



Optimizing Care: Addressing Combat Stress and Post Deployment Readjustment

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NGPHP

Quiz: Military Acronyms

- ▶ AWOL
 - ▶ AOR
 - ▶ CHU
 - ▶ Down Range
 - ▶ FOB
 - ▶ IBCT
 - ▶ MOS
 - ▶ PCS
 - ▶ TDY
 - ▶ CDC
-

Introductions

- Military familiarity or military service?
- What you do and how you interact with SM's
- What do you want to gain from this workshop?



What did you hear?

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THE SOLDIER'S CREED

I am an American Soldier.

I am a Warrior and a member of a team.

I serve the people of the United States and live the Army Values.

I will always place the mission first.

I will never accept defeat.

I will never quit.

I will never leave a fallen comrade.

I am disciplined, physically and mentally tough, trained and proficient in my Warrior tasks and drills.

I always maintain my arms, my equipment and myself.

I am an expert and I am professional.

I stand ready to deploy, engage, and destroy the enemies of the United States of America in close combat.

I am a guardian of freedom and the American way of life.

I am an American Soldier.

Operation Enduring Freedom (OEF)



October 2001 ---



Operation Iraqi Freedom (OIF)

March 2003--Aug. 31, 2010



Operation New Dawn (OND)

Sept. 1, 2010--Dec. 2011

Global War on Terrorism

2.2 Million
Total Force Deployed



Reserve Component
Army National Guard
360,000

500,000 activated
since 9/11

Reserve Component
Reserve Army Guard
200,000

At one point NG/R constituted
40% of total deployed

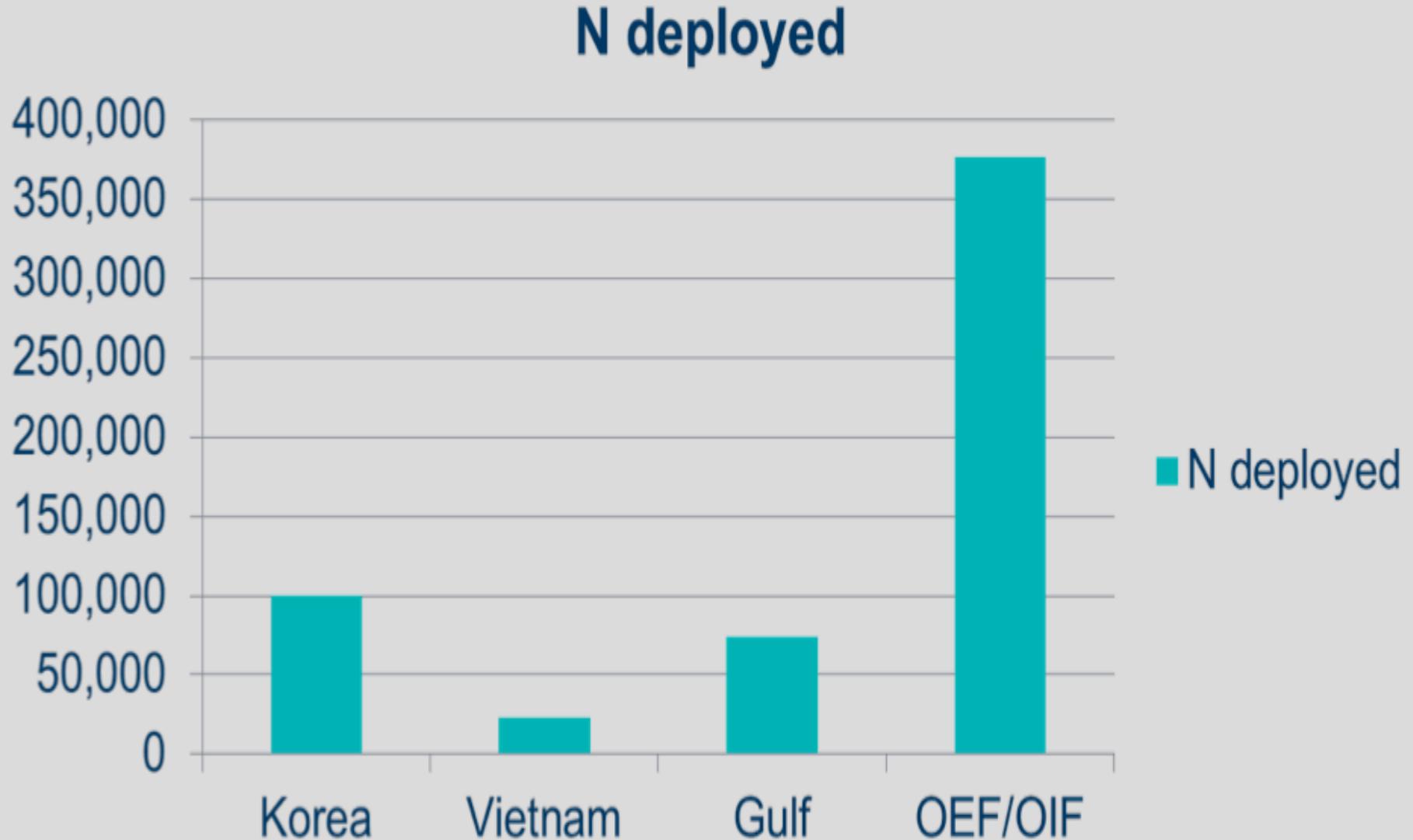
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Today's All Volunteer Army

- ▶ Of the military personnel serving in OEF and OIF, 89% are men and 11% women
 - ▶ Today's service members are also somewhat older and more likely to be married than their Vietnam-era counterparts (implication)
 - ▶ About 40% of current military service members have been deployed more than once
 - ▶ Fatality-to-wounded ratios have been 1:5.0 for OEF and 1:7.2 for OIF compared with 1:2.6 in Vietnam and 1:1.7 in World War II
-

Number of NG/R deployed





After the hugs, kisses and reunions, then what?

Over 1.1 million headed home, back to local communities



**No war is without a
price...Freedom is not
Free**

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What did you hear?

A Decade of War



50,198
Wounded
OIF, OEF, OND

(Does not account for behavioral health injuries)

20.3% of Active Duty and 42% Guard/Reserve identified as requiring mental health treatment



6,637 Total
Fatalities
OIF, OEF, OND

Readjustment is challenging and complex



44% report readjustment difficulties, 48% strains on family life, 47% outbursts of anger, 49% posttraumatic stress (Pew Research Study, 2011)

- Good news: The vast majority of service members navigate reintegration with minimal difficulty
- Bad news: A significant number return and struggle due to real psychological and medical injuries
- Reality, ALL are changed in some manner by their deployment experience

Differing Transition Perspectives



Unrealistic



Realistic

Readjustment from war zone ?



Trained for war

but not for transitioning home

Soldiers are often happy to be home but may...

- Feel “wired” or “tired”
 - Putter around the house, struggling to shift away from operations schedules
 - View themselves and the world differently
 - Feel emotionally disconnected from family and friends
 - Struggle with focus and staying on tasks
 - Desire to go back because “life was easier over there”
 - Struggle being in crowds
 - Feel that others “just don’t get it”
 - Appear irritable or “on edge” to family and friends
-

