



Resilience: Interesting Findings and Need for Solid Evidence

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Two Central Questions



- Is the concept of resilience measureable in military data?
 - What are some of the characteristics of resilient individuals?
 - What are some characteristics of resilient units?
- Is “resilience” trainable?
 - What evidence is required to convincingly show that a program has made individuals more “resilient”?



Outline



- Definition of resilience
- Empirical examples of resilience from survey data
 - Resilient Soldiers
 - Resilient Units
- Is resilience modifiable?
 - Randomized trials



Resilience



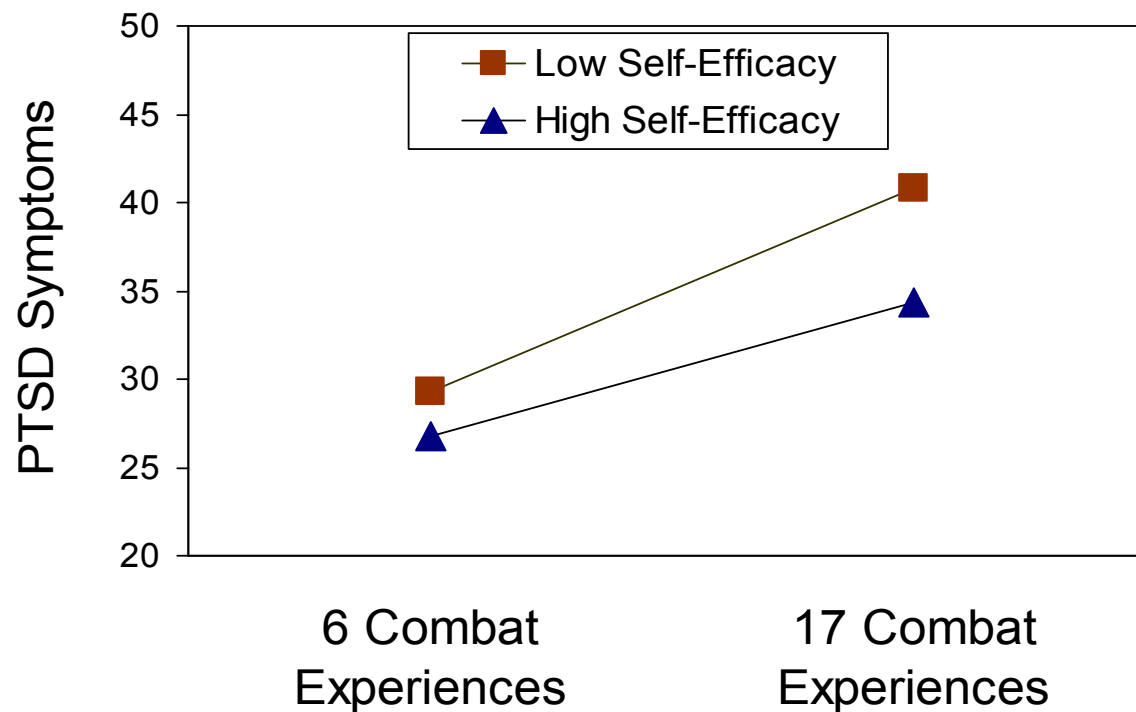
- Definition
 - Psychological resilience comprises the sum total of psychological processes that permit individuals to maintain or return to previous levels of well-being and functioning in response to adversity
- “Resilient” individuals are
 - Less affected by negative events than a non-resilient individual



Surveys: Self-Efficacy



- Being well-trained and confident in job-related skills promotes resilience.





