On-going Traumatic Stress in Iraqi Civilians: Perspectives for Psychiatry and Medicine

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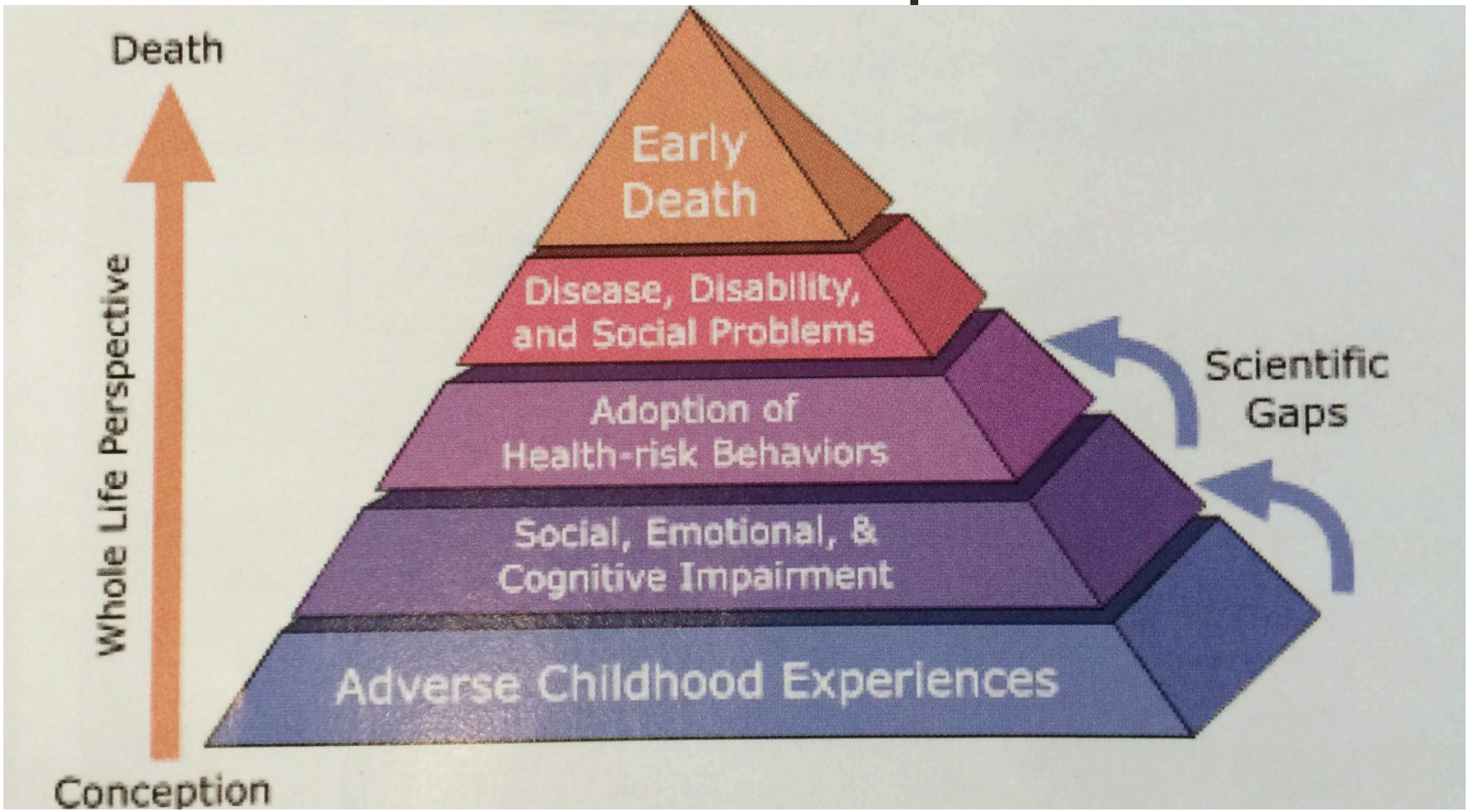
Whole Life Perspective



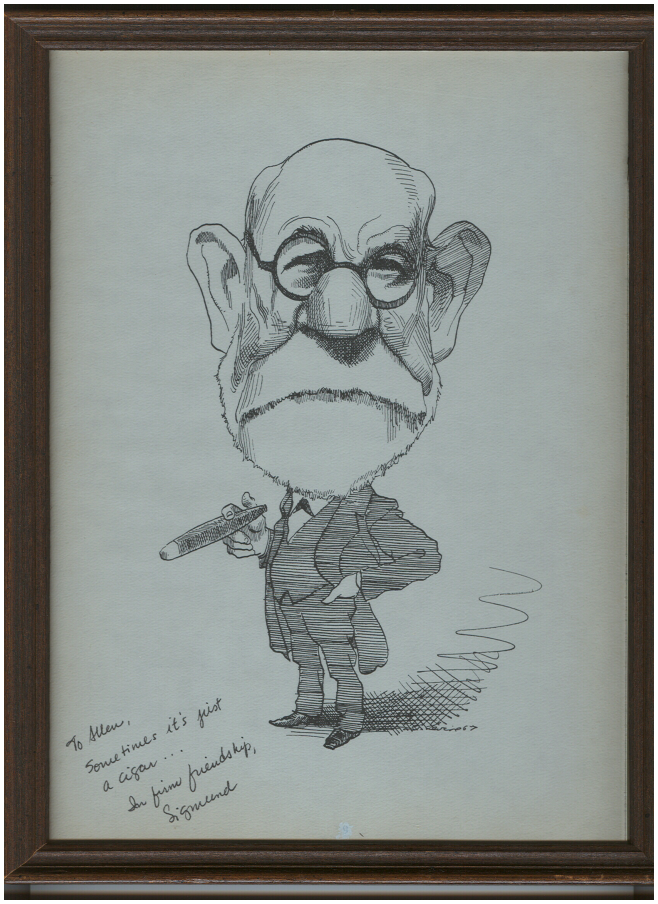
Adverse Childhood Experiences Pyramid – US Centers for Disease Control and Prevention

Maslow's Hierarchy of Needs

Iraq on the Ground:
The View Through the Psychiatrist's Lens

The Psychiatrist's Lens

"Those who fail to learn the lessons of history are destined to repeat them."



George Santayana:

The Life of Reason, 1905

Sigmund Freud:

Remembering, Repeating, and Working Through, 1914

Narrative repair
Moral distress
Truth and Reconciliation
Restorative justice.


مطعم
جناح خاص للعوائل
عيادة
السعدون
الدكتور
اسامة العاني
صيدلية

Iraq Population Profile

- Extraordinary stress x 30 years
- Incredible resilience
- Decreased life expectancy
- Increased infant mortality
- Resurgence of tuberculosis
- Higher than expected incidence of cancer

  ➔(7-8 times world rates)➔
- Higher incidence heart disease, diabetes, etc.
- High rates of depression, other psychiatric disorders, and substance use disorders

Table 5 Trauma Experience
WHO Iraq Mental Health Survey (2008)

- For both 12-month and life time prevalence independently of the number of exposure to traumatic events or gender, the case group shows systematically higher values than the non-case group.
- Considering the lifetime prevalence of trauma experience, except for *capture/kidnapping, imprisoned* and *purposely causing harm to others* every condition is significant. As expected, the case group shows systematically higher value than the non-case group.
- For the 12-month prevalence we observe difference in every condition except for *arrest, life threatening illness* and *purposefully causing harm to others*. Once again, the values for the case group are systematically higher than for the non-case group.
- Except for the category *being beaten by spouse*, where women show higher significant values, in general men show systematically higher exposure to traumatic events.
- The south/centre shows higher values for the following categories: *refugee, internal displacement, exposure to bomb blast, capture, public humiliation, accused of collaboration, beaten by parents as child, beaten by someone else, sexual assault, causing accidental harm to others, witness to killing, death of dear one, family member kidnap, any war related trauma, any trauma* and *other*. The Kurdistan region shows higher values for the categories *life threatening illness* and *others*.