Post deployment can leave you feeling trapped and isolated



Three sources which complicate readjustment

- ▶ Being away
- ▶ Being in a war zone
- ▶ Being in extremely intense situations

The Hell of War





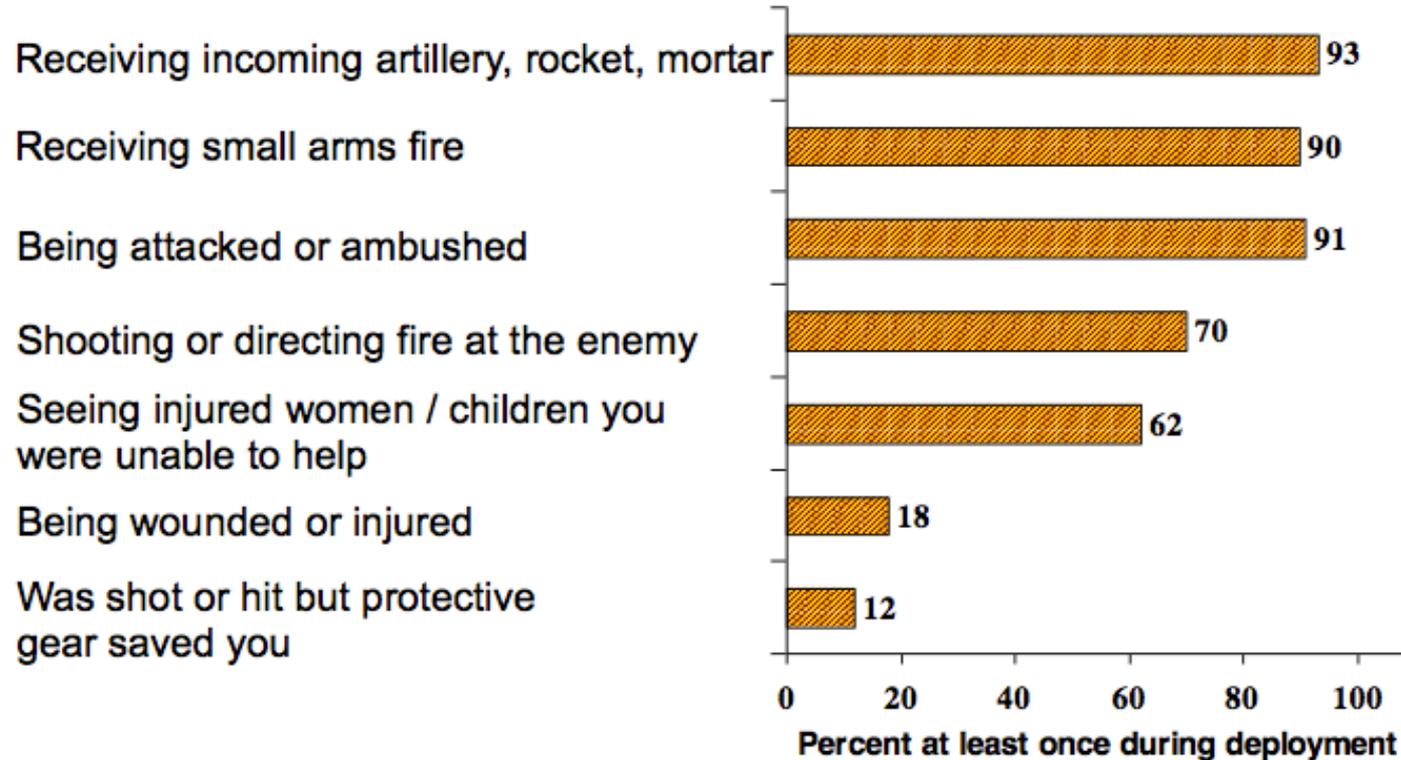
Perspective

When you deploy in a war zone, you are either a bullet sender or a bullet receiver

Combat Trauma Exposure



Common Combat Experiences, U.S. Infantry Land Combat Study – Thomas, et al. 2010



Combat Trauma Exposure



Combat Experiences (Continued)

Knowing someone seriously injured or killed

Seeing dead or seriously injured Americans

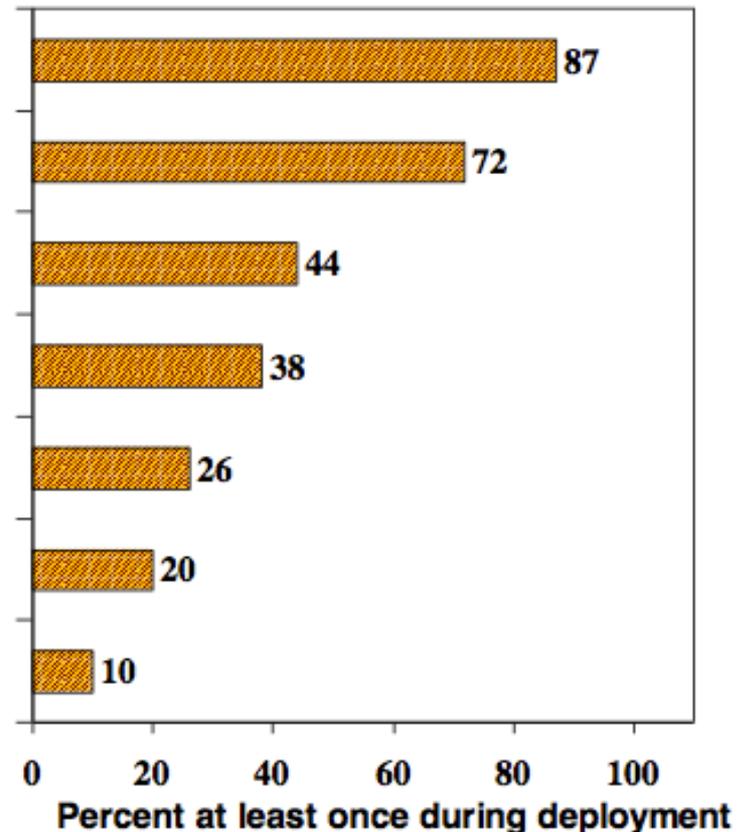
Handling or uncovering human remains

Being responsible for the death of an enemy combatant

Had a buddy shot or hit who was near you

Engaged in hand to hand combat

Being responsible for the death of a non-combatant



War Zones Require a Unique Set of Skills & Behaviors

- ▶ Hypervigilance
- ▶ Lack of trust
- ▶ Anger is your friend
- ▶ Predictability is deadly
- ▶ Intelligence (say less)
- ▶ Mission focus
- ▶ Decision making
- ▶ Response tactics
- ▶ The enemy
- ▶ Emotions
- ▶ Authority
- ▶ Closeness
- ▶ Loss
- ▶ Talking

What works in the combat zone does not necessarily work at home; what worked for you now works against you

“Symptoms” are also Combat Reflexes/Skills and Adaptive

Hyperalert	Sharply tuned threat perception, “6 th sense”
Hypervigilant,	Attention to detail, situational awareness
Re-experiencing, (shoulds, guilt)	Intense mission rehearsal and training to minimize mistakes
Sleep problems	Ability to function on limited sleep
Anger	Adrenaline, focus, attention
Detachment, numbing	Emotional control (“lock it down”) (including grief)
Social withdrawal	Combat buddies are like family
Pain/muscle tension	Strength, ability to shut down pain, drive on

Devastating Mental Health Impact

56 percent of active duty, 60 percent of reserve component, and 76 percent of retired or separated service members say they have reported mental health symptoms to a healthcare provider
(Care for America's Retiring Wounded Warriors, 2007)

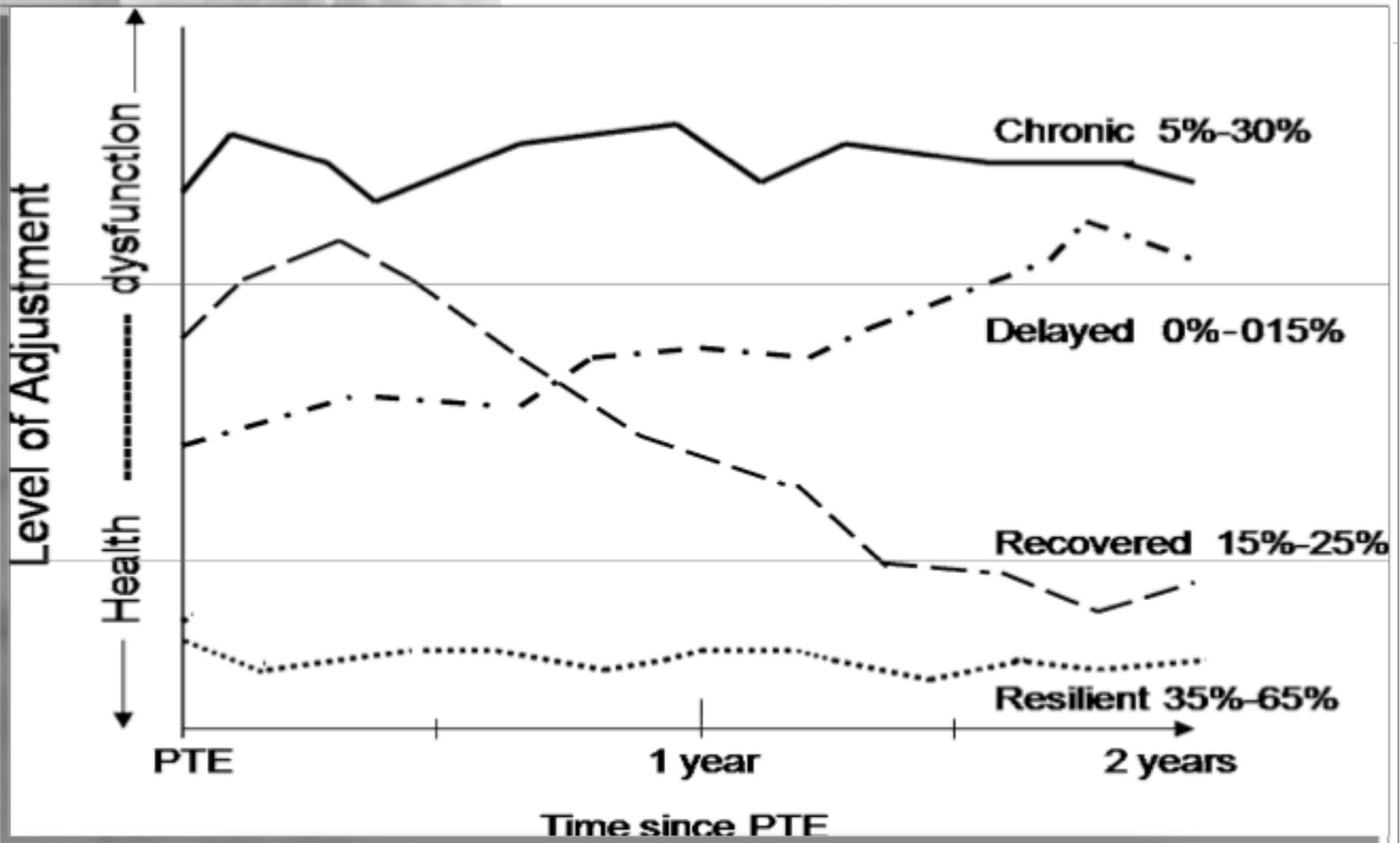
Devastating Mental Health Impact

- ▶ 17% screen positive for PTSD, GAD, MDD--a prevalence 2x's that among Soldiers surveyed prior to deployment (Hodge, Casto, Messer et al. 2004)
- ▶ General prevalence of PTSD ranges from 13% to 20%, which often coexists with depression, substance abuse and other mental health concerns (Hoge et al., 2004; Seal et al., 2007; Tanielian and Jaycox, 2008; Vasterling et al., 2010) **Baseline prevalence 3-6%**
- ▶ Rates for mTBI soon after return from deployment, based on screen and/or clinical interview range from 15.2%-22.8% (Schwab et al., 2007; Terrero et al., 2009; Hoge et al. 2008)
 - ▶ Escalating Suicide deaths--half of which are among never deployed