Resilient Units

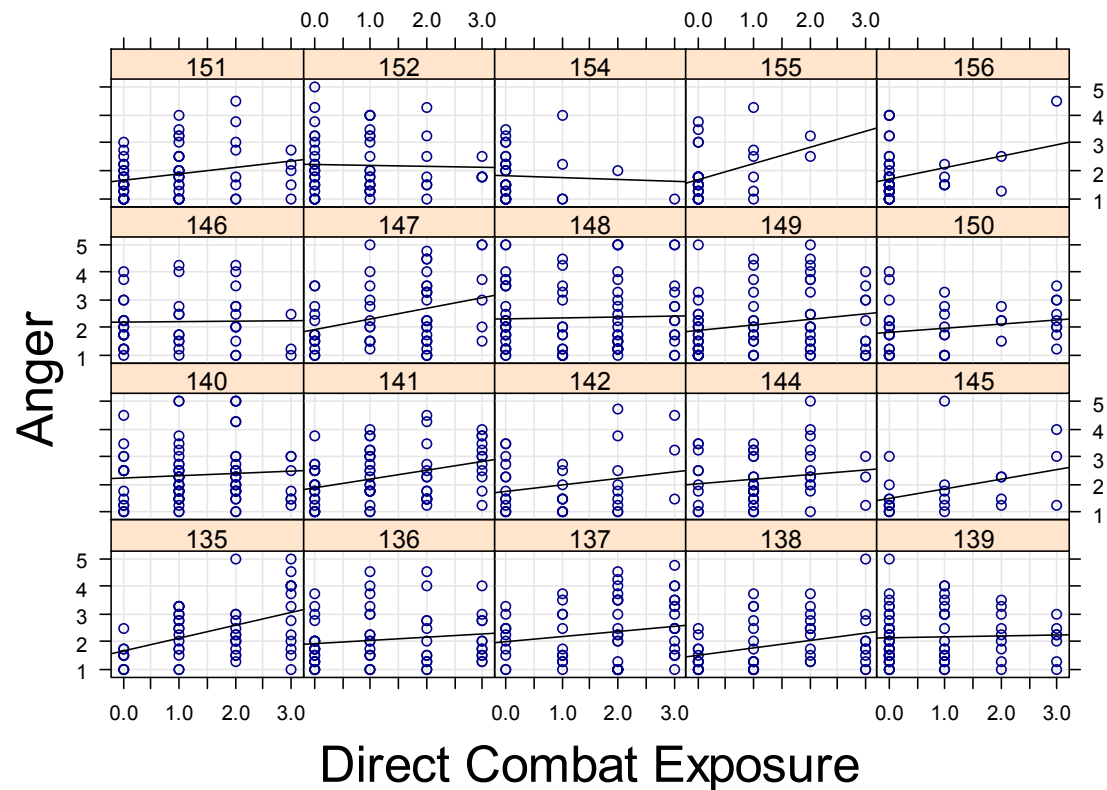


- Soldiers exposed to high levels of combat typically report high levels of anger and aggression.

Each cell represents one Army unit.

Note the differences in trend lines among units. In some units, combat exposure was unrelated to anger.

Resilient units have flat slopes.





Resilient Units



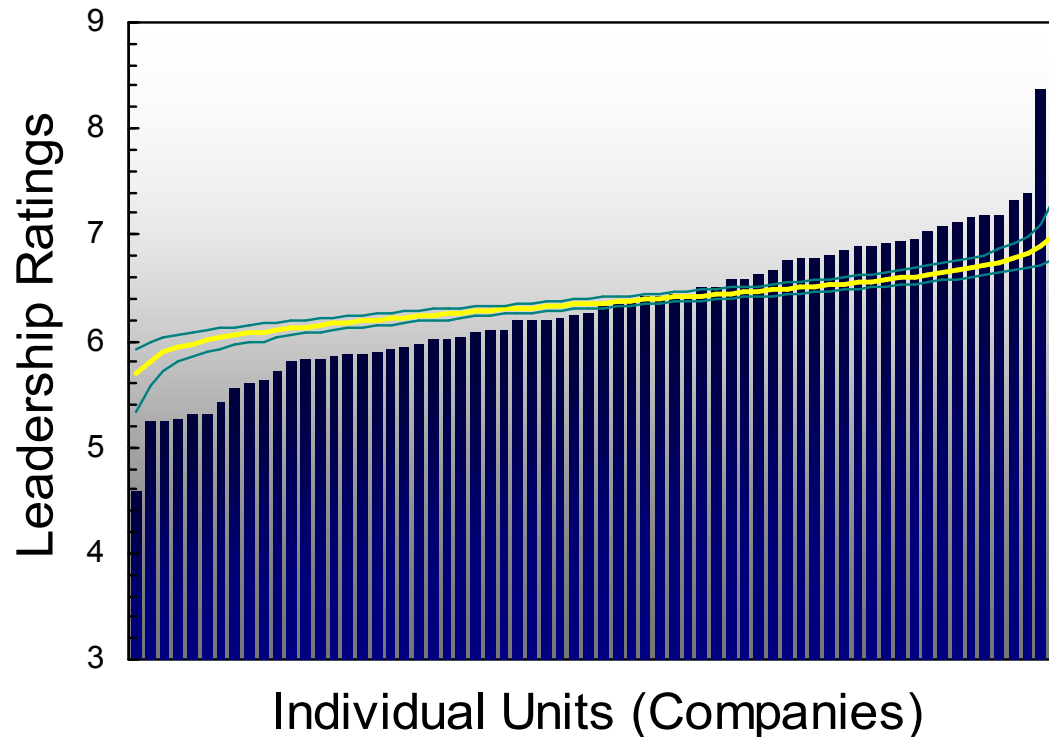
- What unit-level variables might be related to unit resilience?
 - Cohesion (A)
 - Shared sense of being well-trained (B)
 - Leadership (C)



