Module 1: Stress, Trauma and Disaster
Life is inherently stressful
Types of Stressors

Life/Developmental Stressors

Natural Disasters

Man-made stressors
Developmental Stressors

- Birth
- Sep/Individuation
- Adolescence
- Marriage
- Divorce
- Physical disability
- Loss of job
- Chronic disease
- Terminal Illness
- Aging
- Death of loved one
Natural Disasters

- Hurricane
- Earthquake
- Flood
- Pandemics
“You can see for yourself what has gone before...so you can see what will happen, for it will all be formed the same, it is impossible to break the rhythm of the past”

Marcus Aurelius
Man Made Disasters

RAPE

WAR

TORTURE

TERRORISM

AGGRESSIVE ASSAULTS
What is Stress?

• A state of **psychological and physical arousal** that comes about as a result of a threat, challenge, or change in one's environment

• Stress response is the organism’s normal response designed to protect, maintain and enhance one's life
Definitions of Stress

- **Non-specific response** of the body to any demand placed upon it
- **A real or imagined threat** to the psychological or physical integrity of the individual
- **Incongruity** between the organism’s adaptive capacities and the demands placed upon the organism
Stress

• Stress may be in the eye of the beholder

• Definition of the situation
  • How you define a situation determines your emotional response to it
  • If you define something as real it is real in its consequences
Stressors

- **Acute stressor:**
  Circumscribed in time and space.

- **Chronic stressor:**
  Continuing and unrelenting exposure
  - War
  - Physical abuse
  - Sexual abuse
Acute Stress Response

The array of psychophysiological responses that serve to restore homeostasis
The Acute Stress Response

Stressor

Hypothalamus

Sympathetic Nervous System
- Psychological arousal
- Activate vital functions to fight or flee:
  - Heart and lungs
  - Muscles of the extremities
  - Energy mobilization
  - Brainstem mental activity
- Deactivate:
  - Digestion
  - Higher level mental processes

Adrenal Cortex
- Longer-lasting effects
  - Mobilization of energy (fats and glucose).
  - Release of amino acids by skeletal muscle to repair damaged tissues.
  - Vasoconstriction (i.e. digestive organs).
  - Inhibition of inflammation and the immune response.

Epinephrine
- Mobilization of energy (fats and glucose).
- Release of amino acids by skeletal muscle to repair damaged tissues.
- Vasoconstriction (i.e. digestive organs).
- Inhibition of inflammation and the immune response.

Cortisol
- Long-term effects
Chronic Stress

Prolonged unrelieved exposure to a variety of stressors

- Continuous exposure
- Multiple events over time
- Multi-centric
Chronic Stress Response

Dysfunctionality may occur because systemic stress responses:

- Comes on too often
- Fails to habituate to stressors
- Fails to turn off the stress response
- Remains on after the stress has passed
- Wears out the ability of some organs to respond
- Causes other organs to overreact
Chronic Stress

Psychological symptoms

- Anxiety/dysphoria
- Sleep and appetite disturbance
- Psychomotor dysfunction
- Interpersonal, social and performance problems either at school or work
Chronic Stress: Long-Term Consequences

Illnesses related to stress

- Immune Suppression
- Depression/Anxiety Disorders
- Cognitive Impairment
- Aggressive-Violent Behaviors
- Other Psychological Morbidities
- Earlier Aging
- Cardiovascular Diseases

McEwen, 2000
Previous Exposure to Stressful Situations

- Inoculation effect vs. cumulative trauma effect
- Continued exposure to traumatic stimuli leads to gradual loss of resiliency
The Traumatic Stimulus

A traumatic event is stated to have occurred when the person experiences, witnesses, or is confronted with an event or events that involves actual or threatened death or serious injury, or threats to bodily integrity of the self or others often associated with fear, helplessness, or terror.
The Traumatic Stimulus

Children rarely will describe such emotions and may respond with disorganized or agitated behavior.
Acute Trauma