Resilience

- the positive capacity of people to cope with stress and catastrophe.
- cumulative "protective factors"
- used in opposition to cumulative "risk factors"

Definition of Trauma is subjective

trauma |noun –

1. a deeply distressing or disturbing experience : *they were reluctant to talk about the traumas of the revolution*

2. emotional shock following a stressful event or a physical injury, which may be associated with physical shock and sometimes leads to long-term neurosis.

3. Medicine: **physical** injury.

ORIGIN late 17th cent.: from Greek, literally

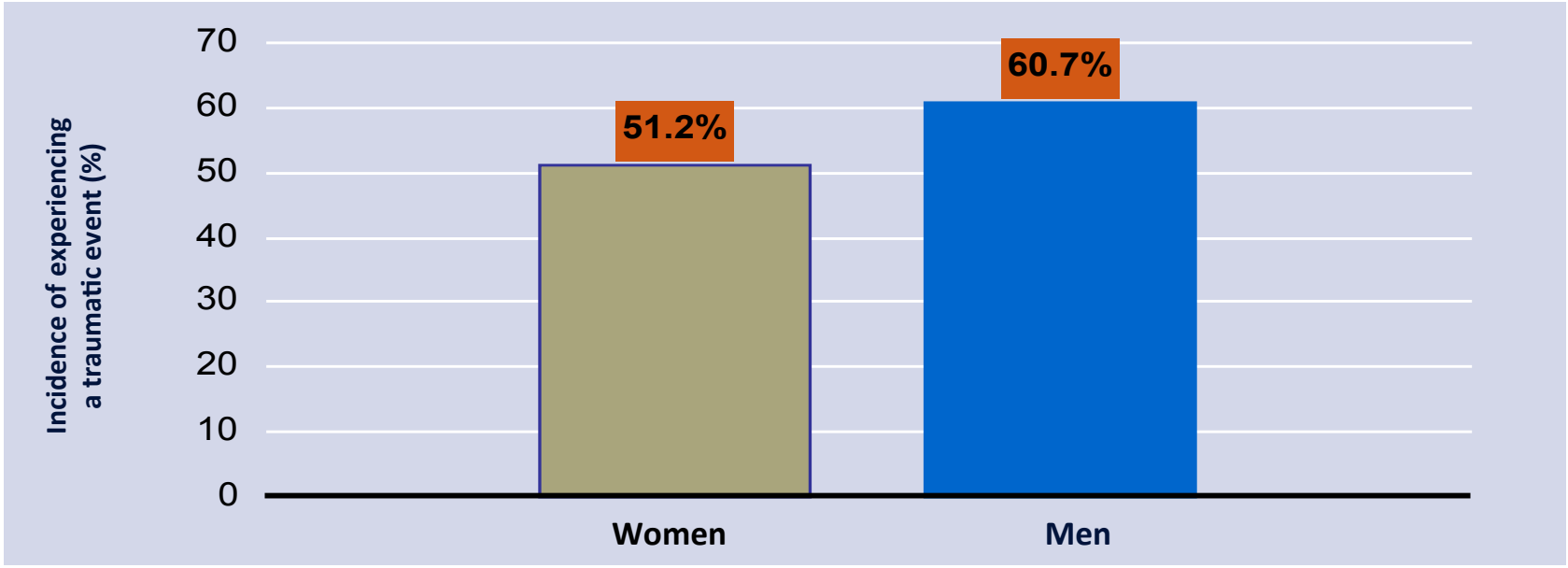
Wound.

The brain responds to experiences, not to events.

Whether an adverse event is traumatic depends upon how the person experienced it.

High Prevalence of Traumatic Events

The lifetime incidence of experiencing a traumatic event severe enough to cause PTSD is more than 50%, according to the National Comorbidity Survey (NCS)*



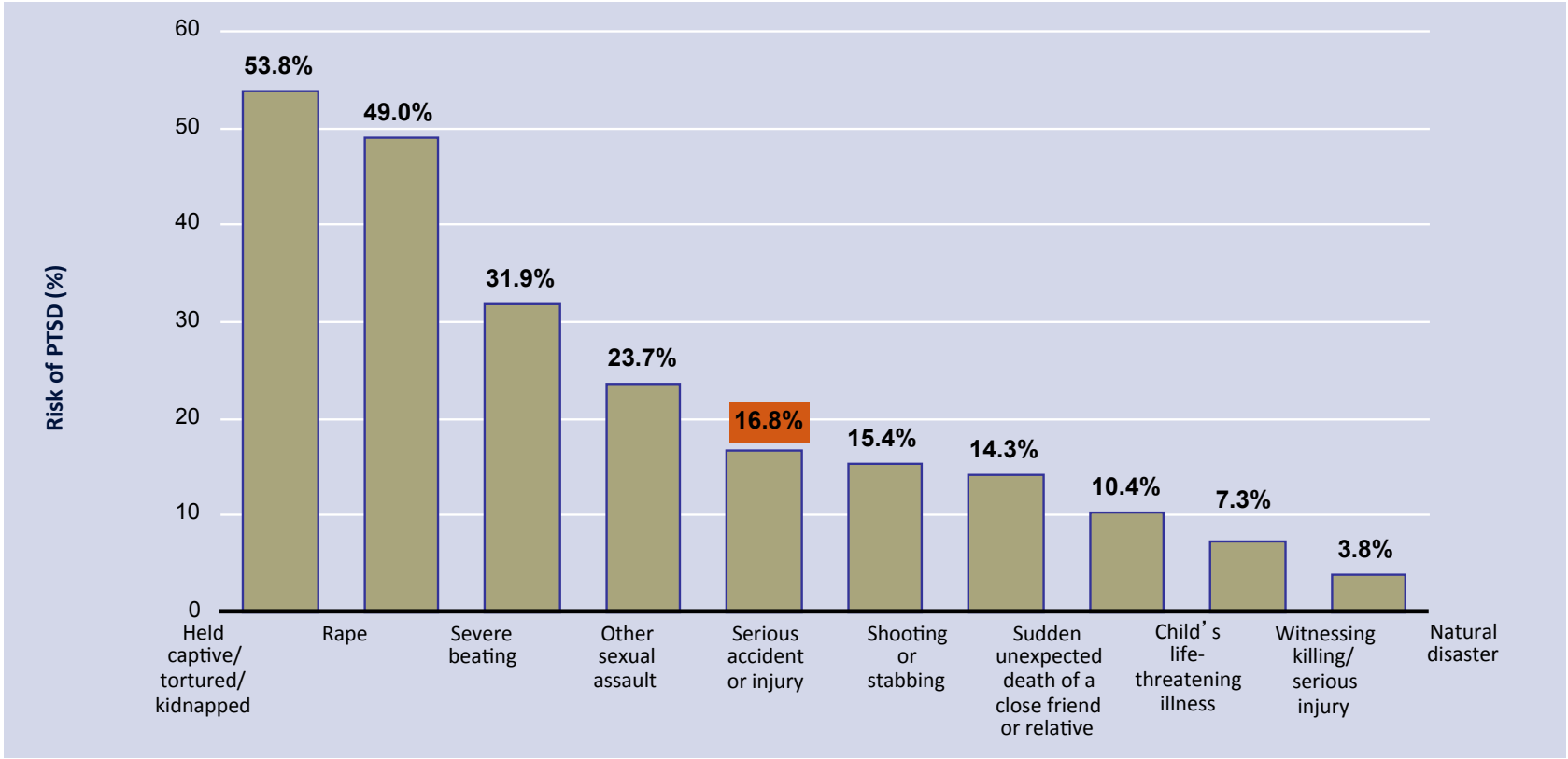
Approximately 20% of individuals exposed to a traumatic event will go on to develop PTSD

*From Part 2 of the NCS. A total of 5877 respondents participated in the survey, which was conducted among individuals aged 15 to 54 years, from September 1990 to February 1992.