Officer Leadership and Anger



- Ratings of positive officer leadership vary significantly across units.



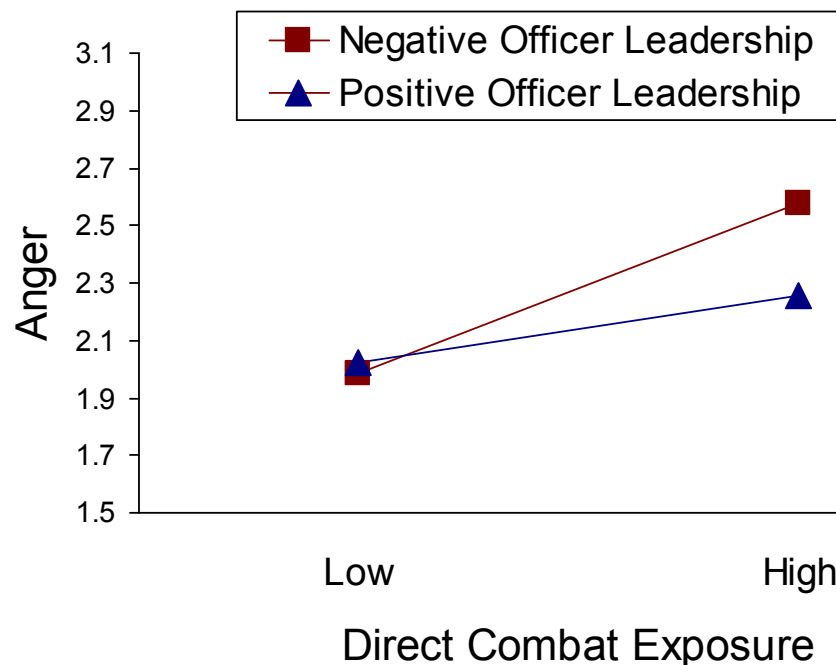
Each bar represents the average rating of leadership in a unit. The yellow line represents the predicted range if there were no differences in leadership among the 66 units.



Officer Leadership and Anger



- Positive officer leadership at 3 months post-combat is a “buffer” that may keep anger low among those Soldiers with high combat exposure.



Direct combat exposure is less strongly related to anger when the unit collectively views officer leadership positively.



Surveys and Resilience



- Large-scale survey data contain numerous examples of factors that produce:
 - Resilient individuals
 - Resilient units
- Limitations
 - Surveys describe events and help identify factors related to resilience
 - Do not establish causality



Can Resilience Be Taught?



- Efficacy needs to be established through experimental design and randomized trials
 - Need for randomized trials to establish a causal link
- Elements of a good randomized trial
 - Individuals or units randomly assigned to receive two or more different types of training
 - Control group receives some type of intervention
 - Efficacy of training evaluated months after intervention on more than satisfaction
 - Differences among trainers assessed and modeled



Group Randomized Trial



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Battlemind Debriefing and Battlemind Training as Early Interventions With Soldiers Returning From Iraq: Randomization by Platoon