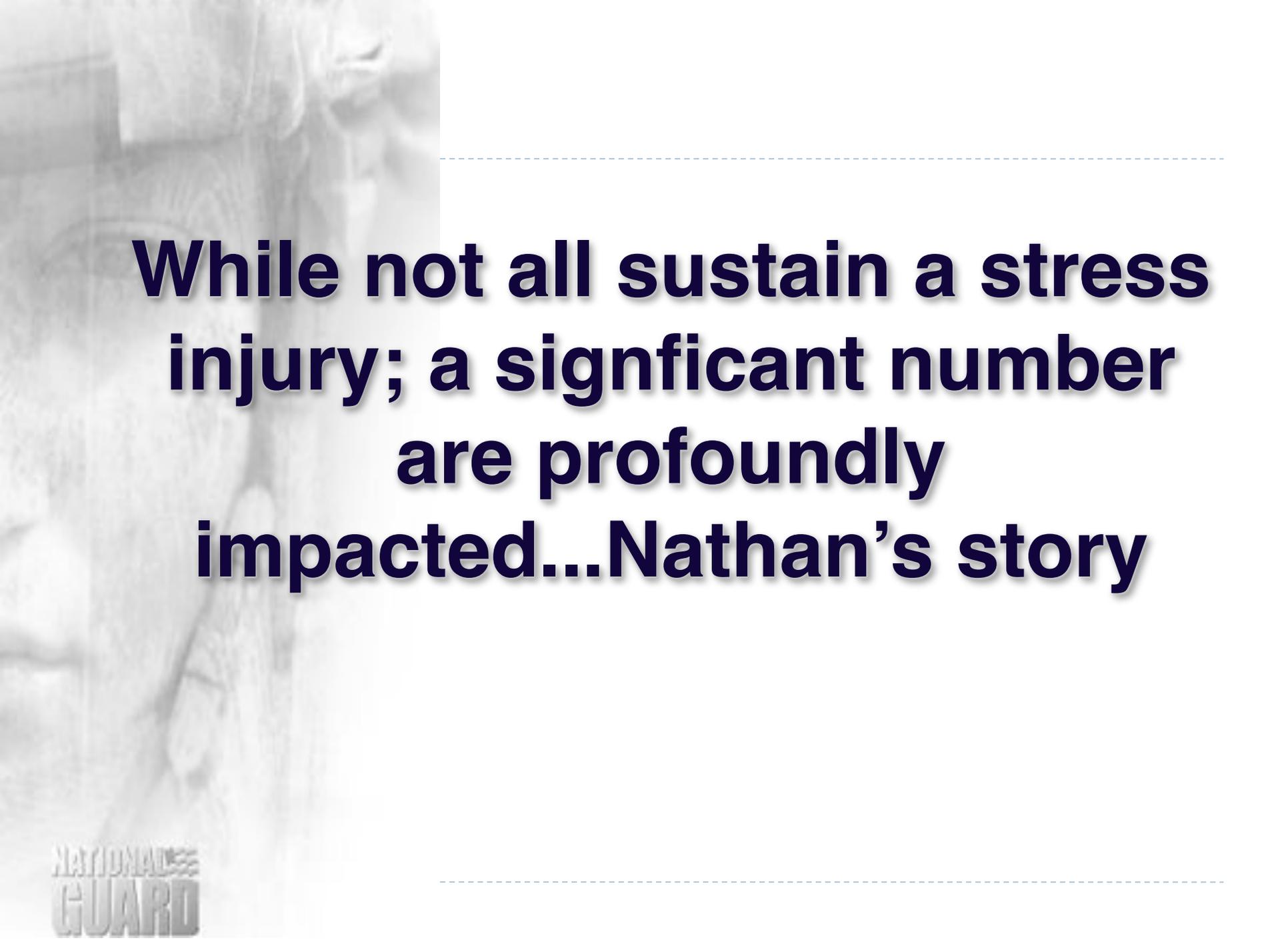
Check your assumptions

While everyone is affected by deployment; NOT everyone sustains a “stress injury” [injury of the mind and brain] resulting in a mental health issue; resilience is the norm

Trauma Trajectories



Bonanno (2004) Loss, Trauma, and Human Resilience.
American Psychologist, 59:1, 20-28



While not all sustain a stress injury; a significant number are profoundly impacted...Nathan's story



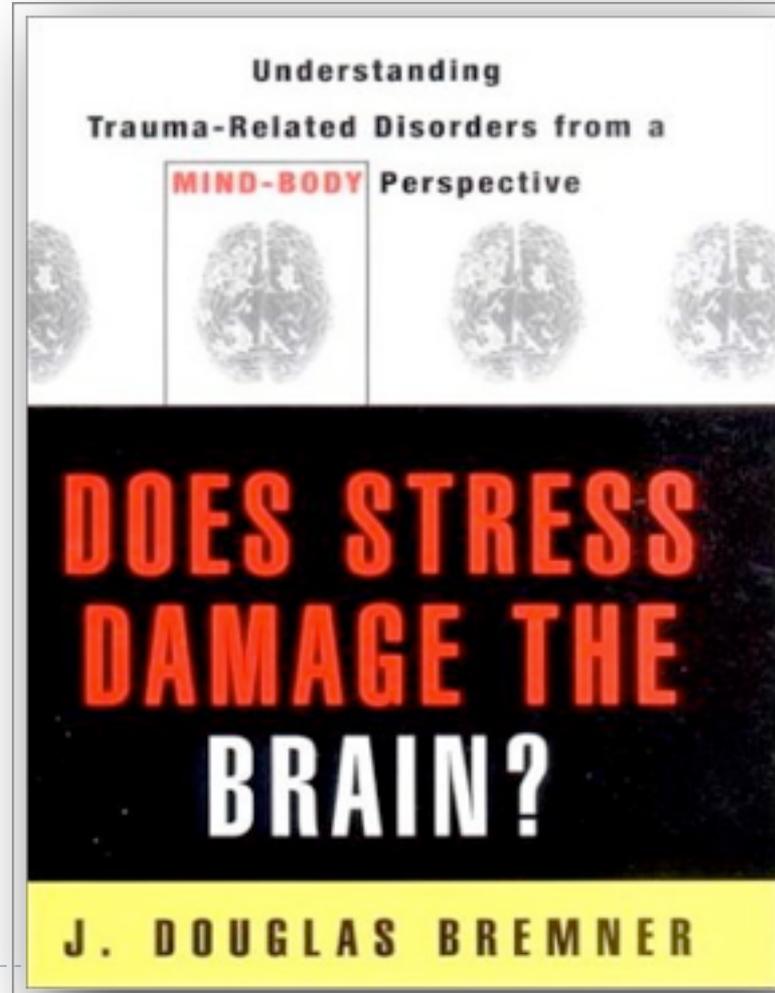
Process....