Kessler 1995; Breslau 1991; Resnick 1993.

Severity of Traumatic Event Increases Risk

Select traumatic events and the estimated risk for developing PTSD*



*Based on results from the Detroit Area Survey of Trauma, which was a telephone survey conducted among a representative sample of 2181 individuals aged 18 to 45 years in the Detroit area in 1996.

Breslau 1998.

Severity of Posttraumatic Symptoms Depends on Interaction Between—

How Event Was Experienced

(terror, horror, helplessness, humiliation)

+

Vulnerability Factors

+

Resilience Factors

+

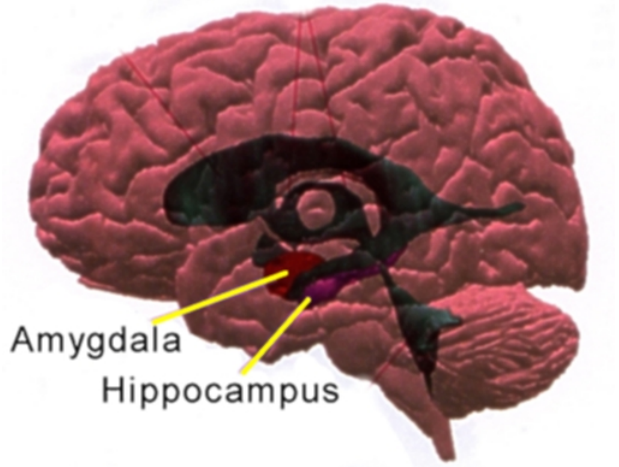
Validation and Support by Social Group

Exteroceptive & Interoceptive

Sensory Pathways

↓

Limbic System



Procedural

Conscious

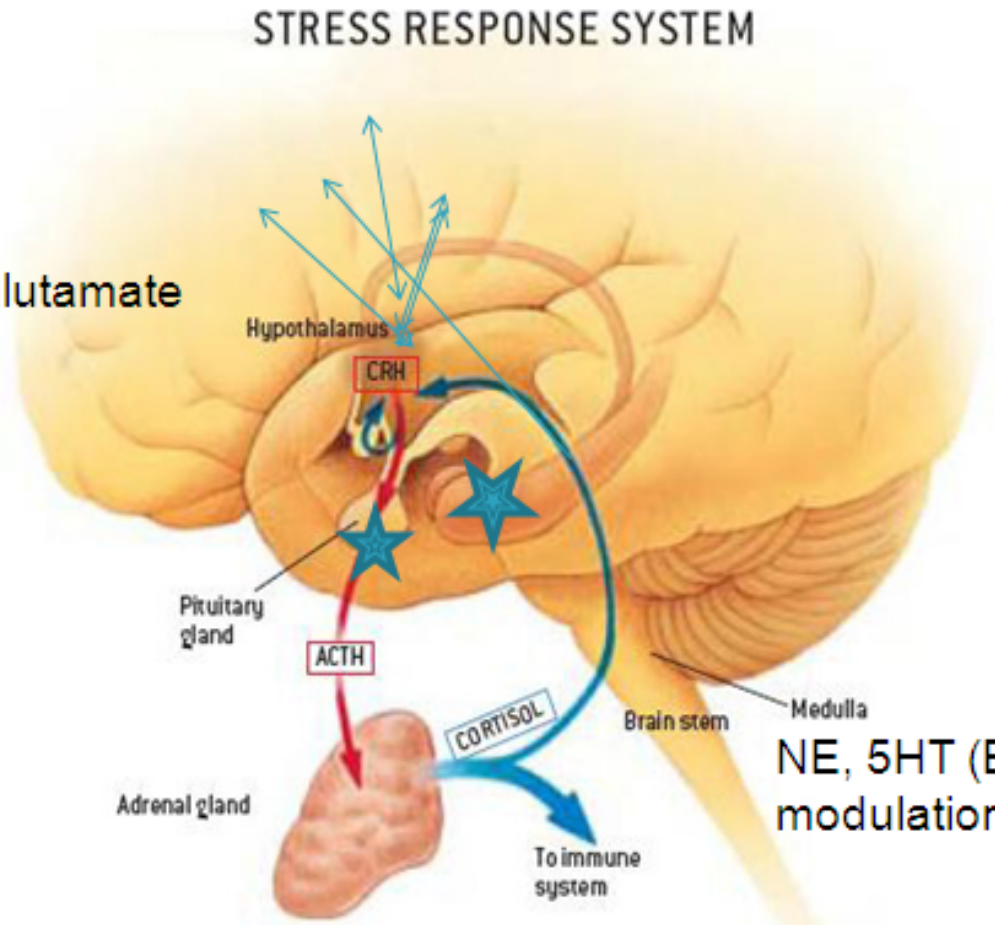
Amygdala

(Implicit Memory)

Hippocampus

(Explicit Memory)

Human stress response systems



Gaba ⟷ glutamate

NE, 5HT (E2 modulation), ACH

★ =Glucocorticoid receptors

Dual Memory Systems for Emotional and Narrative Memory

Implicit Memory

(Amygdala)

- "Mood and body Memory" as images, body sensation, emotional states
- No sense of remembrance
- Mature from birth
- Most efficient in

  states of alarm

Explicit Memory

(Hippocampus)

- Narrative memory of events (verbal memory)
- Has sense of remembrance
- Matures at age 2 - 3 years
- Shuts down in

  states of alarm

Why Do Posttraumatic Symptoms Occur?

Posttraumatic symptoms occur when *implicit* memories produce:

- Visual images
- Body sensations
- Emotional states

In the absence of *explicit* memories that can provide a context for their meaning.

Neurobiology of Chronic PTSD

- Metabolic *hyperactivity* in Amygdala (generating fear behaviors and emotions)
- Metabolic *hypoactivity* in Prefrontal Cortex, Dorsal Cingulate Cortex and Hippocampus (failing to regulate Amygdala hyperactivity)
- Hippocampus can show *structural damage*:

  1) In humans, 8% to 25% decreases in hippocampal volumes on volumetric MRI studies

  2) In animals, dendritic atrophy of pyramidal and granule neurons, suppression of neurogenesis, decreased BDNF;
- Weak Cortisol response to stress.

Traumatic Events Commonly Occur

"Trauma is to psychiatry what
the common cold is to internal medicine."

-- Robert Ursano, MD

- Insomnia
- Emotional numbing; surreal feelings
- Difficulty concentrating
- Hypervigilance, Irritability
- Intrusive images of traumatic event

What is Dissociation?

Events normally experienced as connected on a smooth continuum are isolated from the other mental processes with which they would be normally associated.

*****

A breakdown occurs in connectedness between memory, personal identity, conscious awareness, or mind and body.

What is Dissociation?

