

Objective

The objective of the proposed study is to evaluate the efficacy of two mental fitness interventions during Basic Combat Training. The interventions will be developed from two existing Army programs: Battlemind Training and the Army Center for Enhanced Performance (ACEP). Both of these interventions are designed to increase mental fitness in basic trainees. Battlemind Training is designed to increase mental health and cognitive-related coping skills and ACEP education is designed to increase performance-related mental skills and performance.

Hypotheses Being Tested

Hypothesis 1a: Soldiers who receive Battlemind Training will report better mental health outcomes (e.g., lower depression, less anxiety, more confidence) than Soldiers who receive training in a comparison (control) condition.

Hypothesis 1b: Soldiers who receive Battlemind Training will report better cognitive coping skills than Soldiers who receive training in a comparison (control) condition.

Hypothesis 1c: Soldiers who receive Battlemind Training will be more confident in providing social support to fellow basic trainees than Soldiers who receive training in a comparison (control) condition.

Hypothesis 2a: Soldiers who receive ACEP Education will score higher on measures of performance-related mental techniques (e.g., imagery, goal setting, energy management, effective thinking) than Soldiers who receive education in a comparison (control) condition.

Hypothesis 2b: Soldiers who receive ACEP Education will score higher on measures of performance-related mental skills (e.g., self-confidence, emotional control, attention control) than Soldiers who receive education in a comparison (control) condition.

Hypothesis 2c: Soldiers who receive ACEP Education will report better performance-related cognitions (e.g., motivation, resilience) than Soldiers who receive education in a comparison (control) condition.

Hypothesis 2d: Soldiers who receive ACEP Education will report better cohesion than Soldiers who receive education in a comparison (control) condition.

Hypothesis 2e: Soldiers who receive ACEP Education will perform better on measures of Basic Combat Training performance (e.g., weapons qualifications scores, Physical Fitness tests, combat lifesaver training) than Soldiers who receive education in a comparison (control) condition.

Hypothesis 3: The impact of ACEP Education on performance will be predicted by level of individual differences in adherence, commitment and mastery of ACEP skills.

Hypothesis 4a: Battlemind Training will have more of an effect (e.g., greater effect size) on mental health-related outcomes than ACEP Education. Hypothesis 4b: ACEP Education will have more of an effect (e.g., greater effect size) on performance based outcomes than Battlemind Training.

Exploratory Question 1: Both Battlemind Training and ACEP Education will be assessed in terms of their impact on the rate of attrition relative to their respective comparison (control) conditions.

Exploratory Question 2: In terms of ACEP Education, studies have shown that individuals report learning ACEP skills in a non-linear fashion. Initially, individuals actually experience a decrease in their ratings of their performance-related skills, followed by an increase over time (Hammermeister et al., in press; Holliday, 2007). This initial drop may reflect the individual's greater self-consciousness and appreciation for the complexity of mental skills. The increase reflects a more accurate realization of mental skill capabilities over time.

Exploratory Question 3: Both Battlemind Training and ACEP Education efficacy will be analyzed for an interaction effect between intervention condition and measures of baseline skills and attitudes. For Battlemind Training, the interactions between intervention condition and baseline cognitive style and mental health will be analyzed. For ACEP Education, the interactions investigated will be between intervention condition and baseline ability beliefs, motivation, and mental health.

Approach/Methods

This study will be conducted using group randomized trials at Basic Combat Training. Given the lack of previous randomized trials on mental fitness in the Army's Basic Combat Training context, and the fact that there is no pre-existing Battlemind Training and ACEP training adapted for Basic Combat Training, there will be both a Phase I, or pilot phase, and a Phase II, or full study phase. The pilot study will be the first time the adapted interventions and their respective control conditions will be tested. The pilot study will be conducted with 2 Companies – one piloting the Battlemind and Battlemind-control interventions and one piloting the ACEP and ACEP-control interventions. Thus, there will be approximately 480 Soldiers briefed on the pilot study (1 Company typically has no more than 240 Soldiers). The results will lead to revisions in the interventions and control conditions that will then be evaluated in the full study.

In both the pilot and full study phases, the two interventions will be tested separately because the differential number and duration of the intervention sessions make developing appropriate control conditions infeasible. Specifically, the mental health intervention (Battlemind Training) will be compared to an appropriate control condition and the performance skill intervention (ACEP) will also be compared to an appropriate control condition. Note that Basic Combat Training is 10 weeks long and details regarding intervention timing and location will be finalized in consultation with the research points of contact at the Training and Doctrine Command (TRADOC).