Consequences of Trauma

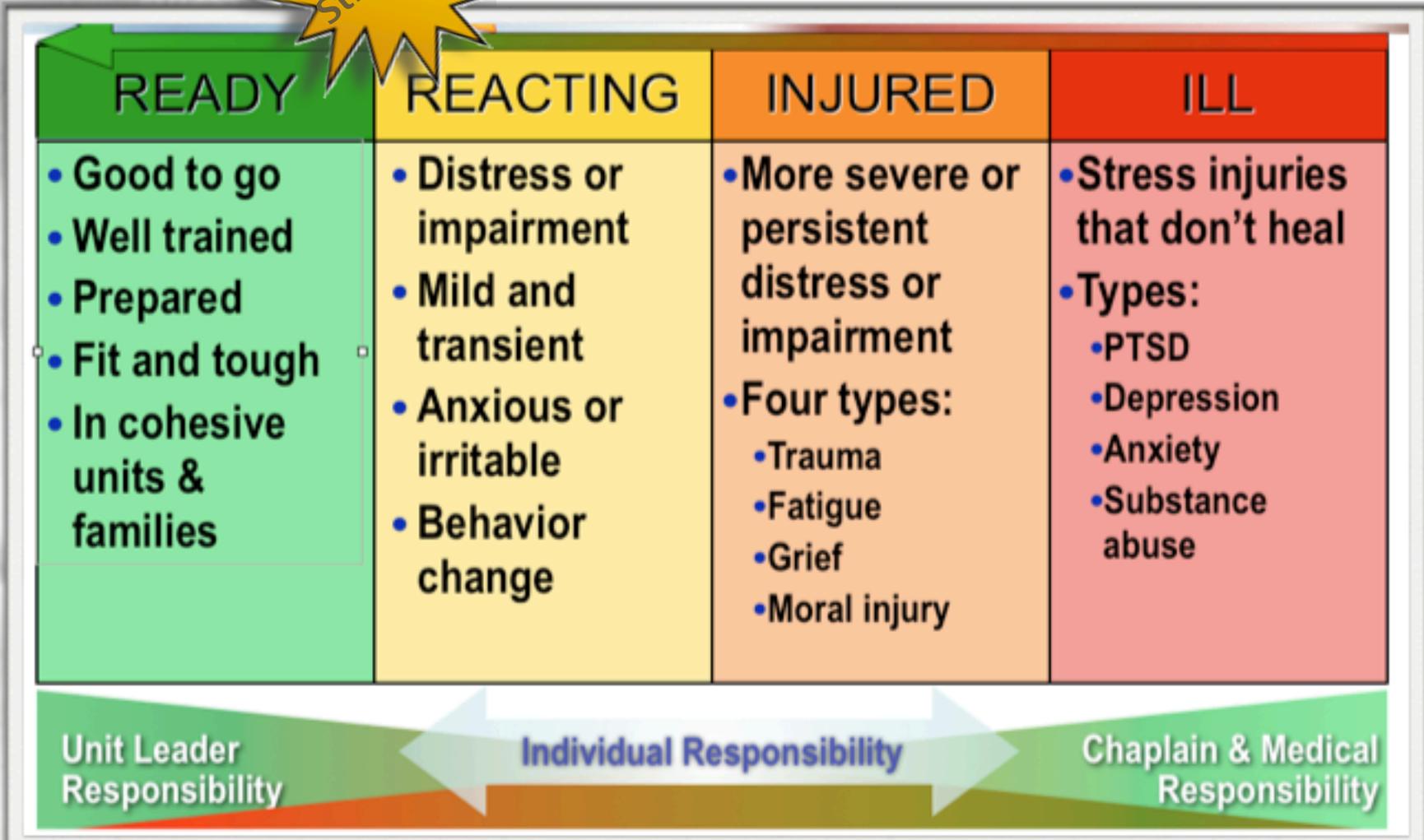
“We have begun to appreciate the profound and sometimes irreversible changes produced by overwhelming stress. These include fundamental alterations in perception, cognition, behavior, emotional reactivity, brain function, personal identity, worldview, and spiritual beliefs.”

– *Matthew J. Friedman, M.D., Ph.D.*

Role of stress in creating mind, brain injury



Stress Continuum



Adaptation vs Stress Injury



- **Adaptation**
- A gradual process
- Can be traced over time
- Individual remains in control
- Reversible



- **Injury**
- May be more abrupt
- A derailment, change in self
- Individual loses control
- Irreversible (though can heal)

