Identifying High Performance Indicators for Close Combat Forces

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Background
• Future multi-domain battlefields projected to have near-peer threats
• Optimization of human performance in parallel with material solutions to achieve overmatch
• Infantry One Station Unit Training (IN OSUT) focused on increasing proficiency and performance
High Performance Indicators (HPI) Study

MASTR-E

• Short-term structured, acute assessment of Soldier performance
• 72 hrs

Squad Performance Model

• Squad-based assessment
• Collective performance during battle drills

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High Performance Indicators (HPI) Study

Study Questions:

1. What are the physical, psychological, and physiological high performance indicators (HPIs) in initial trainees for Close Combat Forces?

2. How can HPIs be used to improve training programs, assist recruiting, impact selection methods, and reduce attrition in Close Combat Forces?
Methodology

• “Success Case Method”\(^1\)
  - “Success Case” = selectee for SFAS/RASP1
  - ID traits/attributes w/ highest correlation to success
  - Enhance traits/attributes in larger population
  - “Shift the Bell Curve"

• Comprehensive Performance Evaluation\(^2\)
  - Multi-disciplined approach
  - Connect & correlate data
  - Model relationships
  - Validate results

\(^1\) Methodology: “Success Case Method”

\(^2\) Methodology: Comprehensive Performance Evaluation
Data Collection

- Comprehensive data: pre-OSUT through Selection
- Quantitative and qualitative data collection
- 200-350 individual data points per Soldier

30th AG | 198th IN BDE | 75th / SWCS
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Pre-OSUT | Blue Phase | Gold Phase | RASP / SFAS

- 1-2 days prior to ship
  - Administer informed consent
  - Computer-based psychological assessment / demographics
  - 1 x Focus Group (18; 6 x trainees)
  - 1 x Focus Group (Rgr; 6 x trainees)
  *Dependent on # trainees

- Post Blue Phase
  - Paper survey
    - Confidence
    - Injuries
  - 1 x Focus Group (18; 6 x trainees)
  - 1 x Focus Group (Rgr; 6 x trainees)
  - Peer evaluations

- End/Post Gold Phase
  - Computer-based psychological assessment / demographics
  - 1 x Focus Group (18; 6 x trainees)
  - 1 x Focus Group (Rgr; 6 x trainees)
  - Peer evaluations
  - DSLNO assessment survey

- RASP / SFAS
  - Psychological assessments
  - Performance Assessments
  - Exit Interviews

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Physical & Training

- Land Nav
- ACFT
- OPAT
- HPDT
- Eagle Skills
- Obstacle Course

Psychological

- Emotional Stability
- Grit
- Creativity
- Impulse Control
- Ambiguity Tolerance

Physiological

- Metabolomics
- Bone Density
- Androgen Iron
- Energy Expenditure
- Immune Function

Imagery

ASVAB / GT

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Data Analysis

- Office of Economic and Manpower Analysis (OEMA) at West Point
- Machine learning to analyze ~650k data points
  - 200-350 data pts./Soldier
  - ~3,000 Soldiers/year
- Multiple targeted profiles for success
Potential Performance Interventions

- Identify success profiles most closely associated with Soldier
- Modify existing training event conditions
- Interventions must be feasible at scale
Questions

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