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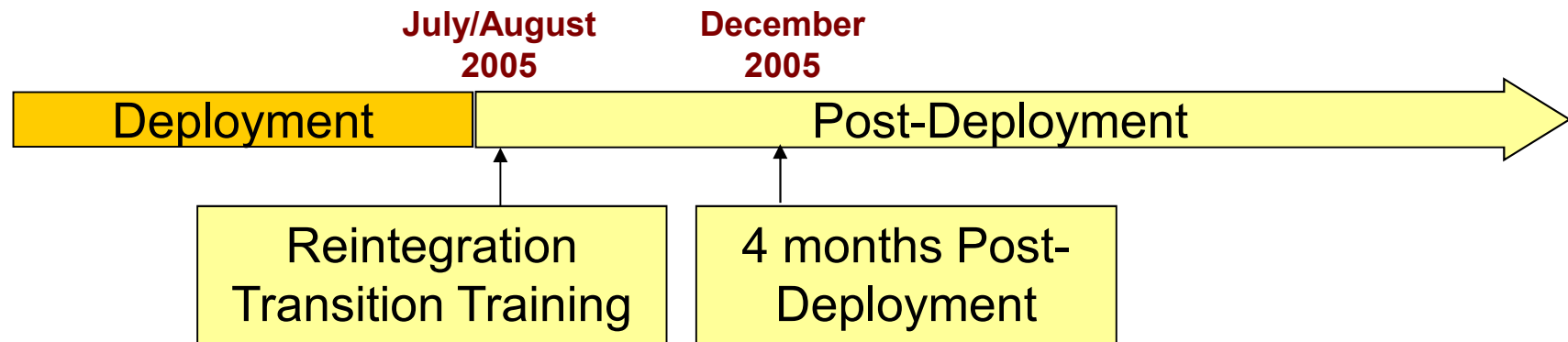
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Researchers have found that there is an increase in mental health problems as a result of military-related traumatic events, and such problems increase in the months following return from combat. Nevertheless, researchers have not assessed the impact of early intervention efforts with this at-risk population. In the present study, the authors compared different early interventions with 2,297 U.S. soldiers following a year-long deployment to Iraq. Platoons were randomly assigned to standard postdeployment stress education, Battlemind debriefing, and small and large group Battlemind training. Results from a 4-month follow-up with 1,060 participants showed those with high levels of combat exposure who received Battlemind debriefing reported fewer posttraumatic stress symptoms, depression symptoms, and sleep problems than those in stress education. Small group Battlemind training participants with high combat exposure reported fewer posttraumatic stress symptoms and sleep problems than stress education participants. Compared to stress education participants, large group Battlemind training participants with high combat exposure reported fewer posttraumatic stress symptoms and lower levels of stigma and, regardless of combat exposure, reported fewer depression symptoms. Findings demonstrate that brief early interventions have the potential to be effective with at-risk occupational groups.



