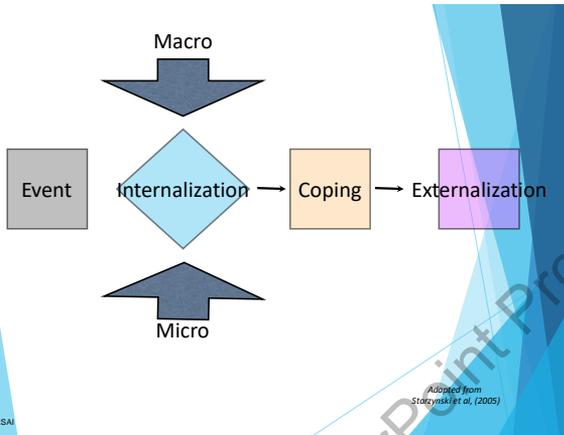


The Impact of Trauma on Brain and Behavior



Impacts of Sexual Trauma

Studies and victim reports indicate that the impact of assault is:

- ▶ profound
- ▶ often long lasting
- ▶ and variable.

Generally:

- ▶ Physical
- ▶ Psychological

Long Term Effects

- ▶ Burgess / Holmstrom (1972)
 - ▶ 600 victim interviews
 - ▶ 25% felt symptoms for 6 months
 - ▶ 25% felt symptoms for 2-4 years
 - ▶ 40% felt symptoms for more than 6 years

RSAI

An Evolution of Language

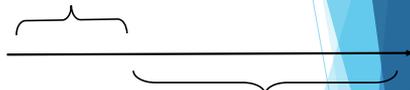
- ▶ ????????
- ▶ Shell Shock
- ▶ Rape Trauma Syndrome
- ▶ Acute Post Traumatic Stress Disorder

Acute Stress Disorder

duration of symptoms: 2 days and 4 weeks

occurs w/in: 4 weeks of event

Assault



Post Traumatic Stress Disorder

duration of symptoms: at least one month
can have delayed onset

American Psychiatric Association
DSM-IV, 2000

Characteristics of Acute / Post Traumatic Stress

ASD

- ▶ Disassociation
- ▶ Re-experiencing
- ▶ Avoidance
- ▶ Anxiety

PTSD

- Re-experiencing
- Avoidance
- Arousal

American Psychiatric Association
DSM-IV, 2000

Disassociation

During or after trauma:

- Numbness
- Detachment
- Absence of emotional responsiveness
- Reduced awareness of surroundings
- Derealization
- Depersonalization
- Dissociative amnesia

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I left my body at that point. I was over next to the bed, watching this happen... I dissociated from the helplessness. I was standing next to me and there was just this shell on the bed... There was just a feeling of flatness. I was just there. When I re-picture the room I don't picture it from the bed. I picture it from the side of the bed. That's where I was watching from.

Re experiencing of the trauma through intrusive and persistent:

- Images
- Thoughts
- Dreams
- Flashbacks
- Sense of reliving the trauma
- Distress and reactivity when exposed to reminders of trauma

Every time I walk into my bedroom I see him standing over me and telling me to take off my clothes and not say a word. I can't get it out of my head. It's as if it's happening right now.

Avoidance of stimuli that arouse recollections of the trauma:

- Thoughts
- Feelings
- Conversations
- Activities
- Places
- People
- Inability to recall important aspects of trauma
- Diminished interest in significant activities
- Feelings of detachment / estrangement

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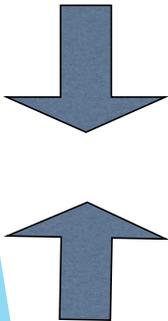
Marked symptoms of **anxiety** or increased **arousal**:

- Difficulty Sleeping
- Irritability / outbursts of anger
- Problems with concentration
- Hyper-vigilance
- Startle response
- Motor restlessness

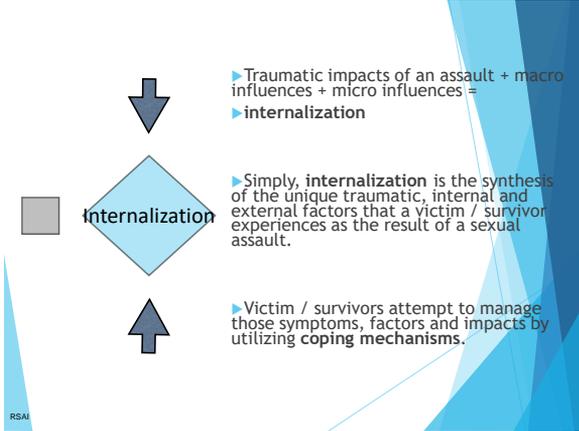
ASD / PTSD Symptoms can:

