

The Psychology of Disaster

Humpty Dumpty Had a Great Fall
Frank Shiromoto, PhD

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Humpty Dumpty sat on a wall
Humpty Dumpty had a great fall
All the King's horses and all the
King's men
Couldn't put Humpty together again



Traumatic Events

- A disaster is a traumatic event
- These events are typically so extraordinary/horrific they tend to distress almost everyone
- From survivors to first responders, bystanders, to those watching events unfold on television, especially children

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Acts of Nature-Natural Disaster

- Earthquakes – Northridge 1994,
- Hurricanes – Katrina 2005
- Flood/Tsunami – Indian Ocean 2004
- Fires (lightning)
- Volcanic eruption
Mt. St. Helens 1980



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Intentional Deliberate Acts

- War
- Abuse – sexual, physical, emotional, cult
- Torture
- Terrorism/suicide bomber
- Hostage/POW/kidnapping
- Riots
- Witnessing a murder, suicide, assault
- Sniper attack
- September 11,2001

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Unintentional Accidents-Technological Failures

- Industrial explosions- Gulf coast oil rig
- Plane, train, car crash, ferry sinking
- Hungary's toxic sludge
- Nuclear disaster – three mile island
- Collapse of buildings
- Fires destroying homes and buildings



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Toxic Chemical Spill-Hungary



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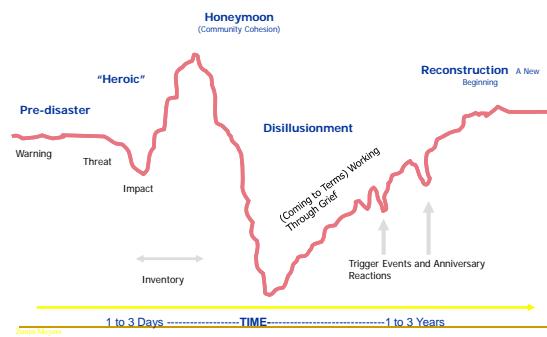
Phases of Disaster

- Pre-disaster warning (apathy, denial)
- Impact (riding out the storm)
- Heroic (saving self and others)
- Honeymoon (optimism for recovery high)
- Disillusionment (FEMA red tape, loss/grief)
- Reconstruction (a new beginning, 1-3 yrs)

From Myers and Zunin, 1990, in public domain

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Phases of Disaster



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Disaster Stress Response

- A normal reaction to abnormal situation
- High anxiety, excessive worry about safety of self and family
- The body is aroused, hypervigilant, easily startled (sounds, smell, shaking ground)
- The brain's alarm system stays on alert
- Trauma memory is re-lived over and over trying to make sense of it all

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Fight or Flight Response

- Our body's response to perceived threats (stress)
- To either fight or flee for survival
- Hardwired in our brains from earlier humans fighting to survive predators
- The first stage when someone experiences stress- adrenaline & cortisol released, heart races
- The body changes, digestion slows, blood diverted to our muscles, endorphins released to reduce pain
- All is preparation for survival, mental focus bypasses rational mind



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Common Reactions

24-72 Hours

- Restlessness, irritability and fear
- Emotional release, crying
- Fatigue, sleep problems
- Lack of focus, staying away from work
- Reliance on alcohol, medications
- Coping mechanisms have failed
- Mood swings (high hope to sadness)
- Grief, loss, anger
- Flashbacks, intrusive memories

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Reactions of Children under age 10

- Clinging behavior
- Wanting to be fed or dressed
- Regressive behaviors to earlier childhood
- Competition with siblings for parental attention
- Nightmares, sleep disturbance
- Withdrawal from school and/or friends
- Irritability, acting out at school
- Fear of noises, wind, rain...

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Disaster Mental Health

Help is on its way...

- DMH is the immediate response to those in need after a disaster
- It is often called psychological first aid or crisis intervention
- It is practical, dealing with current situation to stabilize/reduce stress symptoms
- Use of community resources –food, shelter



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Who is affected by a Disaster?