Cognition compartmentalizes—

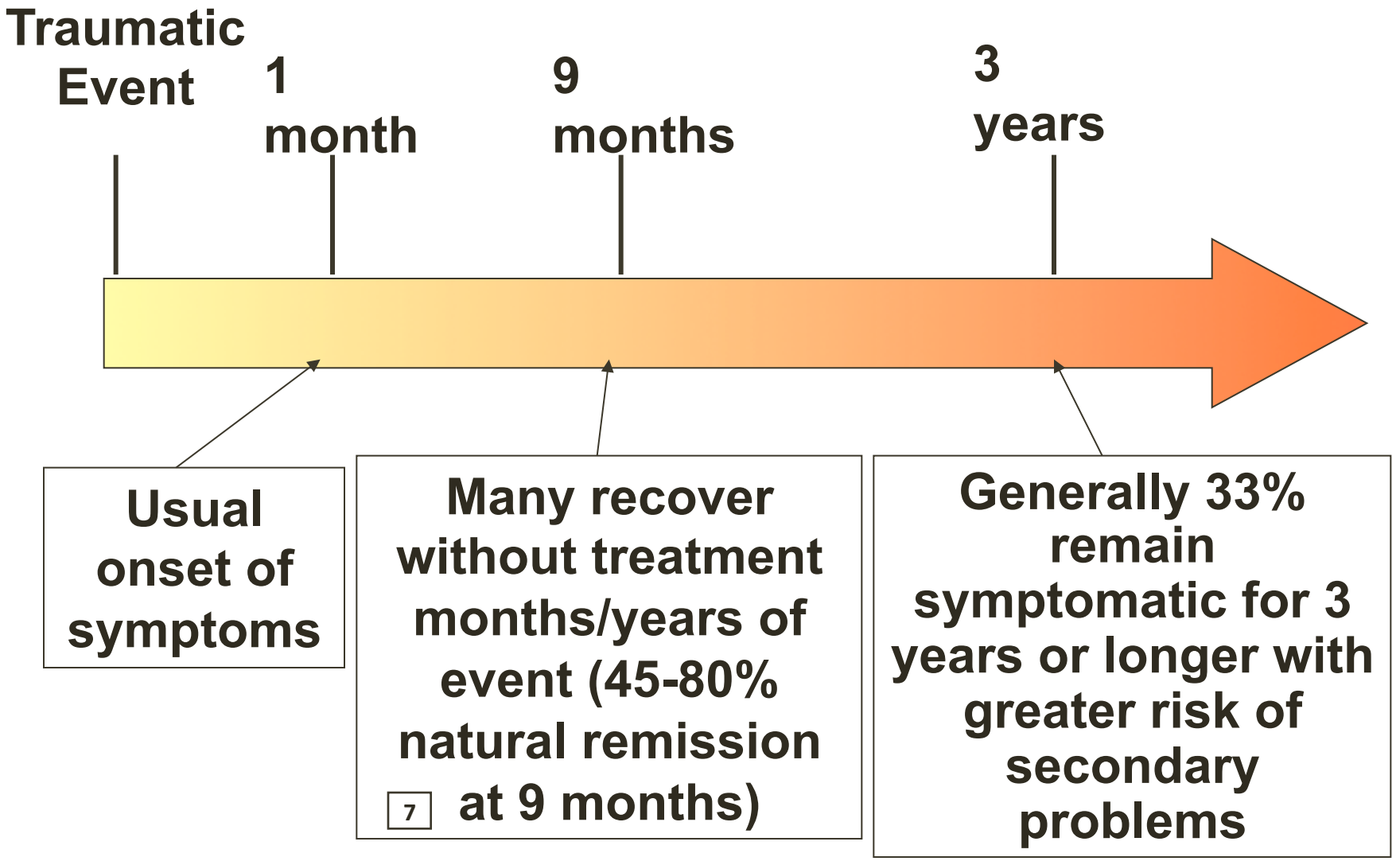
A sense of operating as a whole person is lost.

The mind functions as if its different components are operating in isolation from one another.

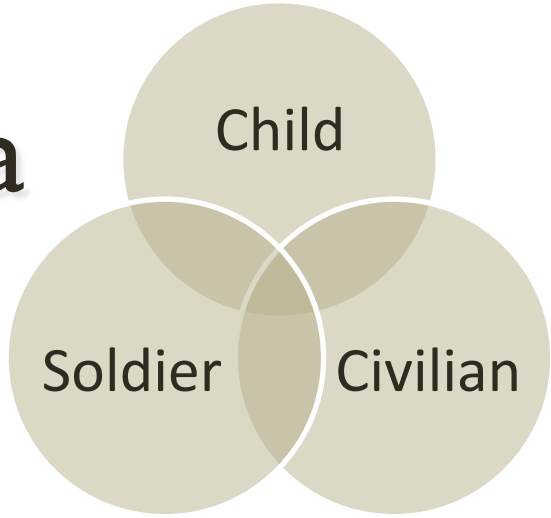
Waltz with Bashir (Israel, 2008)

The best way to cope with trauma is a health ability to dissociate.

Natural history of PTSD



3 Domains of Trauma



- Shell Shock in soldiers WWI and WWII
- PTSD in Soldiers - Post Vietnam
- PTSD - post childhood trauma
- OTSD - civilians in war/conflict zones
- Traumatic Brain Injury - better understood in 21st century complex emergencies

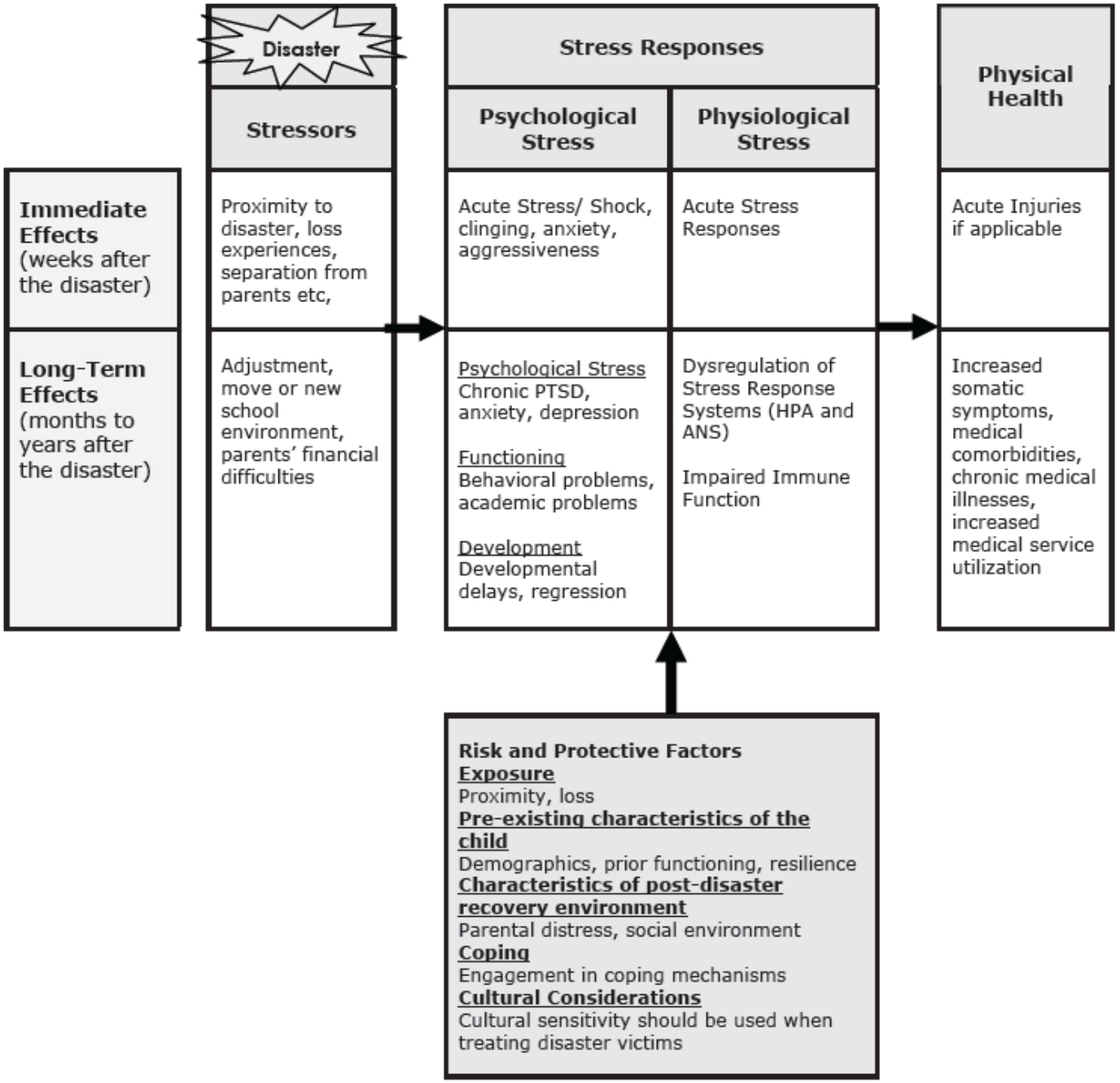
PTSD in DSM-5

- DSM-IV
  - A: 1 Stressor (experienced or witnessed – 2 fear, helplessness, or horror)
  - B: Intrusive recollection
  - C: Avoidant / numbing
  - D: Arousal/hyper-vigilence
  - E: Duration >1 month
  - F: Functional significance (social, occupational)