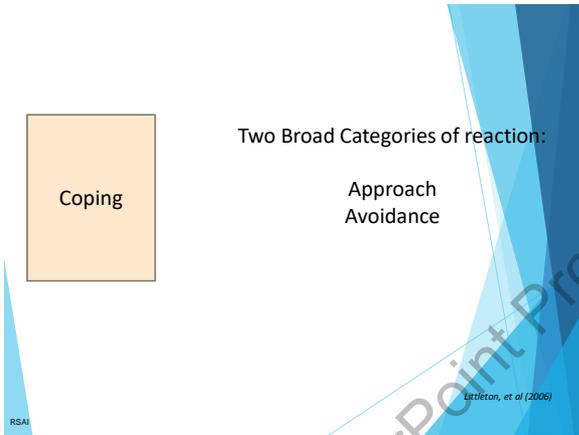
- ❖ Cause significant distress and impairment in social, occupational, or other important areas of functioning
- ❖ Impair an individual's ability to pursue necessary tasks including:
 - ❖ obtaining necessary assistance
 - ❖ mobilizing personal / supportive resources

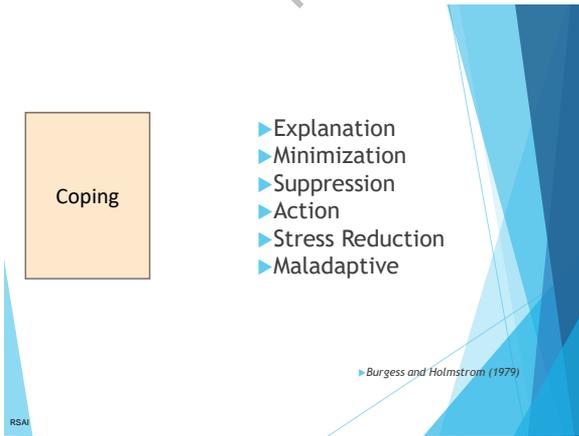
Influences on Psychological Reactions



- Macro Influences**
 - Community understanding of rape (and recovery)
 - Community reaction to the specific crime
 - Community-wide cultural / spiritual beliefs
 - Availability and duration of robust, needs-driven supportive services
- Micro Influences**
 - Age /Development
 - Previous victimization history or experience
 - Psychological function prior to assault
 - Personal, cultural / spiritual beliefs
 - Personal beliefs about sexual violence (and recovery)
 - Perception (and duration) of support
 - Severity of assault
 - Relationship to offender







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Coping

Explanation:

- ✓ Why did the assault occur?
- ✓ What were the offenders motivations?
- ✓ Why did the victim / survivor react as he/she did?
- ✓ Why were they believed / not believed?

Coping

Minimization:

- ✓ telling oneself that the impact of the rape was not as significant or impacting as perhaps it was
- ✓ understating needs (support, services, information)

Coping

Suppression:

- ✓ avoid thinking of assault
- ✓ avoid stimulus that reminds of the assault

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Coping

Action:

- ✓ makes changes in job, home, activities
- ✓ keeps busy

Coping

Stress Reduction:

- ✓ utilizes techniques such as meditation, exercise, or prayer
- the deployment of these practices may be useful during particularly stressful moments
- May emphasize the importance of routine or observance

Coping

Maladaptive:

- ✓ excessive use / abuse of alcohol, drugs
- ✓ control strategies such as eating disorders
- ✓ self-harm behaviors
- ✓ risk-taking
- ✓ isolation from supportive networks
- ✓ sexual promiscuity
- ✓ inappropriate / abusive relationships
- these strategies are likely already inadequate to manage existing life stress-proceedings will add to that stress
- these behaviors, particularly those considered illegal / or outside community norms will create other systems / community complications.
- may serve to isolate victim from supportive networks.

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Externalization

Externalization is the culmination of all of the impacts, factors and coping strategies that a victim employs to survive their assault.