- Circumscribed in time and space
- May produce little effect on the psychosocial context
Acute Trauma

An “event trauma”
is frequently associated
with a cascading inventory
of secondary stressors
transducing an “event trauma”
into a process or “chronic trauma”.
Chronic Trauma

- Continuing and unrelenting exposure
- Exposure to an inventory of primary and secondary stressors
- Greater risk of psychological consequences.
In most instances a single event trauma is associated with an inventory of secondary stressors which in and of themselves become traumatic stimuli.
Secondary Stressors

- Separation from loved ones
- Closing of schools
- Inactivity
- Death of a family member
- Displacement

- Decreased food and water resources
- Displacement
- Physical injury
- Loss of community and social supports
Exposure to Traumatic Stressors

- Lifetime risk of exposure to a traumatic stressor: **70-90%**
- Average number of traumatic stressors during a lifetime: **4-5** (United States)
- Most frequent lifetime stressor: sudden and unexpected death of a loved one

Source: Breslau et al., 1998
Disaster

A severe disruption, ecological and psychosocial which greatly exceeds the coping capacity of the altered community

*World Health Organization, 1992*
Disaster

Latin ➔
“Dis” means “against”
“Astrum” means “stars”

Disaster ➔
“The stars are evil”
Classification of Disasters

Human-Generated Disasters
- Mass Violence
- Terrorism

Natural Disasters
Community Responses to Disasters and Terrorism
Disaster Levels

**LEVEL 1**
Requires local emergency, medical and community agencies

**LEVEL 2**
Regional response requiring multiple sourced skilled personnel and special equipment

**LEVEL 3**
Requires the involvement of state and federal authorities to cope with massive and widespread destruction
Phases of Disaster

1. PREDISASTER
   - Threat
   - Warning

2. HEROIC
   - Impact
   - Inventory

3. HONEYMOON
   - COMMUNITY COHESION

4. DISILLUSIONMENT

5. RECONSTRUCTION
   - A NEW BEGINNING
   - WORKING THROUGH GRIEF
   - COMING TO TERMS

Trigger Events and Anniversary Reactions

1 TO 3 DAYS  Time  1 TO 3 YEARS

ZUNIN/MYERS
Impact Phase

- Duration: impact period
- Survival behaviors
- Responses:
  - Shock
  - Terror
  - Fear
  - “Stun” reaction
Heroic Phase

- Duration: hours to few days
- Behaviors:
  - Seeking safety
  - Search
  - Rescue
  - Aid

Source: Young et al., 2002
Heroic Phase

- Altruism is common
- Self-assessment of risk may be distorted
- Separation from family members is distressing

Source: Young et al., 2002
Honeymoon Phase

- Duration: weeks to months
- Survivor optimism
- Gratitude for survival
- Community solidarity & bonding
- The group acts to protect the survivors

Source: Young et al., 2002
Honeymoon Phase

- Assistance pours into the area
- Media focus on the event
- Belief that life will rapidly return to normal

Source: Young et al., 2002
Disillusionment Phase

- Duration: months to years
- Fatigue emerges
- Losses are realistically assessed

Source: Young et al., 2002
Disillusionment Phase

- Media pulls out
- Volunteerism declines
- Persons remain displaced
- Hope diminishes
- Resentment builds
- Community cohesion is challenged

Source: Young et al., 2002
Reconstruction Phase

- Duration: months to years
- Rebuilding continues
- The new reality is accepted
- Anniversaries or reminders may be distressing

Source: Young et al., 2002
Reconstruction Phase

- Renewed appreciation for life and relationships
- Reassessment of priorities and commitments
- Recognition of personal strengths

Source: Young *et al.*, 2002
Reconstruction Phase

Recovery process for survivors is highly variable:

- Most regain predisaster level of functioning
- Some emerge at a higher level of functioning

Source: Young et al., 2002