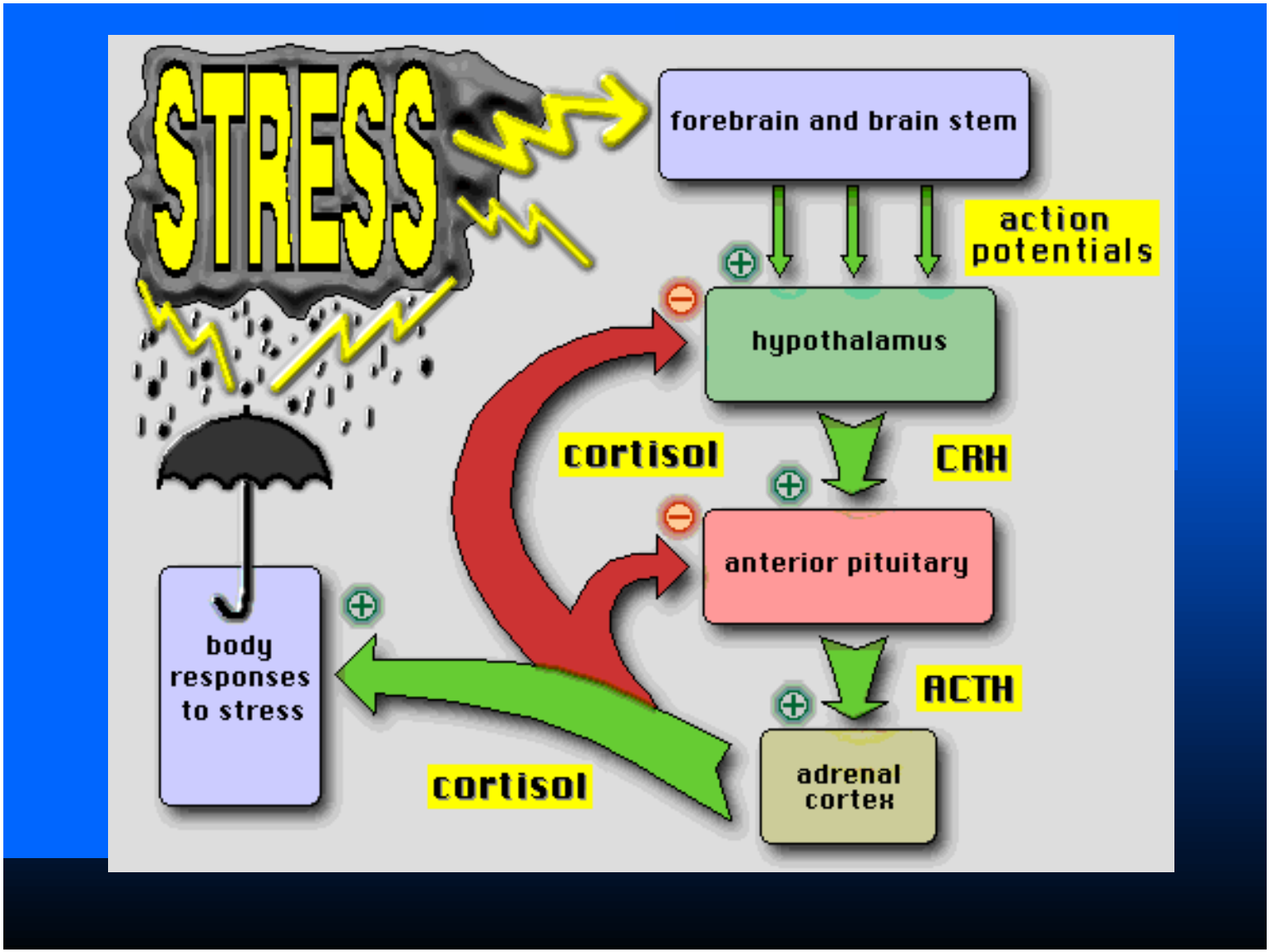
- DSM-5
- A1-Stressor experienced or witnessed event, actual or threatened death or serious injury
- NOT A2 – response involved fear helplessness or horror
- (children: disorganized or agitated behavior)
- Includes B,C,D
- AND negative mood/cognitions or dissociations
- PTSD no longer anxiety disorder, now trauma/stress related disorder

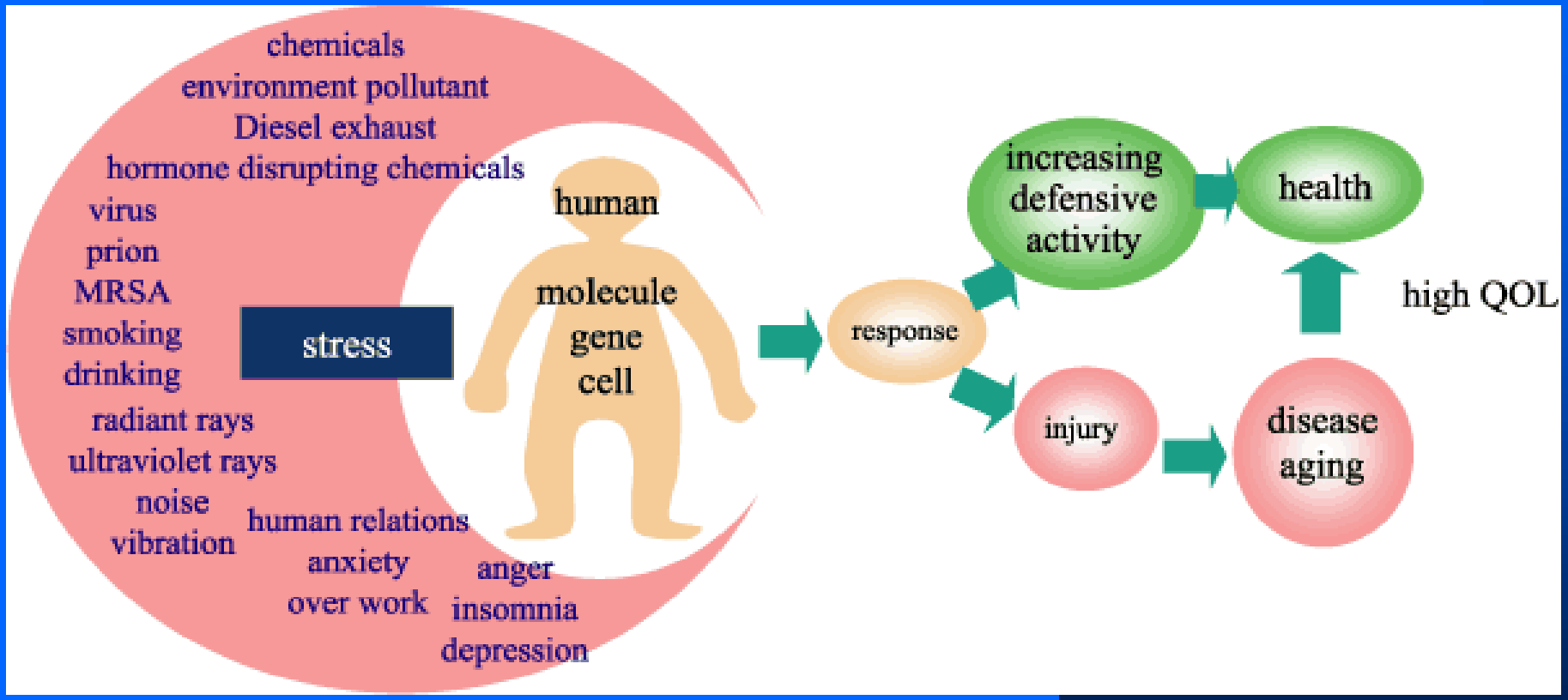
Table 3 Alternative nomenclatures for describing traumatic stress experiences