Supportive, effective services and resources can help:

- mitigate the effects of trauma
- address questions and assumptions
- assist family and peer support persons
- identify healthy coping strategies and networks
- re engage services if trauma is re experienced

Neuroscience Considerations

- ▶ Distinct link between brain processing and behavioral responses
- ▶ Often responses are outside an individual's conscious control because of the part of the brain that is engaged
- ▶ Stress disorganizes the brain/trauma is worse

Neuroscience Considerations

- ▶ Chemical changes are significant
 - ▶ adrenaline released
 - ▶ Heart rate increases, blood pressure increases, pupils dilate, blood flow diverted to extremities
 - ▶ steroids released to counter adrenaline
 - ▶ both damaging to the body
- ▶ Permanent changes impacting the brain and body (more on that later)

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Trauma transforms the body

- ▶ Trauma overwhelms and reconditions the Human Nervous System
- ▶ Traumatic reactions occur when action is of no avail (helplessness, terror)
- ▶ Components of body's ordinary response to danger tend to persist in altered and exaggerated state, long after actual threat is over

Traumatic symptoms take over

- ▶ Re-experiencing event in sensory forms (flashbacks)
- ▶ Avoidance of reminders of event
- ▶ Chronic hyper-arousal in autonomic nervous system

Making Memories



- Sensory Information enters the brain through the *Thalamus*
- Sensory information goes directly to the Amygdala & is screened for danger or emotional significance

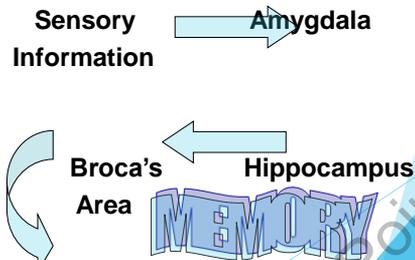
If the sensory information does not pose a threat...

Making Memories

- Sensory info moves on to the Hippocampus where it is compared to other stored information
 - ❖ Keeps info in sequential order
 - ❖ Attaches meaning
- Broca's Area is activated at the same time (responsible for speech)
 - ❖ Attaches words – enables telling of event as a long or short story

A memory is made

Making memories



Trauma memory

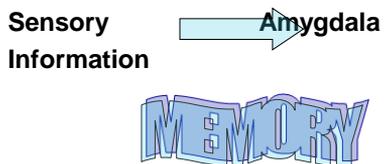
- Sensory Information enters the brain through the Thalamus
 - ❖ *sound, sight, taste, touch, smell*
- Sensory information goes directly to the Amygdala & is screened for danger or emotional significance

DANGER!!

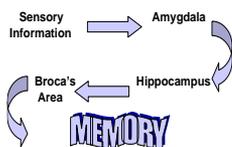
Trauma Memory

- Sensory info coded as “danger” stored as is
A memory is made
- The hippocampus is suppressed, therefore:
 - ❖ Time sequence of events may not be kept
 - ❖ Ability to tell story may be impaired
 - ❖ The victim’s perception is that the event is not over, the danger is not past

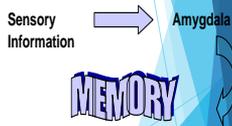
Trauma Memory



Normal Memory



Trauma Memory



▶ A note about
“permanent
changes”

RS&I

Trauma severs normal functions

- ▶ Disorganization & fragmentation = key components of PTSD
- ▶ Person may experience:
 - ▶ Intense emotion, but no clear memory of event
 - ▶ Ability to remember every detail, but with no emotion
 - ▶ Constant state of vigilance, but unable to know why

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Let's switch gears just a bit...

▶ What are you
afraid of?

RS&I

ANS



▶ Two branches:

- ▶ Sympathetic branch (SNS)
 - ▶ Aroused in states of effort and stress
- ▶ Parasympathetic branch (PNS)
 - ▶ Aroused in states of rest & relaxation

Freezing (tonic immobility)

- ▶ Usually the SNS and PNS work opposite each other
- ▶ When death seems imminent, escape impossible, traumatic event is prolonged, limbic system will SIMULTANEOUSLY activate both SNS & PNS
- ▶ Hyperarousal with inability to move = freezing

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Freezing

- ▶ Victim of trauma in altered state
 - ▶ Time slows
 - ▶ No fear
 - ▶ No pain / pain numbed

Instinctive

- ▶ Responses are instantaneous & instinctive
 - ▶ Not a response to consideration & choice
- ▶ Important to help clients (as well as helpers) understand this
 - ▶ Contributes to shame & “I should have’s”

Takeaways

- ▶ Helping folks (survivors, helping professionals, OURSELVES) understand why people who have experienced sexual assault work the way they do goes a long way towards understanding, healing, and helping.

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