Four Causes of Stress Injuries

Intense or Prolonged
Combat or Operational Stress

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graph TD; A[Intense or Prolonged Combat or Operational Stress] --> B(Life Threat); A --> C(Wear & Tear); A --> D(Loss); A --> E(Inner Conflict);
```

**Life
Threat**

- A traumatic stress injury
- Due to terror, horror, or helplessness

**Wear &
Tear**

- A fatigue injury
- Due to the accumulation of all stress over time

Loss

- A grief injury
- Due to the loss of cherished people or things

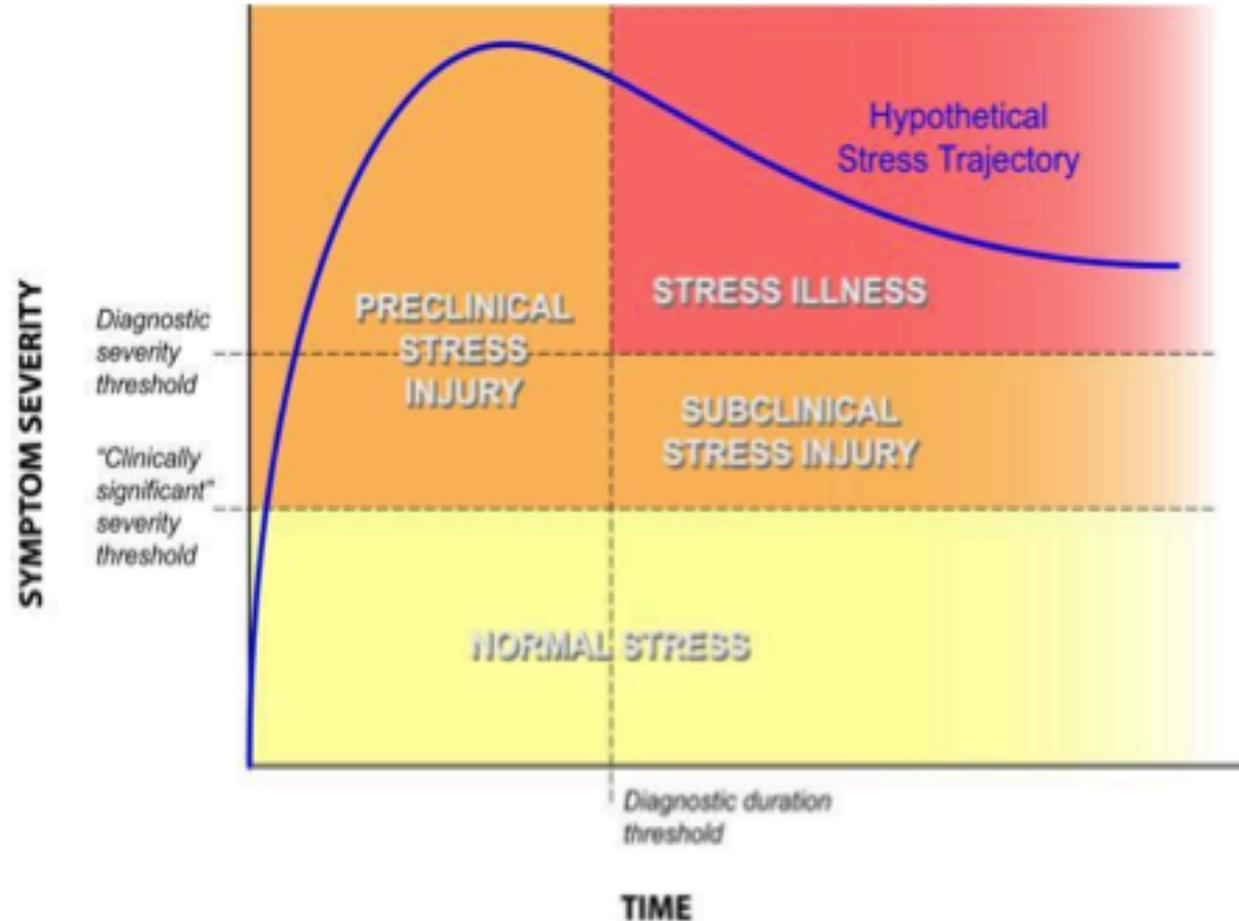
**Inner
Conflict**

- A moral injury
- Due to a betrayal of moral values

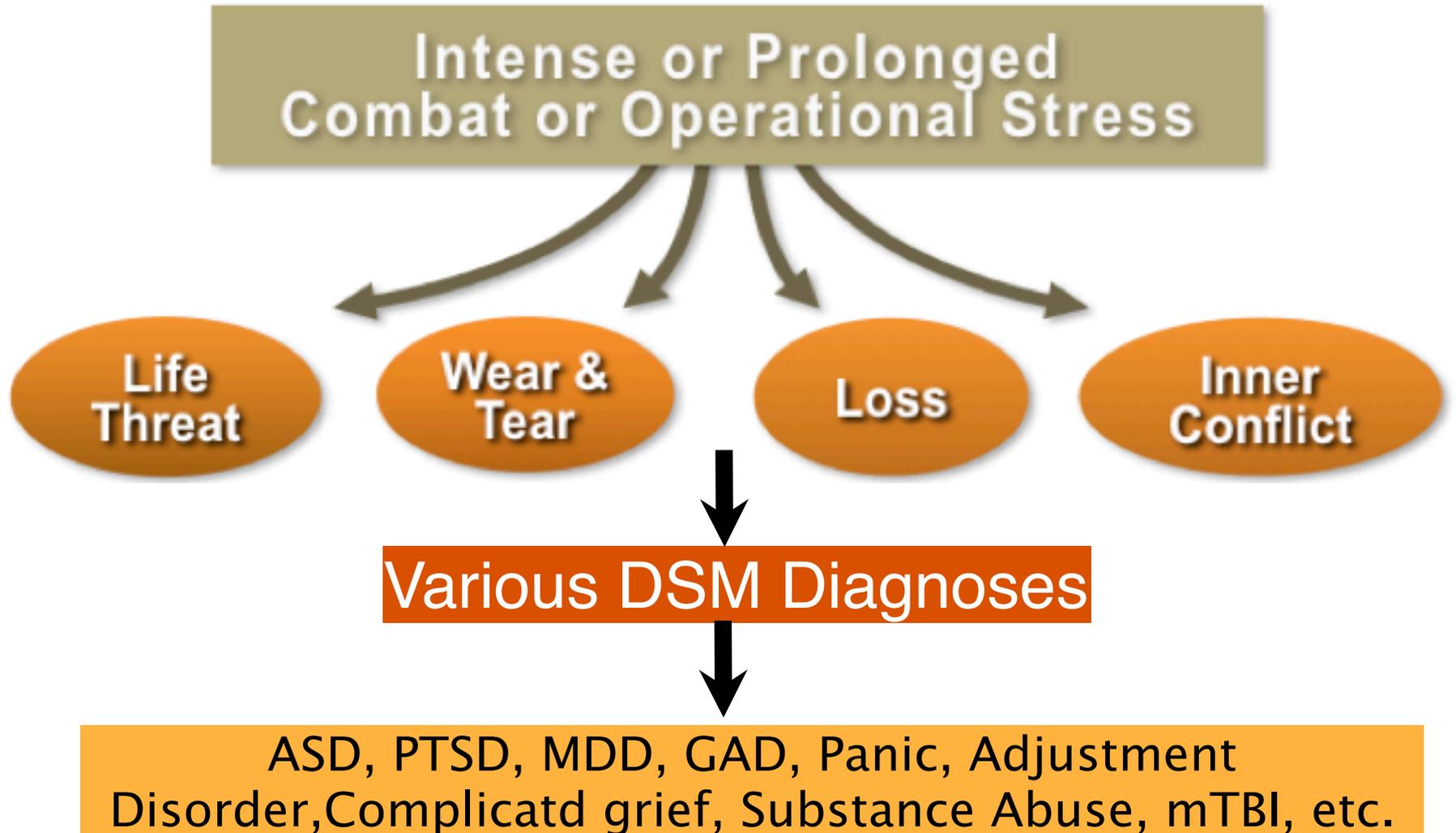
Stress Continuum Model: Conceptual Tool

Three Zones of Distress

- **Red Zone:** diagnosable mental disorders (stress illnesses), as defined by DSM-IV criteria for severity and duration
- **Orange Zone (2 sectors):**
 - Subclinical: typical DSM-IV symptoms but of insufficient severity to meet criteria for dx
 - Preclinical: acute distress or dysfunction (crisis) of too brief duration to meet criteria for dx
- **Yellow Zone:** “normal,” common, mild, fully reversible distress or changes in functioning that are within the ability of the person to master



Stress Injuries and DSM Diagnoses



Inner Conflict: Moral Injury



- ▶ Every War has its atrocities
- ▶ Destruction, killing, maiming
- ▶ Combatants embedded among civilians, children used as shields or combatants, mass graves or execution sites
- ▶ Bearing witness to mass destruction, human depravity and evil



The war
after
the war

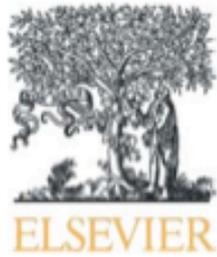


<http://projects.huffingtonpost.com/moral-injury/the-grunts>

The Grunts

Damned If They Kill, Damned If They Don't

<http://on.aol.com/video/what-is-moral-injury--518154819>



High rates of exposure to violence and its aftermath: 65% report seeing dead bodies or human remains; 31% handling or uncovering human remains and 60% report seeing wounded women and children they were unable to respond.

Moral injury and moral repair in war veterans: A preliminary model and intervention

Brett T. Litz ^{a,b,c}
Caroline Silva ^a

Survey of in theater Soldiers revealed 27% indicate being faced with an ETHICAL situation in which they did not know how to respond (MHAT-V, 2008)

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^b Boston University, United States
^c Newton, Massachusetts, United States
^d San Francisco VA Medical Center, University of California at San Francisco, United States

ARTICLE

Keywords:
Moral injury
Iraq War
Afghanistan
OIF
OEF

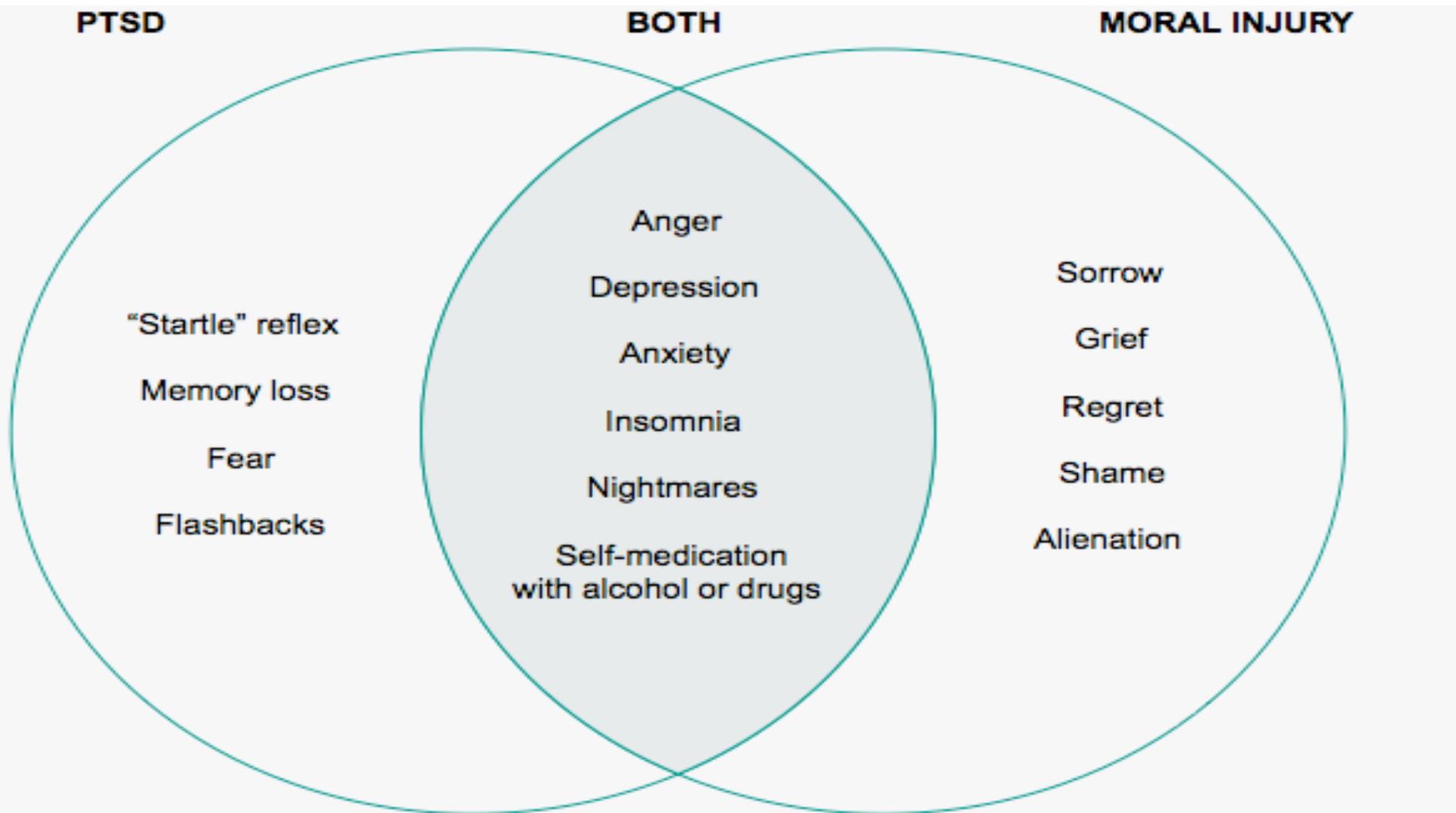
48-65% returning from OIF report being responsible for the death of an enemy combatant and 14-28% reported being responsible for the death of a non-combatant (Hoge, 2004)

examination of moral injury, we review the available literature, define terms, and offer a working conceptual framework and a set of intervention strategies designed to repair moral injury.

Inner Conflict: Moral Injury

- ▶ Defined: “perpetrating, failing to prevent, bearing witness to or learning about acts that transgress deeply held moral beliefs and expectations”