PTSD Post-traumatic Stress Disorder	OTSD Ongoing Traumatic Stress Disorder	Complex PTSD
A: Stressor (experienced or witnessed) Reaction of fear, helplessness or horror B: Anxiety C: Dissociation D: Hyper-arousal E: Nightmares F: Flashbacks	• Stress endures in time • Person experiences psychological symptoms plus • Physiological correlates • Changes in vital signs: temp, BP, heart rate, respiratory rate, pain • Endocrine/ Metabolic changes • Difficulty maintaining internal milieu	• Severe relationship impairments • Disturbances of mood regulation (e.g. outbursts of anger)


Disaster
Stressors
Stress Responses
Psychological Stress
Physiological Stress
Physical Health
Immediate Effects (weeks after the disaster)
Long-Term Effects (months to years after the disaster)
Proximity to disaster, loss experiences, separation from parents etc,
Adjustment, move or new school environment, parents' financial difficulties
Acute Stress/ Shock, clinging, anxiety, aggressiveness
Psychological Stress
Chronic PTSD, anxiety, depression
Functioning
Behavioral problems, academic problems
Development
Developmental delays, regression
Acute Stress Responses
Dysregulation of Stress Response Systems (HPA and ANS)
Impaired Immune Function
Acute Injuries if applicable
Increased somatic symptoms, medical comorbidities, chronic medical illnesses, increased medical service utilization
Risk and Protective Factors
Exposure
Proximity, loss
Pre-existing characteristics of the child
Demographics, prior functioning, resilience
Characteristics of post-disaster recovery environment
Parental distress, social environment
Coping
Engagement in coping mechanisms
Cultural Considerations
Cultural sensitivity should be used when treating disaster victims

Stress and the Immune System




chemicals
environment pollutant
Diesel exhaust
hormone disrupting chemicals
virus
prion
MRSA
smoking
drinking
radiant rays
ultraviolet rays
noise
vibration
stress
human relations
anxiety
over work
anger
insomnia
depression
human
molecule
gene
cell
response
increasing defensive activity
health
high QOL
injury
disease
aging

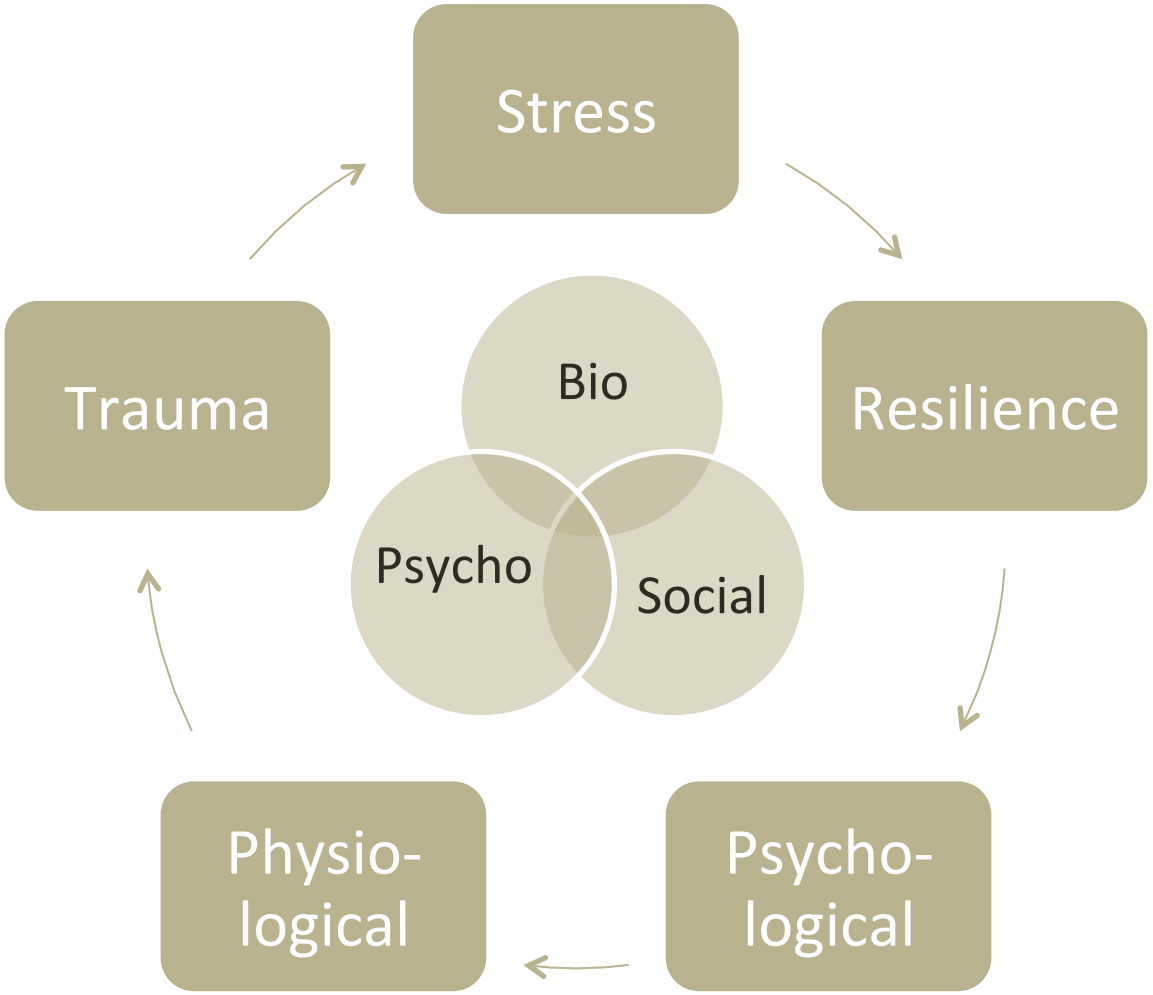
PNI = Psycho Neuro Immunology

- **The study of the link between psychological states and the functioning of the nervous system.**

- **The study of the interactions among the mind, immune system, and the neurological system that modulate susceptibility to disease or its progression**

Complex Emergencies: Tsunami, Earthquake, War

Integration of Mental Health and Psychosocial support and Primary Care



Summary

Integration of mental health into primary care brings attention to a much needed and often neglected aspect of healthcare.

In a world of specialists, mental health is often carved out of healthcare and treated as something different , less important, subject to prejudice, stigma, misunderstand, and underfunding.

Integration of mental health into primary care brings mental health care a step closer to healthcare and to getting people services they need.

Disaster situations, like tsunamis, earthquakes, and especially wars, remind us that physical health cannot really be separated from mental well-being. Trauma has health consequences, physical and mental, and coping with trauma requires an integrated understanding.

In Iraq, people have shown extraordinary resilience; yet they suffer increased susceptibility to cancer, heart disease, and a host of physical manifestations of stress-related conditions.

