradigm shift in Army training methodology. Described below are two key takeaway categories, training methodology and implementation strategy. They provide the study's guidelines for creating a training environment that leads to Soldiers who are resilient, mentally agile, and situationally aware – a training environment that will minimize physical and mental casualties while optimizing performance in combat.

Training Methodology

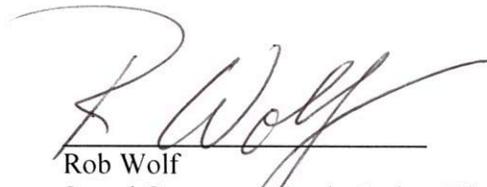
1. **Continuum:** When We Train (*Basic to Advanced – Continuous*)
 - ✓ Focus on skill development and adult learning strategies
 - ✓ Align instructional tools with learning requirements
2. **Scenarios:** What We Train (*Mental Models / Desired Behavior*)
 - ✓ Sequence graduated SET skills training based on stage of learning
 - ✓ Construct scenarios to practice decision making and problem solving
3. **Technology / Cognitive Realism:** How We Train (*Believable Presentation*)
 - ✓ Implement technologies that support experiential learning and interaction
4. **AAR:** How We Learn (*Discussing and Accepting through Experiential Learning*)
 - ✓ Reflect on experiences to change individual mental models
 - ✓ Reinforce learning with coaching and feedback with guided team self-correction

Implementation Strategy

1. **Single Army HD Requirements Integration Manager:** The Big Picture
 - ✓ Single point of responsibility to manage the vision and implementation
 - ✓ Fragmented lines of responsibility = Fragmented implementation
2. **Implementation Strategy Plan of Action:** What's Next and Who Sponsors
 - ✓ Mature the continuum, scenarios, technology, and integrated AAR concepts
 - ✓ Develop skills task list (what to train) and scenarios to elicit desired behavior (how we train)
 - ✓ Scenario content and skills development strategy – Requires dedicated cross-functional team
3. **Early Implementation and Validation:** Maturing the Vision
 - ✓ Establish a CoE for HD training development, integration, testing, and implementation strategy
 - ✓ FY15/16 Quick Wins: Technology insertion to existing Programs of Record



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