- ▶ The harm comes from shattering an individual’s beliefs about purpose and meaning in life, induces moral dissonance and existential crisis
- ▶ Involves disruption of the “assumptive world”
- ▶ Dependent on the nature of the act, the actor’s character, and the degree of involvement
▶ Results in highly aversive and haunting states of inner conflict, turmoil, and shame
- ▶ Experienced as PTSD-like symptoms: intrusion, numbing and avoidance with a spiral toward shame, guilt, demoralization and self-condemnation

Moral Injury



What is Damaged in Stress Injuries?



In the Brain:

- ▶ Messenger chemicals get depleted
- ▶ Set points in control systems get shifted (allostasis)
- ▶ Excessive and persistent arousal (phys/emotional)
- ▶ Possible literal damage to the hippocampus from cortisol and excessive excitation

In the Mind:

- ▶ Necessary and deeply-held beliefs are cracked
- ▶ Self-worth and self-confidence are shaken
- ▶ Sustaining attachments may be lost
- ▶ Ability to integrate memories is damaged

In the Spirit and Relationships:

- ▶ Life doesn't make sense like it used to
- ▶ Ability to forgive and feel forgiven is damaged
- ▶ Trust and connection to others is damaged

Neuroimaging in PTSD

Structural

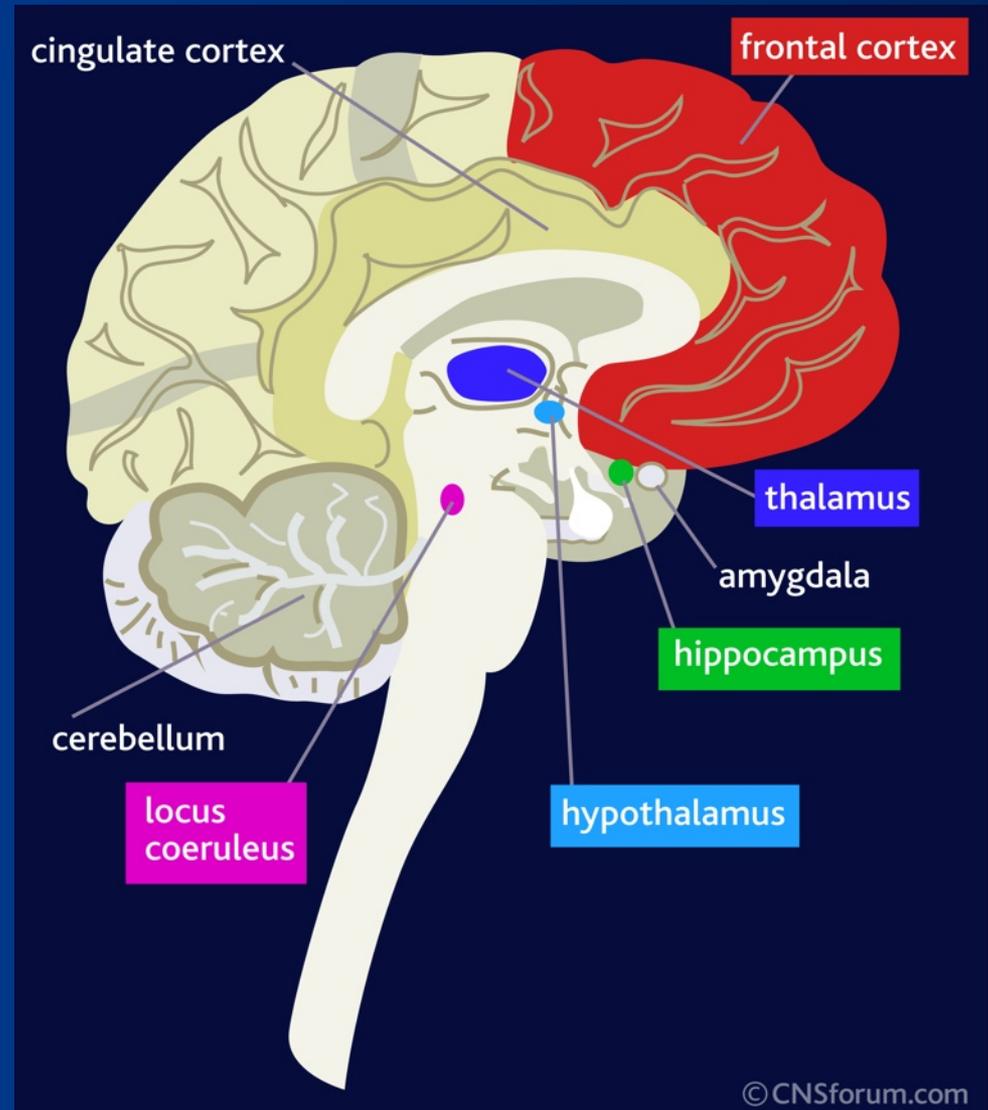
- ↓ hippocampus
- ↓ medial PFC

Functional

- ↑ amygdala
- ↓ medial PFC

Biochemical

- ↓ hippocampus
- ↓ ACC, ↓ PFC



The Limbic System

- Generation of emotion
- Memory Formation (storage and retrieval)
- Survival/Fear Response
- Helps us perceive & Evaluate the environment
- Controls the bodily response to fear, emotion & stress

Pre-Frontal Cortex (LED)

- Inhibits the activity of the Amygdala
- Distinguishes truth from fiction (Movies)
- Does not always feel threatened (Sees the world as a safe place)
- Relating to others in social situations
- Permanent memory storage

Judgment
Strategizing
Emotional Expression
Drive
Reasoning
Impulse Control
Decision Making
Regulates changes in mood
Planning

Thalamus:

- Relay station
- Filters info before it goes to the CEO
- "Good secretary/switchboard"
- Coordinates brain regions during stress response

Hypothalamus:

-Food, Water, Sleep, Sex
-Doorway to the body
-Hormone release to the body
-Controls the bodily response to emotion

Hippocampus:

- Verbal & Logical Memory storage (Facts, faces, names)
- Hard Drive of the Brain
- New Memories are filed
- Records the emotions attached to a stressful event



Amygdala:

- Gives emotion & meaning to information
- Fear Center
- Rage, Aggression, Phobia, Anxiety
- Storage of emotional memories (smells, sounds, images)

EVENT

Chemicals are released to prepare the body for ACTION

- Endorphins
- Cortisol
- Norepinephrine - Alertness
- Opioids - Pain
- Glucocorticoids - Inhibit responses

↑ Heart Rate

↑ Sweating

↑ Breathing

↑ Blood Pressure

↑ Blood supply

Paradox: “Normal” and “Injury”

- ▶ PTSD is part of the “normal” range of human response to prolonged and extremely stressful experiences
- ▶ PTSD is also an “injury”; physiological damage has taken place which serves to “stall” adaptive readjustment and therefore a legitimate “disorder” (Injury is a better term)
- ▶ We must hold to both aspects

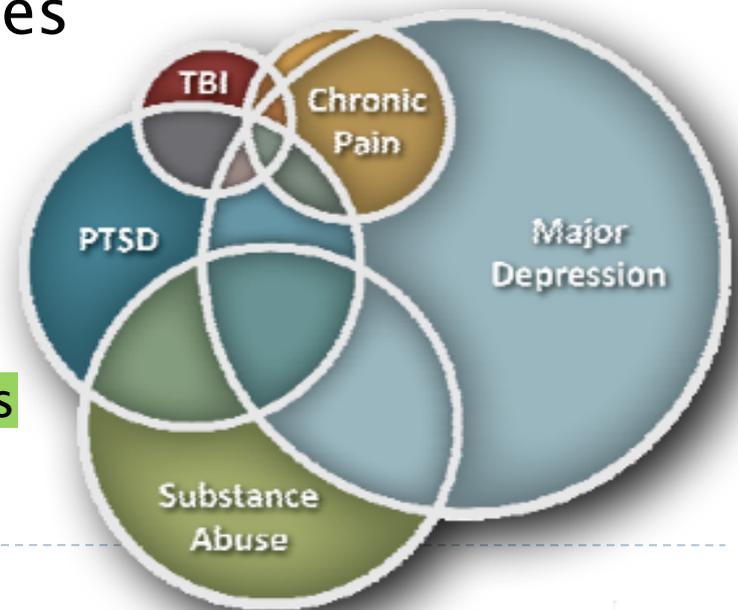