Post-Deployment Study Timeline

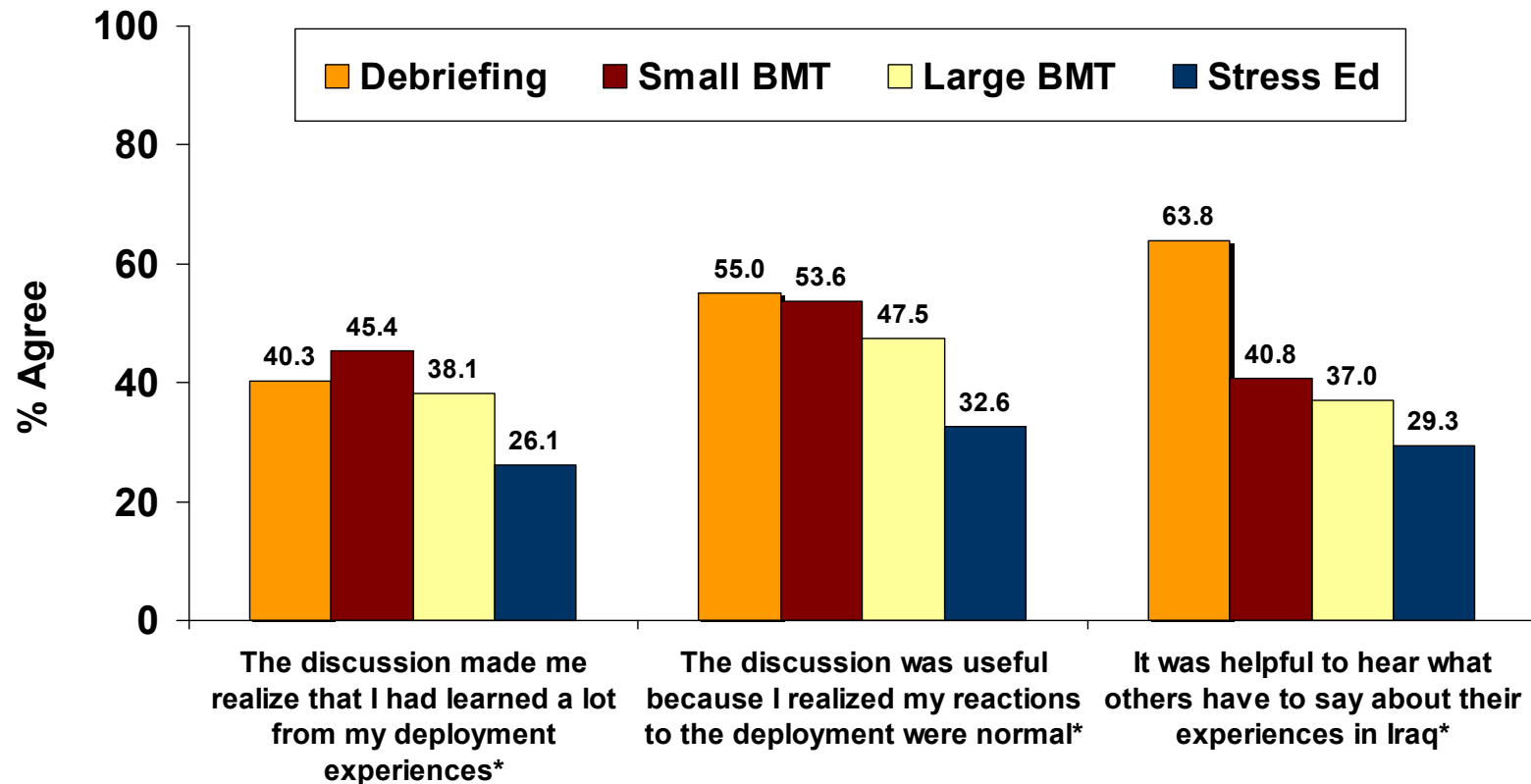


- 1,060 Soldiers received one of three types of transition training:
 - Stress Education (large group)
 - Battlemind Psychological Debriefing (small group)
 - Battlemind Training (small or large group)



Attitudes

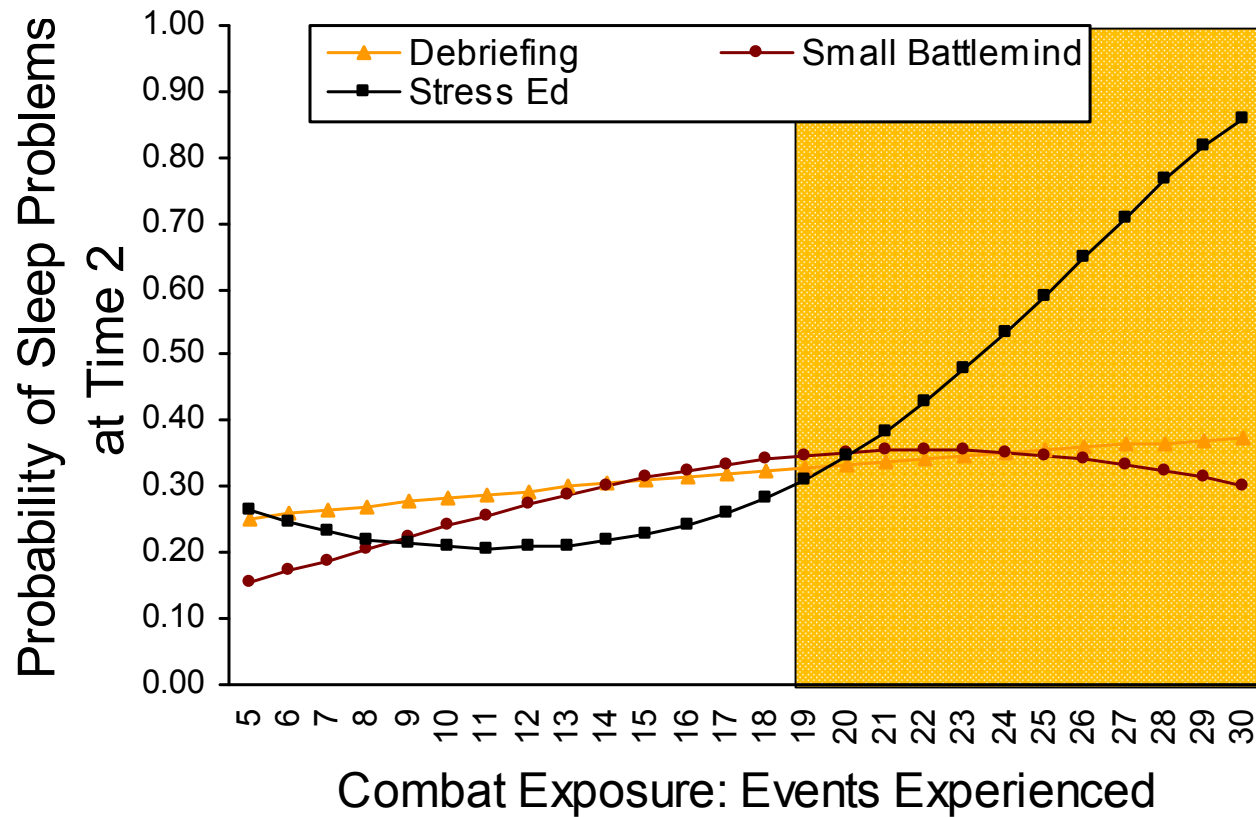
- Soldiers rated Battlemind Psychological Debriefing and Battlemind Training high in utility