Conclusion

- The World Health Organization long ago recognized the importance of not only biological but also psychosocial factors in illness, when it offered its significant definition of health as "bio-psycho-social well-being, not just the absence of disease." (WHO,1946). Because of the dynamic interactions between biological and psychosocial factors we witness in global disasters and complex emergencies, I believe that there is a stronger statement that needs to be made. The artificial distinction between health and mental health obscures rather than clarifies the integral relationship of mind and body. There is no real difference between health and mental health. Health is health. The bio-psycho-social approach is not just a good idea, it is a reality based on an increasing body of scientific evidence. The challenge now is to apply that knowledge to practice in both resource rich and resource poor settings.

Table 4 – Adverse Childhood Experiences (ACE) Study Findings

Adverse Childhood Experience* ACE Categories (Birth to 18)	Impact of Trauma and Health Risk Behaviors to Ease the Pain	Long-Term Consequences of Unaddressed Trauma (ACEs)
Abuse of Child ■ Emotional abuse ■ Physical abuse ■ Contact Sexual abuse ***Trauma in Child's Household Environment*** ■ Alcohol and/or Drug User ■ Chronically depressed, emotionally disturbed or suicidal household member ■ Mother treated violently ■ Imprisoned household member ■ Not raised by both biological parents (Loss of parent – best by death unless suicide, - Worst by abandonment) ***Neglect of Child*** ■ Physical neglect ■ Emotional neglect * Above types of ACEs are the "heavy end" of abuse. *1 type = ACE score of 1	***Neurobiologic Effects of Trauma*** ■ Disrupted neuro-development ■ Difficulty controlling anger-rage ■ Hallucinations ■ Depression - other MH Disorders ■ Panic reactions ■ Anxiety ■ Multiple (6+) somatic problems ■ Sleep problems ■ Impaired memory ■ Flashbacks ■ Dissociation ***Health Risk Behaviors*** ■ Smoking ■ Severe obesity ■ Physical inactivity ■ Suicide attempts ■ Alcoholism ■ Drug abuse ■ 50+ sex partners ■ Repetition of original trauma ■ Self Injury ■ Eating disorders ■ Perpetrate interpersonal violence	***Disease and Disability*** ■ Ischemic heart disease ■ Cancer ■ Chronic lung disease ■ Chronic emphysema ■ Asthma ■ Liver disease ■ Skeletal fractures ■ Poor self rated health ■ Sexually transmitted disease ■ HIV/AIDS ***Serious Social Problems*** ■ Homelessness ■ Prostitution ■ Delinquency, violence, criminal ■ Inability to sustain employment ■ Re-victimization: rape, DV, bullying ■ Compromised ability to parent ■ Negative alterations in self perceptions and relationships with others ■ Altered systems of meaning ■ Intergenerational trauma ■ Long-term use of multiple human service systems

ACE>4

AlOH x 7
Sex<15 x2
Cancer x2
Emphysema x 4

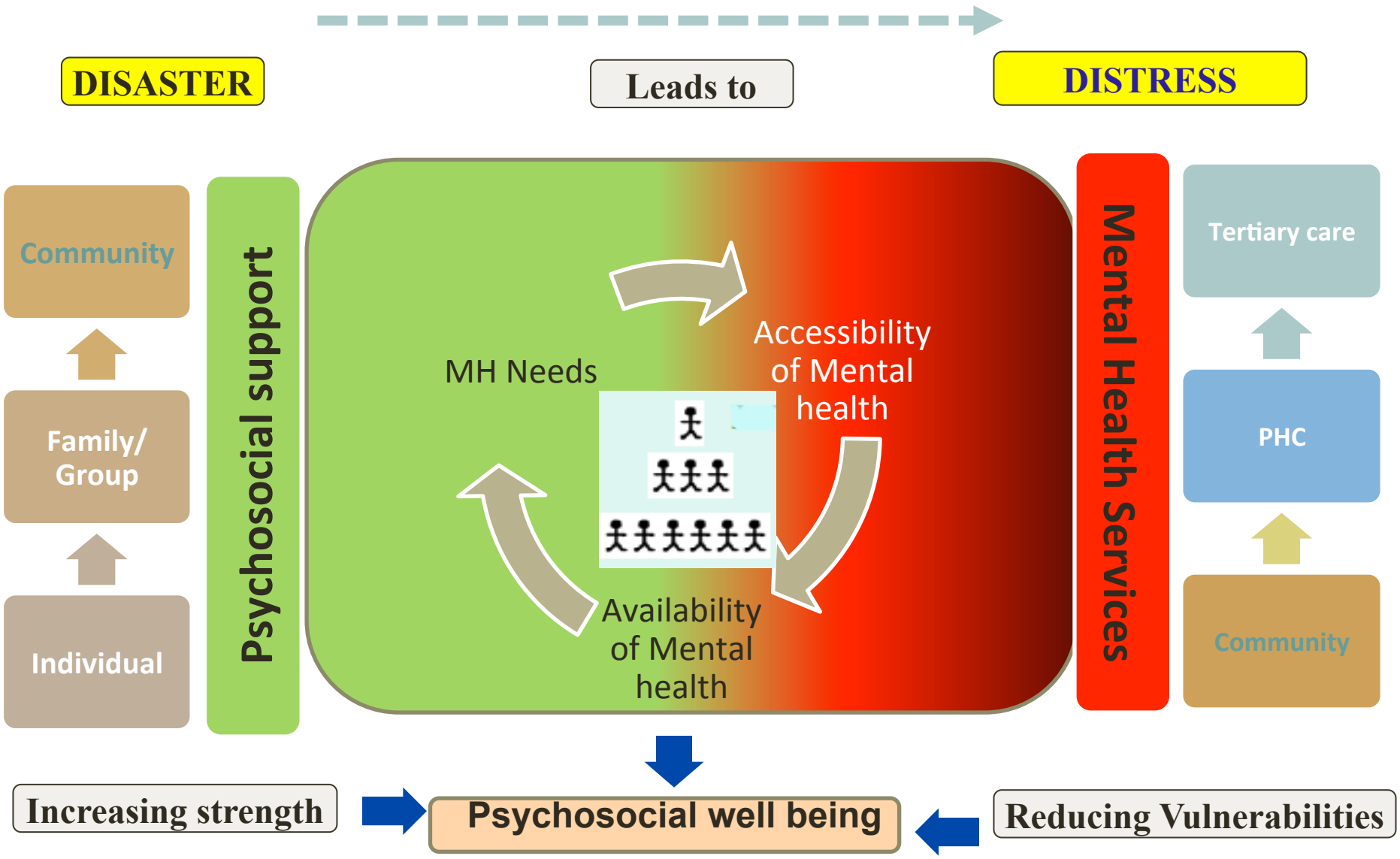
ACE>6

suicide attmp x30

WHO Pyramid


Low
High
FREQUENCY OF NEED
Long-stay Facilities & Specialist Services
Community Mental Health Services
Psychiatric Services in General Hospitals
Mental health services through PHC
Informal Community Care
Self-care
INFORMAL Services
QUANTITY OF SERVICES NEEDED
High
Low
COSTS