A closer look

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Interrelated nature of mental health concerns

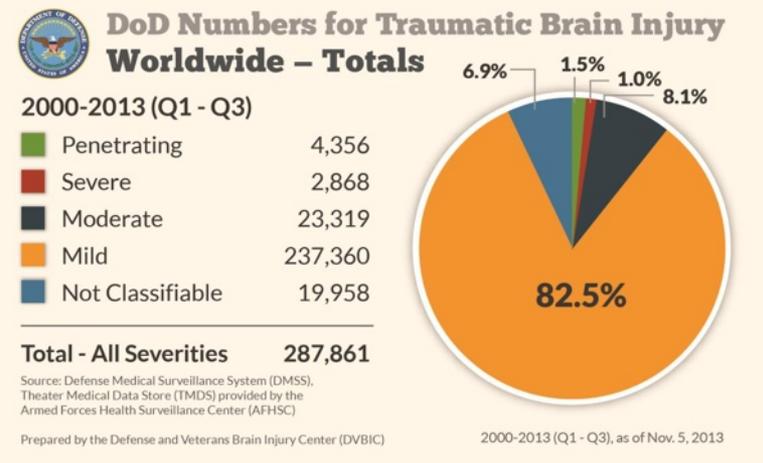
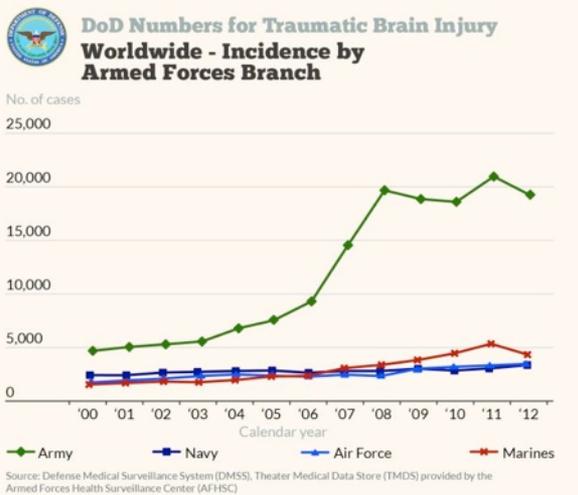
- Post-deployment mental health impact can take many forms
 - ▶ Some reactions are not clearly defined
 - ▶ Others are readily recognizable
 - ▶ In many instances these reactions represent a cluster of interrelated issues



Common Co-occurring issues

A closer look: TBI

- TBI is the most common physical injury for combatants
- Overwhelming majority are considered mTBI/concussions
- Difference in severity between concussion and moderate/severe traumatic brain injuries (TBI)



Recovery from Concussion

- 1st week post-concussion : 90% + endorse postconcussive symptoms
- 1 month post-concussion: ~50% are recovered fully
- 3 months post-concussion: ~66% are recovered fully
- 6-12 months post-concussion: ~10% still symptomatic
- Those who remain symptomatic at 12 months likely due to additional co-occurring complications

Post Traumatic Stress Disorder (PTSD)

- PTSD has become common vocabulary
- Post trauma reactions are seldom easily characterized
- ▶ Post traumatic stress refers to any distress following a stressful event in a war zone which does not rise to the level of PTSD
- ▶ PTSD reflects a specific set of physical reactions which are common responses to extreme or prolonged stress

Common reactions

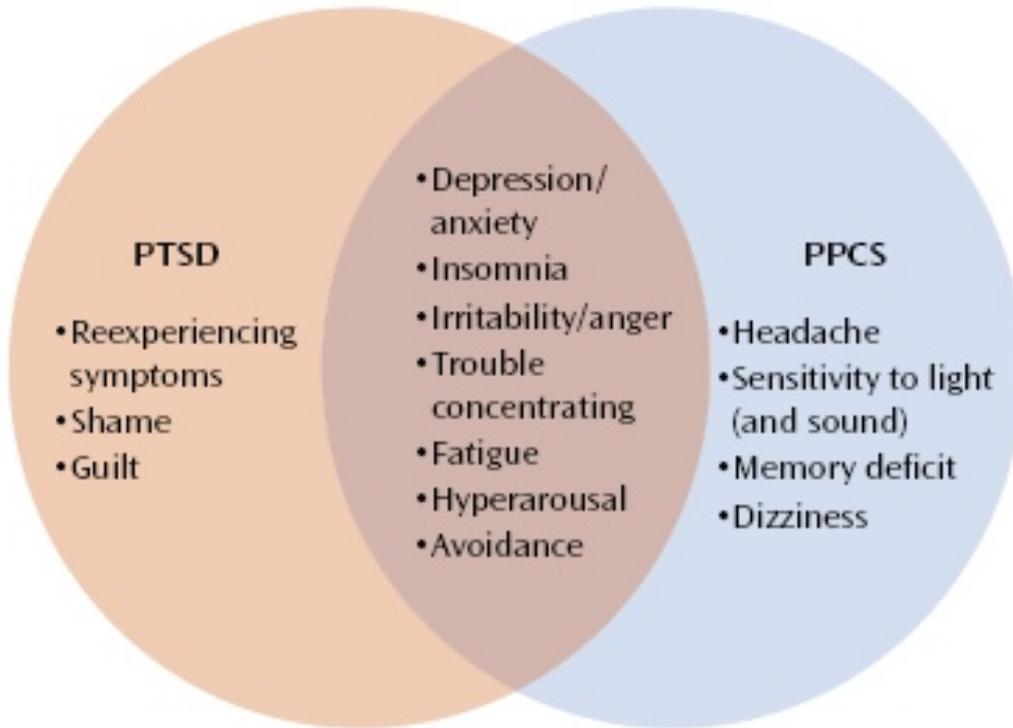
- Recurrent thoughts of the event
- Flashbacks/bad dreams
- Emotional numbness (“I don’t feel anything”) ; reduced interest or involvement in work or outside activities (“I don’t care about anything any more”)
- Intense guilt or worry/anxiety
- Angry outbursts and irritability
- Feeling “on edge,” hyperarousal/hyper-alertness
- Avoidance of thoughts/situations that remind person of the trauma
- Depression

Potential negative impact

- Relationship problems
- Diminished sense of wellbeing
- Alcohol and substance abuse
- High risk behavior
- Misconduct
- Employment problems
- Functional impairment
- Homelessness
- Legal problems
- Isolation



Overlap of TBI and PTSD



The same event which causes the TBI/concussion can also produce the trauma for PTS/PTSD reactions



Changes in Criteria

DSM IV

Divided into 3 clusters

Re-experiencing

Avoidance & Numbing

Increased arousal

DSM V

Divided into 4 clusters

Intrusion

Avoidance

Negative alterations in cognitions & mood

Alterations in Arousal & Reactivity



Dynamics of SUD and PTSD in OEF/OIF Veterans

- ▶ PTSD is a risk factor for SUD—Use of alcohol or drugs may reduce the anxiety component of PTSD and thus be reinforced
- ▶ Withdrawal from substances may exacerbate PTSD symptoms
- ▶ Prolonged exposure as a treatment for PTSD doesn't increase craving or substance abuse
- ▶ Patients prefer that the two conditions be treated together



Optimizing care

Sobering Math

- ▶ Of Veterans who need MH care, less than half will engage in treatment
- ▶ Of those who begin PTSD treatment, about 60% drop out (many after first session)?????
- ▶ With only 50% seeking care and a 40% recovery rate, current strategies will reach no more than 20% of all needing PTSD treatment