Source: Adler, Bliese, McGurk, Hoge, & Castro (2009)



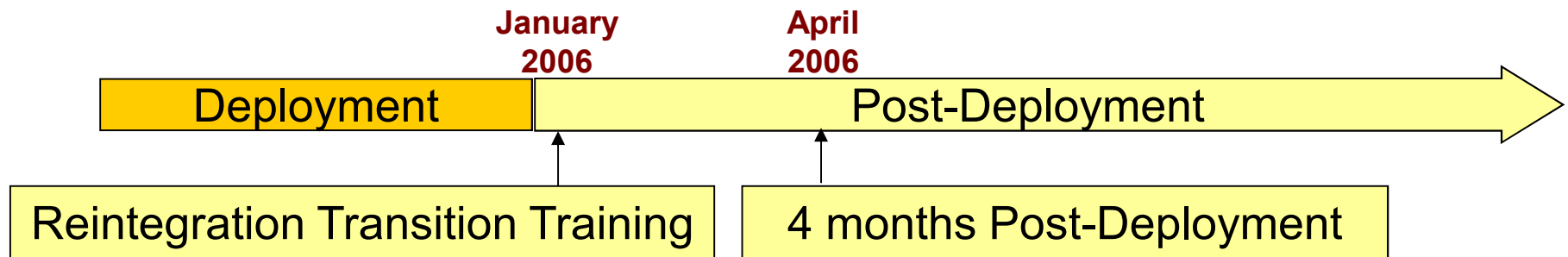
Post-Deployment Outcomes: Sleep



Source: Adler, Bliese, McGurk, Hoge, & Castro (2009)