Everyone in the community is touched by a disaster including first responders, bystanders, and people watching on television



Disaster MH services is reaching out to everyone by going to them

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Model for DMH Intervention

- Consultation-other prof staff, admin, chaplin
- Outreach – go out to those impacted -Sept 11
- Defusing, debriefing groups
- Education-normal reactions, ways to cope
- Crisis intervention-safety first, assessment and saying "Can I get you some water?"

Myers & Wee, Disaster Mental Health Services, 2005

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Debriefing Groups-CISD

- Critical Incident Stress Debriefing is one part of a comprehensive system of crisis intervention
- Other parts are family assistance, referrals to further care, individual interventions, follow-up
- Always a voluntary group process
- Discussion of facts, thoughts, reactions, symptoms, teaching/educational, closure (referral)
- Purpose of CISD is to reduce stress related symptoms, not to prevent PTSD
- The beginning of making sense of what happened

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DMH Differs from Psychotherapy Hospital Shooting Incident

- DMH is brief, not on going counseling
- Less formal, no future appointments, no office
- Direct practical solutions, less insight driven
- People do not have mental health diagnosis
- Listen to their stories...not to fix it for them
- Compassion and "presence"- just being there
- Reducing stress reactions or restoring person to pre-disaster level of functioning

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What is PTSD?

- Post traumatic stress disorder is the result of exposure to a stressful or traumatic event.
- In a given year, 5-6 million Americans have this disorder
- It is the overwhelming of our coping responses that results in constant re-living of the traumatic/disaster event

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Symptoms of PTSD

- Re-experience the trauma: flashbacks, recurrent dreams, body sensations
- Avoidance: avoid places and people that reminds us of the trauma, a feeling of detachment from loved ones and friends
- Arousal or hypervigilance: easily startled and on guard

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Risk Factors for Developing PTSD

- Directly exposed traumatic event, disaster
- Seriously injured
- Trauma that was long lasting (abuse)
- Witnessed family member being in imminent danger
- Felt helpless to help others or self
- Experienced past trauma or life threatening situation
- Current mental health issues

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Psychology of Disaster

- Traumatic processed memories are stored in the brain differently than normal memories
- These memories remain separate, fragmented from our regular system of recall memories
- Highly charged, volatile, unstable, non-verbal, triggered by our surroundings

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Psychology of Disaster

- Traumatic memories appear stuck in the right hemisphere of the brain and apart from the left (logical) hemisphere
- Makes it more difficult to "make sense of it"-no logic or reason to what happened
- Difficult to put it away, to file it, because we can't put meaning to it so it "sits on our computer desktop"
- Traumatic memories overwhelm our brain's ability to process, decipher, and store in long-term memory file

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Vietnam War Vet Story...

distorted thinking, can't trust anyone

self-destructive thoughts, guilt

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Psychology of Disaster-Brain

Abnormalities

- Amygdala-an almond size part of the brain responsible to bring the body to full alert when danger is perceived. Abnormal fear or anger responses.
- Hippocampus-a seahorse shaped part of the brain is less functional (memory) and smaller in size in people with PTSD.

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Different Levels of Care

- Disaster Mental Health-crisis intervention
- Peer counseling, if available
- Psychotherapy/counseling (EMDR, Thought Field Therapy, Cognitive/Behavioral Therapy)
- Alternative healing techniques –meditation, acupuncture, hypnosis, creative writings/imagery, dance, yoga, biofeedback
- Medications and hospitalization

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Challenges our Spiritual Beliefs

- After experiencing a traumatic event the first questions are Why? Why did this happen to me? Why did I survive?
- We can turn to our spiritual beliefs for comfort or we can question our beliefs...
- Anger at higher powers...
- This challenges the core of who we are...I used to be strong and confident

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The New Beginning...

- Your life has changed and the new beginning starts when these memories are less volatile and less emotionally charged
- We begin to have understanding and making sense of what happened
- Those triggers shape our thoughts and we can choose to make the right decision without bad things happening to us
- This takes time, for some a few months, for others a few years

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Now this active trauma memory will become a part of your past, connected to a time line of your past and other adaptive memories



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References

- The A to Z of Trauma
Ron Doctor and Frank Shiromoto, 2009
- Disaster Mental Health
Diane Myers and David Wee, 2005