- ▶ 1.2 million draw down---30% will have some kind of combat stress--->360,000
- ▶ Getting Soldiers into treatment and keeping them in treatment is paramount

Hoge, 2011, JAMA 306: No. 5, pp 549-551



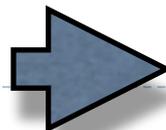
Billy's Challenges



**Foster therapeutic
alliance to generate
treatment engagement**

Negative perceptions of mental health

- Negative perceptions of mental health care
 - 25% “I don’t trust mental health professionals”
 - 15% “Psychological problems tend to work themselves out”
 - 18% “Getting mental health treatment should be the last resort”
- Among NG (OIF) More than half screen positive for mental health problems
 - 65% indicated they “ought to handle it on their own” or “didn’t want to believe I had a problem”
- Clash of cultures (MH and Military)
 - Mental toughness
 - Collectivism
 - Self-reliance



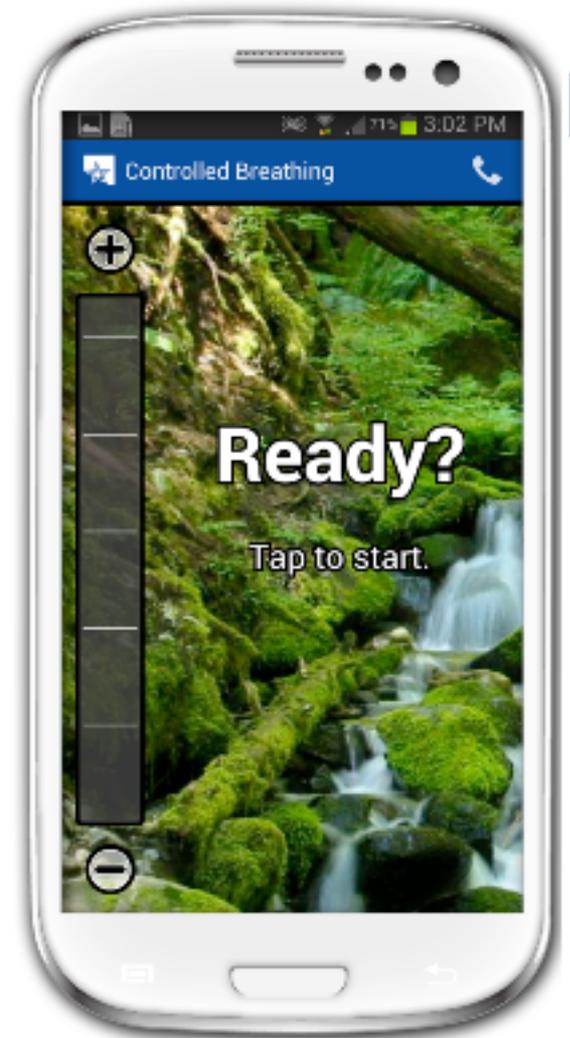
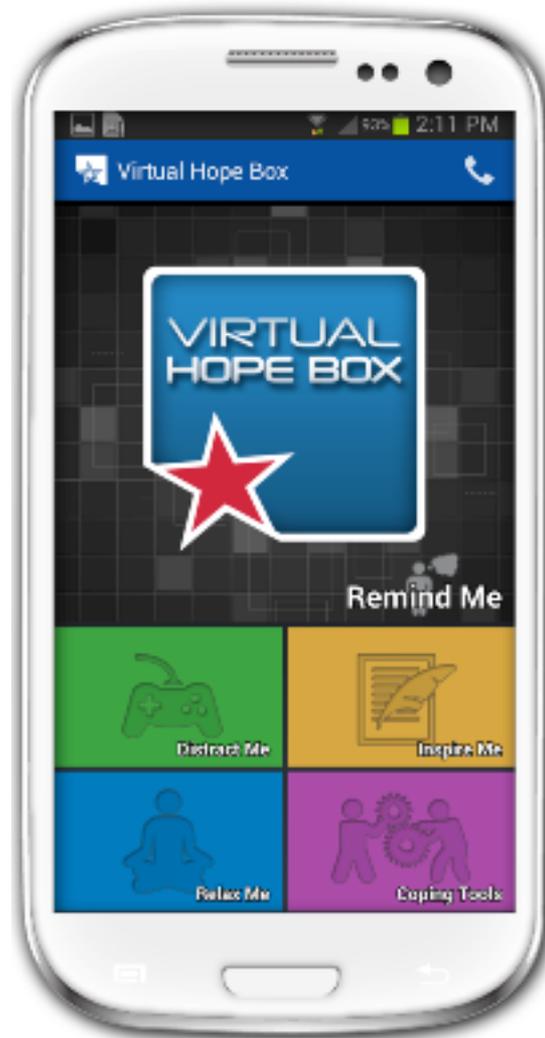
Resistance to engage with mental health support--seems counter to Warrior identity

Maintain awareness...

heightened risk for Suicide

- ▶ You are working with a population at heightened risk for multiple reasons
- ▶ Be attuned to vague, indirect language
- ▶ Always take it seriously
- ▶ Don't be afraid to raise the topic directly
- ▶ Know how to build a safety plan
- ▶ Work at connecting

Virtual Hope Box



Expect, and address anger

- ▶ Anger effective survival skill
- ▶ Anger often tied to losses incurred during deployment
- ▶ Anger feeds the adrenaline crave
- ▶ Anger often fed by hypervigilance (wired)
- ▶ Anger by product of lack of sleep
- ▶ Anger is a way to maintain control
- ▶ Mask for emotional pain

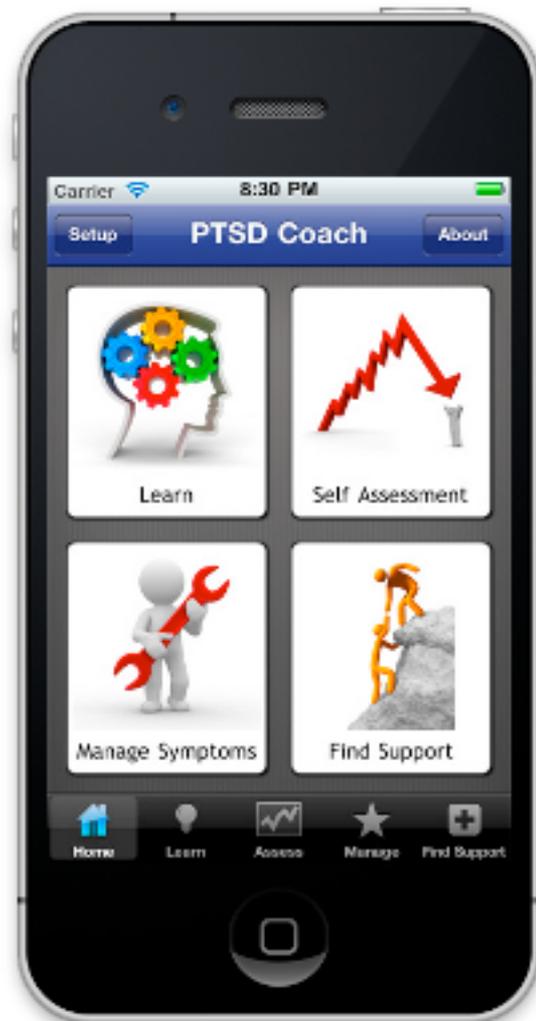
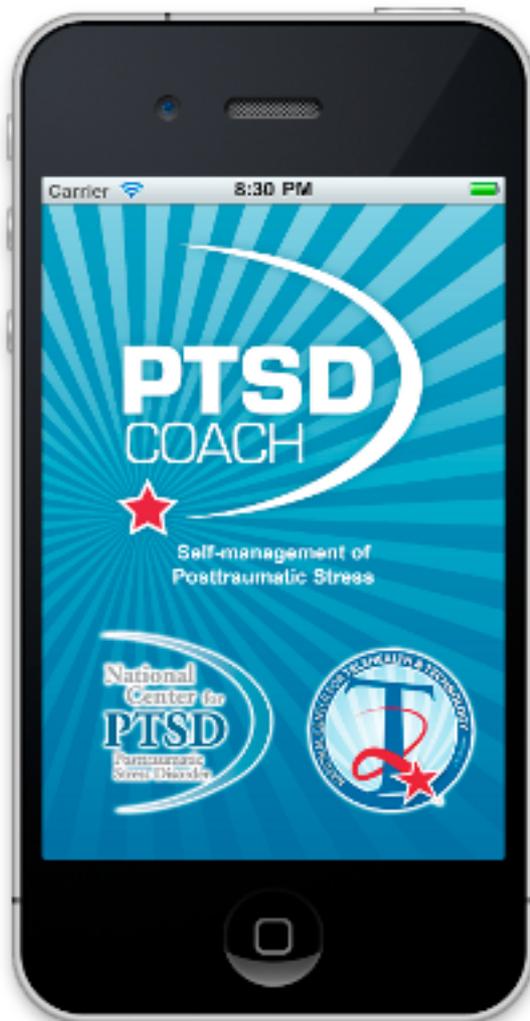


Attend to the physiology of combat

Relaxation skills

Sleep skills

Increase emotional tolerance



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Enhance social connections and support



Create action plans



Support exploration of loss



Guide cognitive restructuring



**Support narration--telling
their story**



**Pay attention to how you
communicate**

Resources

Free download http://www.nap.edu/catalog.php?record_id=13499

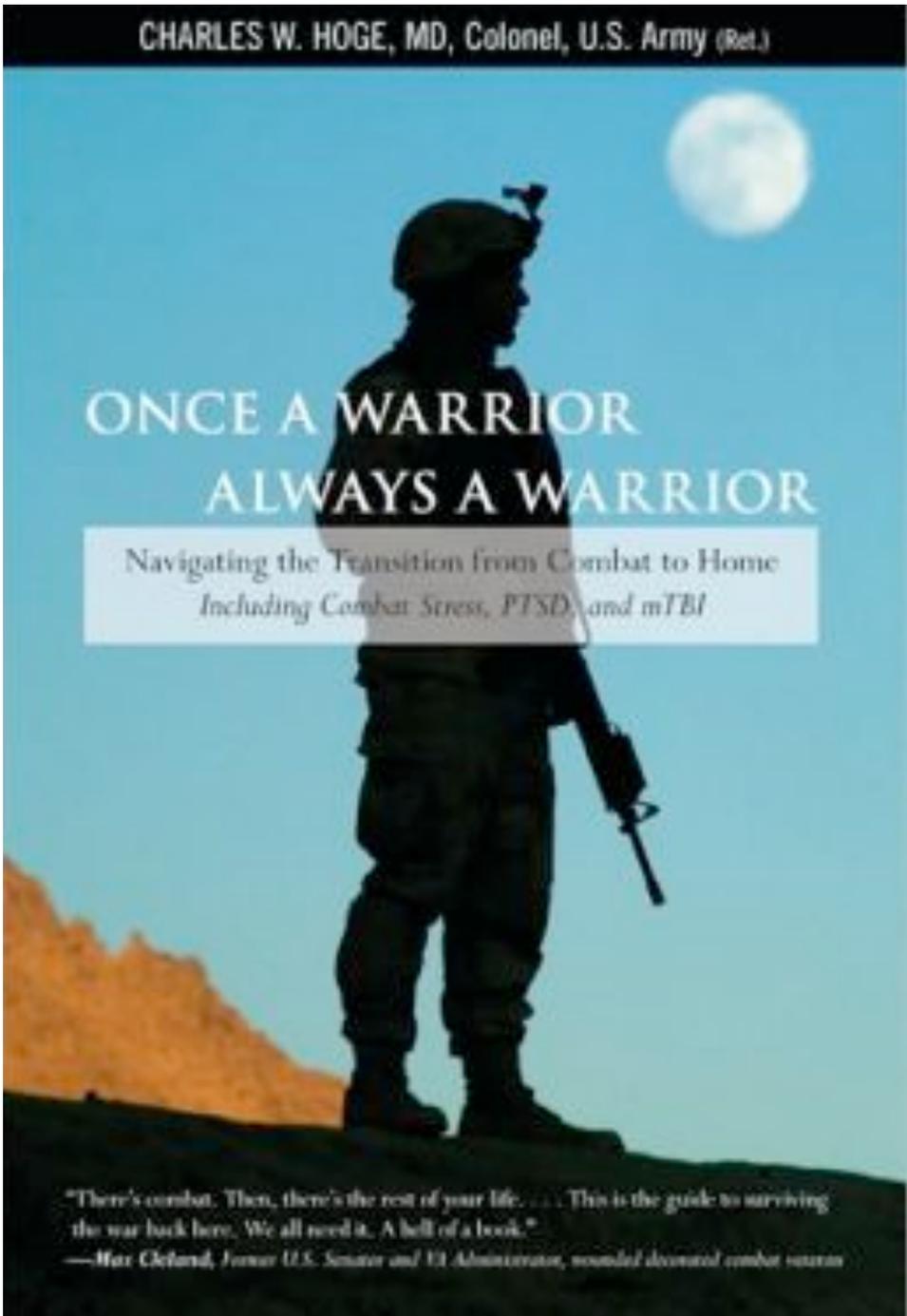
Returning Home from Iraq and Afghanistan: Assessment of Readjustment Needs of Veterans, Service Members, and Their Families

Committee on the Assessment of Readjustment Needs of Military Personnel,
Veterans, and Their Families

Board on the Health of Select Populations



CHARLES W. HOGE, MD, Colonel, U.S. Army (Ret.)



ONCE A WARRIOR ALWAYS A WARRIOR

Navigating the Transition from Combat to Home
Including Combat Stress, PTSD, and mTBI

"There's combat. Then, there's the rest of your life. . . . This is the guide to surviving the war back here. We all need it. A hell of a book."

—*Max Cleland, Former U.S. Senator and VA Administrator, wounded decorated combat veteran*



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Taming The

FIRE

Within



Life After War

ANNE FREUND, PH.D.

Free book download

[http://www.wwe.com/
military/taming-the-
fire-within](http://www.wwe.com/military/taming-the-fire-within)

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