Post-Deployment Replication Study

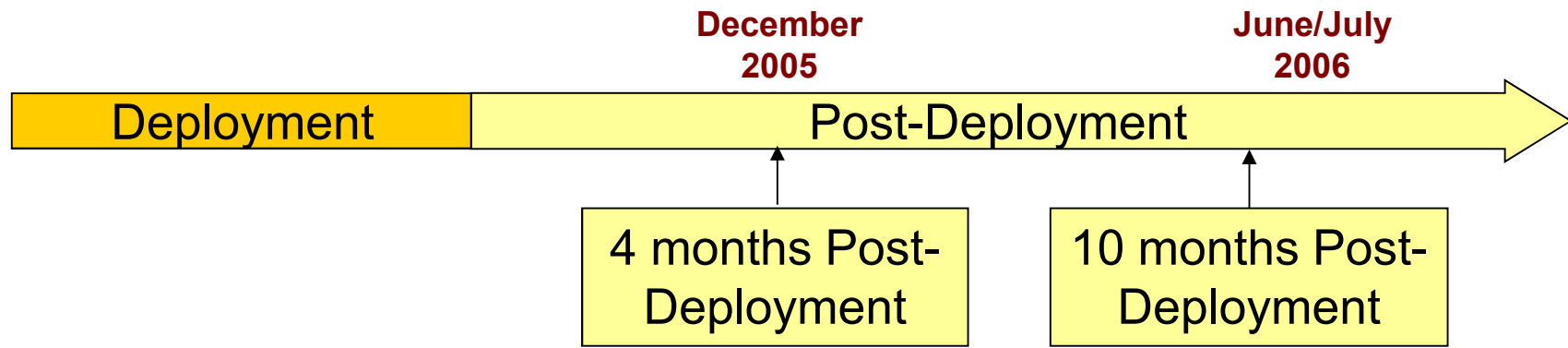


- 1,459 Soldiers received Post-Deployment Training:
 - Battlemind Training (small group)
 - Battlemind Training (large group)
 - Stress Education (large group)
- Regardless of combat experience, Soldiers in the Battlemind Training conditions had better adjustment than those in Stress Education:
 - Fewer PTSD symptoms (small group training)
 - Higher Perceived Organizational Support scores

Source: Thomas et al., 2007



4 Months Post-Deployment Study



- 629 Soldiers received Resilience (Battlemind) Training at approximately 4 months post-deployment or survey only
- Weaker design because control group does not have alternative intervention

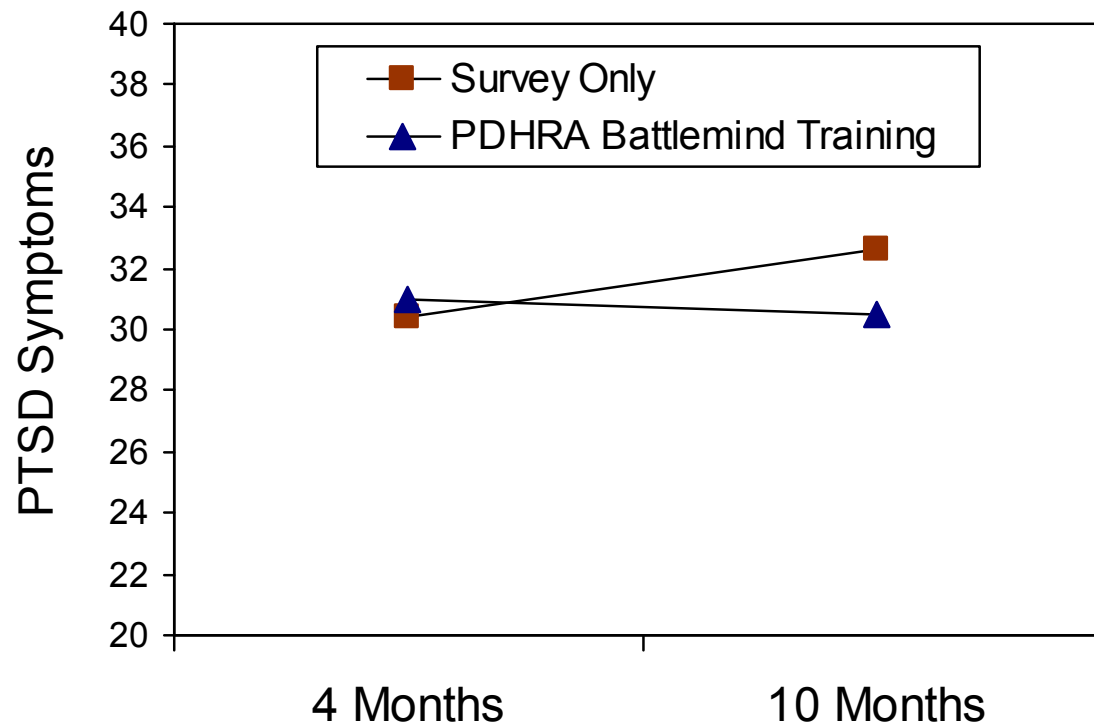
Source: Adler et al., 2007



Randomized Trials



- PDHRA resilience training associated with a drop in PTSD symptoms six months later.





