

# Terrorism and Disasters

Treating Acute Stress and  
Preventing Psychological  
Dysfunction

# What is Psychological Trauma?

- Overwhelming, unanticipated danger that cannot be mediated/processed in way that leads to fight or flight
- Immobilization of normal methods for decreasing danger and anxiety
- Neurophysiological dysregulation that compromises affective, cognitive and behavioral responses to stimuli

# What is Psychological Trauma?

- Events are not traumatic, but they are potentially traumatogenic.
- There are types of events that are more likely to be traumatic than others
- However, the individual's subjective experience is likely the most salient factor

# Event Factors

- How directly events affect their lives:
  - Physical proximity to event
  - Emotional proximity to event (threat to child, parent versus stranger)
  - Secondary effects-of primary importance (does event cause disruption in on-going life)

# Individual Factors

- Genetic vulnerabilities and capacities
- Prior history (i.e. consistent stress or one or more stressful life experience/s)
- History of psychiatric disorder
- Familial health or psychopathology
- Family and social support
- Age and developmental level

# Peritraumatic Factors

- Dissociation
- Acute Depression
- Extreme Hyperarousal

# Acute Stress Disorder

- Diagnosis developed to designate acute reactions
- Less than 30 days post event
- Sx's for two consecutive
- Similar to PTSD, but includes dissociative sx's
  - Predicative of later PTSD and MDD

# Post Traumatic Disorders: Not Automatic & More than PTSD

- Most adults and children recover without a lasting post-traumatic psychiatric disorder
- In adults 10-20% develop depression or PTSD (often both)
- In adults subclinical depression or substance use common
- Classic PTSD not common in children-but incidence increases with age (especially adolescents)

# Traumatic Grief

## Traumatic Loss

- Sudden unexpected death of significant other(s)

## Traumatic Grief

- **Terror:** yearning, searching
- **Horror:** preoccupation, crying, denial
- **Numbing:** stunned, disbelief, *denial, dysphoria*
- ***Distinct from Depression*** (which involves *apathy, guilt, hypochondriasis, insomnia, anxiety, suicidality, hostility, loneliness, & worthlessness, as well as dysphoria, denial*)

# The Danger Response

- Thalamus registers whether sensory input is familiar or novel and whether or not a potential threat
- Threat triggers primitive brain (amygdala) to cause release corticosteroids & norepinephrine
- Peripheral startle & fight-flight response (autonomic nervous system, sympathetic branch)
- Peripheral resource conservation (autonomic nervous system, parasympathetic branch)

# Neurobiology of Stress (Cont'd)

- **Alarm:** amygdala coordinate body's mobilization in response to threat
- **Attention:** norepinephrine released by locus ceruleus (brain stem area) promotes focused attention
- **Reactivity:** corticosteroids promote instinctual survival responses rather than goal-directed reflection
- **Information Processing:** Hippocampus inhibited in spatial orientation and categorization of sensory inputs
- **Executive decision making:** pre-frontal cortex receives confusing/chaotic alarm signals and is down-regulated

# Psychological Casualties

- More people suffer from chronic emotional difficulties post disaster than from physical difficulties
  - Psychological sequelae correlate with a number of factors including injury
  - Different experiences related to the event can trigger psychological symptoms
    - Many individuals appear more traumatized by events in Superdome than events directly related to Hurricane Katrina
    - Cumulative effect of stress may cause emotional dysfunction

# Disasters Require Integrated and Coordinated Responses

- At every step of a disaster response, psychological interventions take place that may limit or intensify post traumatic responses
- External Structure and containment support individual restabilization
  - Governmental Authority: Messaging and Public information
  - First Responders
  - Sheltering and provision of basic needs
  - Transition to semi-permanent status

# Levels of Intervention

## ■ Governmental

### – Pre-event planning

- Worse time to begin coordinating is during a crisis
- ICS should include Crisis mental health response plan
- Prepare for worst and hope for best

### – Clear and unambiguous messages about:

- Nature and reality of event
- Plans in place
- Directions for citizens

# First Responders

- First responder's ability to authoritatively, but respectfully and supportively address victim's needs can decrease stress reactions
  - Recognition that psychological injury is as important as physical injury
  - Supportive structure aids individual's ability to respond as needed
  - Orient individuals when needed
  - May prevent surge of overwhelmed individuals

# Shelters and Outreach: The Role of Mental Health Providers

- In addition to assessment and direct psychological interventions, MHP should facilitate activities that enhance protective factors
  - social and familial support prosocial activities
    - Recognition and promote previous relationships and community connections
    - Engage individuals in rebuilding

# Current Knowledge: About Interventions

- We know very little about what is the most effective forms of crisis and early intervention
- Few controlled treatment studies
- We know more about what doesn't work
- Treatment of PTSD symptoms better established

# Crisis and Early Intervention

- One time interventions show no evidence of effectiveness (*Gist & Devilly, 2002*)
- No evidence that debriefings models are ineffective and may be harmful (*Gist & Devilly, 2002; Mayou, Ehlers, & Hobbs, 2000*)
- Concerns that group models model have contamination effects (*Laor, 2002*)

# Rationale

- Psychoeducation
- Engagement and Assessment
- Monitoring
- Intervention/Treatment

# Psychoeducation

- Provision of information about typical reactions and basic relaxation techniques, demystifies responses
  - Decrease concern that they are going crazy
  - Teach people how to self-soothe
    - Deep breathing
    - PMR
    - Sleep Hygiene

# Engagement

- Early engagement provides the opportunity for on-going follow up contact, to monitor psychological functioning ecologically relevant issues
- Engagement requires thoughtful and supportive interactions at a time when people are most vulnerable. Active listening is a necessary skill

# Assessment

- Assess current psychological status especially for high risk presentations that require immediate intervention
- Assess event and individual risk factors early and thereby identify individuals who have known vulnerabilities before they manifest difficulties.
- Treators and others may put extra special efforts towards working with these high-risk persons in an effort to decrease the likelihood that they will develop posttraumatic symptoms.
  - Especially important to connect to social supports

# Monitoring

- Symptoms related to traumatic events may appear at almost any time after an event and may be triggered by secondary reminders that were previously unrecognized. (*J. R. Davidson, 2001; McFarlane, 2000; North et al., 2002*)
- Continued monitoring allows for treatment to take place early in symptom formation and before they become potentially refractory.

# Principles of Intervention

1. Do no harm
2. Parents or primary caretakers are essential therapeutic agents for children
3. Restoration of external structure and authority
4. Amelioration of threat

# Principles of Intervention

5. Do not assume knowledge of what is the most salient event, image or idea for the individual
6. Child interventions need to be developmentally informed and include important adults

# Key Elements of Early Intervention

- **Affect:** Identify, label and link to ideation and somatic experience (noting differences from beginning to end of contact and with reports about pre-morbid functioning)
- **Cognition:** Assess quality and nature of thought processes and link to affective impact of event and associated ideas

# Basic Measures

- Grounding for disoriented individuals
- Deep Breathing, PMR for tension anxiety
- Sleep hygiene, sedatives may be useful (alpha agonists?)

# Specific Measures

- Cognitive behavioral interventions for symptomatic individuals
  - Trauma focused CBT
  - EMDR (eye movement not necessary)
  - Exposure only when needed
- Careful not to be premature or intrusive
- If not timed correctly can interrupt normal processing and coping capacity

# Specific Measures

- Group treatments must be done carefully
  - Homogeneity members is essential
    - Developmental level (children of similar ages should be grouped together)
    - Symptom intensity (asymptomatic or mildly symptomatic individuals may worsen if exposed to severely compromised patients)