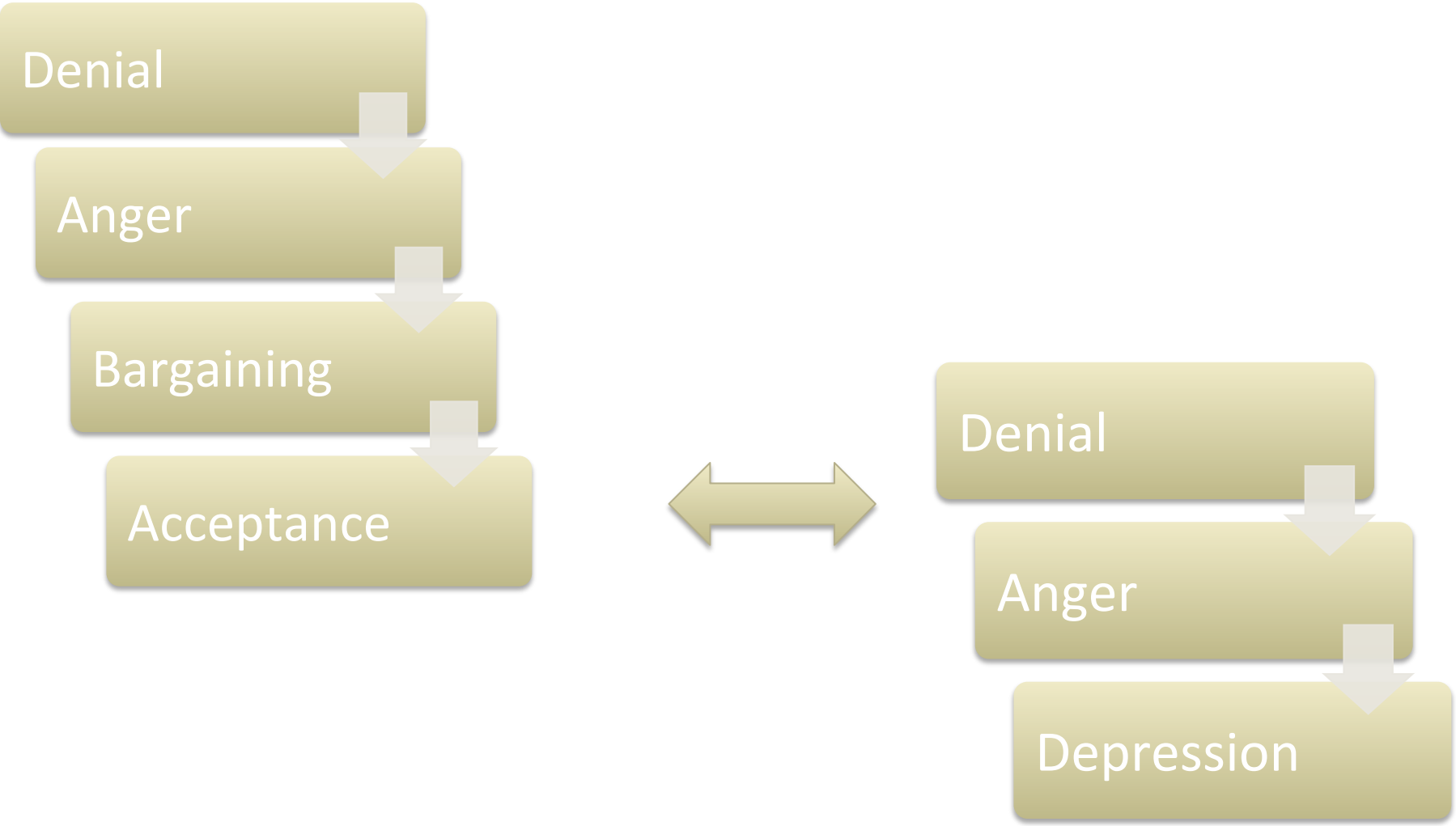
A diagram of service/programme



Stages of Grief

E. Kubler-Ross	H. Lowenbach	W. Dyer
Denial	Denial	*Unglaube* Disbelief
Anger	Anger	*Zorn* Anger
Bargaining	Accusatory	*Selbstmitleid* Self-pity
Depression	Self-accusatory	*Traurigkeit* Sadness
Acceptance	Acceptance	*Gott flehend* Pleading with God
		Anerkennung Acknowledgment

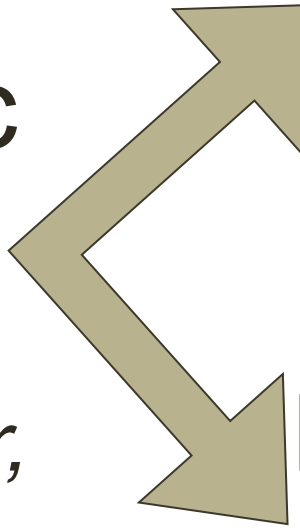
Processing Change (Stages of Grief)



PTSD and Dissociative Disorders Are Co-Sequelae of Traumatic Stress

Traumatic Events

Terror, Horror, Helplessness, Humiliation



Posttraumatic Stress Symptoms

Dissociative Symptoms

PTSD and Dissociative Disorders Often Co-Occur

PTSD symptoms— nightmares, intrusive memories, hyperarousal— predominate after life-threatening traumatic events, particularly after the adolescent years.

Dissociative symptoms predominate when abuse or neglect occurs chronically during childhood.

What is Normal Dissociation?

Examples of Normal Dissociation:

(1) Driving lost in thought, arriving at correct destination, but without recollection of how got there;

(2) Total absorption in a book or movie so complete that all awareness of surrounding environment is lost;

(3) Athlete feels no pain from an injury while competing in the game.

Dissociation Can Be a Non-Pathological Response to Traumatic Events

Acute dissociative symptoms occur in:

- 30% of accident survivors
- 40% of earthquake survivors
- 53% of witnesses to executions
- 57% of ambush victims

Dissociative symptoms are a “normal” response to severe stress when they do not persist or disable daily functioning.

Symptoms of Pathological Dissociation

(1) Amnesia— Memory gaps not due to ordinary forgetting

(2) Depersonalization— Out-of-body experiences and other distortions of the sense of one's own body

(3) Derealization— Distortions in visual or auditory perception or sense of time

(4) Identity Disturbance— Fragmentation of sense of self

(5) Conversion (Somatic Dissociation)— Loss of conscious awareness or control over physical body

Continuum of Dissociative Disorders

Mild  *Severe*

Depersonalization Disorder

Mild but Chronic Childhood Emotional Neglect or Abuse

Dissociative Identity Disorder

Severe Childhood Physical, Sexual, or Emotional Abuse

Resilience

- the positive capacity of people to cope with stress and catastrophe.
- cumulative "protective factors"
- used in opposition to cumulative "risk factors"

Build skills to endure hardship

- Get connected
- Remain hopeful and optimistic
- Take care of yourself
- Accept and anticipate change (Be flexible)
- Work toward goals
- Take action
- Learn new things about yourself
- Think well of yourself

Resilient children

- ·the ability to delay gratification
- ·interest in humans, things and ideas
- ·interest in school
- ·resilient children tend to be overachievers.
- they are "easy to guide”
- ·they have realistic plans for their future
- ·they have a realistic concept of their abilities
- ·they asked for help when they needed it
- ·they were sympathetic towards others
- ·they were able to verbalize their feelings

Resilient youth (intrinsic factors)

- ·Empathy
- ·Caring
- ·Equity and social justice
- ·Safety -Restraint and resistance skills
- - Setting boundaries
- ·Planning and decision making- goal setting
- - Problem solving and creativity
- ·Self efficacy ·Self esteem
- ·Acceptance
- ·Cultural awareness
- ·Spirituality

Resilient youth (extrinsic factors)

- ·Caring family
- ·Family communications·Family support
- ·High expectations parents (not expecting perfection but excellence)
- ·Achievement·Family role models
- ·School engagement ·Parental involvement with school ·School work·bHigh expectations school
- ·Bonding to school·School boundaries
- ·Achievement
- ·Caring neighbourhood ·Neighbourhood boundaries·Community values
- ·Adult relationships
- ·Positive peer relationships·Positive peer influence

Resilience helps you thrive.

- ”Resilient individuals have cultivated a sense of forgiveness, and regardless of the setback or slight, they're able to box it up, put it in a package and let go of it. Think of resiliency as emotional buoyancy.”

Edward Creighton, MD
Oncologist, Mayo Clinic