Basic Training Study



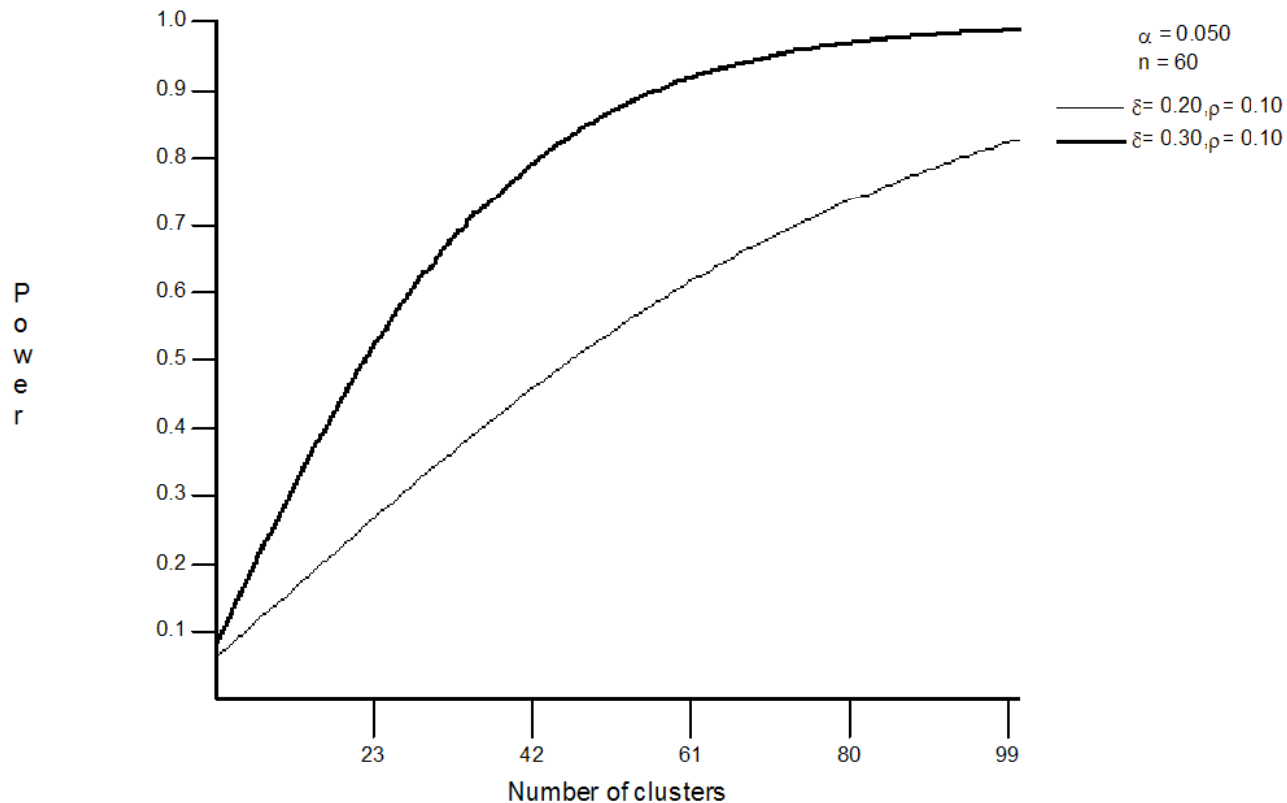
- Cognitive-Behavioral Program (Cohn & Pakenham, 2008)
 - Focus on attribution retraining (“I failed because I am stupid” versus “I failed because I did not try hard enough”)
 - Changing attributions can affect feelings, future expectations and subsequent actions
 - Design
 - Three platoons in Intervention Condition (N = 101)
 - Two platoons in Control (N = 73)
 - Statistical concern is the small number of groups (platoons) in a group randomized trial
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Resilience



- Number of platoons needed to have sufficient power under typical assumptions





Can Resilience Be Taught?



- Large study being conducted in collaboration with Australian military (PI: Adler)
 - Fort Jackson: 48 platoons from 2 Battalions randomly assigned to Cognitive Behavioral Program versus Military History control (Williams, et al., 2004)
 - Final data being collected. Results available in early 2010.
 - Two studies
 - Cognitive Behavioral Program versus Military History
 - ACEP Skills versus Military History
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Conclusion



- Resilience comes in numerous measurable forms.
 - Almost always revealed in some form of statistical interaction
 - Observational studies provide a great deal of compelling information about how resilience might be enhanced; however, proof of resilience-training program efficacy must be established through randomized trials.
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