Promoting safety, justice and healing by recognizing and responding to the Brain’s Response to Trauma and Abuse

Kim Day, RN, SANE-A, SANE-P
SAFEta Project Director
Jennifer Pierce Weeks, RN, SANE-A, SANE-P
Education Director
International Association of Forensic Nurses

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Objectives

• Recognize the anatomy and physiology of the brain;
• Recognize the neuro-biologic responses to physical and psychological trauma, including strangulation
• Summarize the need for medical intervention, both from the victim, healthcare and legal perspectives.
• Discuss the impact that this can have on responding to victims of sexual assault.
Intimate Partner Violence

Strangulation

Child Maltreatment

Sexual Assault

Left Brain
- Analytical
- Logical
- Precise
- Repetitive
- Organized
- Details
- Scientific
- Detached
- Literal
- Sequential

Right Brain
- Creative
- Imaginative
- General
- Intuitive
- Conceptual
- Big picture
- Heuristic
- Empathetic
- Figurative
- Irregular

Frontal Lobe
- the largest of the brain's structures
- Higher cognitive area
- Thought, voluntary movement, decision making and language
**Damage to Frontal Lobe**
- Paralysis
- Loss of spontaneity in social interactions
- Mood changes
- An inability to express language
- Atypical social skills and personality traits

**Occipital Lobe**
- Primary Visual Area
- Responsible for determining where objects are located and what objects are

**Damage to the Occipital Lobes**
- Hallucinations
- Blindness
- Inability to see color, motion, or orientation
- Synesthesia (sensing a sense other than the one being stimulated)
Parietal Lobes

- Takes information from different senses to build a coherent picture of the world
- Visual spatial processing, number representation

Damage to the Parietal Lobes

- inability to locate and recognize objects,
- events and
- parts of the body (hemi-spatial neglect)
- difficulty in discriminating between sensory information
- Disorientation
- lack of coordination

Temporal Lobes

- Perception, face recognition, object recognition, memory acquisition, understanding language, and emotional reactions.
Damage to the temporal lobes

- Difficulties in understanding speech, recognizing faces and objects
- Inability to attend to sensory input
- Persistent talking with long- and short-term memory loss
- Increased/decreased interest in sexual behavior
- Aggression

Thalamus

- Relay station for information between the cortex and brain stem and within different brain structures
- Perception, attention, timing and movement

Damage to the Thalamus

- Amnesia or memory loss
- Apathy
- Coma
- Dementia
- Difficulty speaking (aphasia)
- Loss of alertness
- Sleepiness
- Impaired processing of sensory information
- Inattention
- Impaired movements and posture
- Pain
What is Trauma??

Who can suffer from brain injury or trauma?

Traumatic Brain Injury

• TBI is the leading cause of injury-related death in children and young adults in the United States
• A leading cause of injury death and disability in the United States
• Approximately 1.7 million U.S. civilians sustain a TBI annually (2002-2006)
• 1.4 million of these are treated and released from emergency departments (EDs)
• 275,000 were hospitalized and discharged alive
• 52,000 died
• TBI-related deaths represent one third of all injury-related deaths
• This does NOT include TBI sustained while serving abroad in the U.S. military or those who did not seek medical care

• the highest combined rates of TBI-related ED visits, hospitalizations, and deaths occur in young children (aged <5 years)
• followed by adolescents (aged 15–19 years) and
• adults aged ≥75 years
• Males make up 59%, females 41%
• The leading causes of TBI are
  – falls (35%),
  – motor vehicle–related injuries (17%), and
  – a strike or blow to the head from or against an object (e.g., workplace or sports–related injuries [26.5%]),
  – assaults (15%), and
  – other and unknown causes [21%]

Source: CDC.gov/traumaticbraininjury/get_the_facts.html
Mild TBI (Post Concussion)

- A concussion is a type of mild TBI
- Caused by a bump, blow, or jolt to the head that can change the way your brain normally works
- Can be from a fall or a blow that causes the head and brain to move quickly back and forth
- Usually not life-threatening
- Effects can be serious

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Severe TBI

- Closed – an injury to the brain caused by movement of the brain within the skull. Causes may include falls, motor vehicle crash, or being struck by or with an object.
- Penetrating – an injury to the brain caused by a foreign object entering the skull. Causes may include firearm injuries or being struck with a sharp object.

Severe TBI can range from

- Subdural Hematoma
- Epidural Hematoma
- Intracerebral Hematoma
- Diffuse Axonal Injury
Neuropsychology

Memory

Attention and Concentration

Decision-making

Impulsivity

Disorientation

Language and Communication

Trauma Effect on Neurobiology of the brain

- Neurobiological changes can cause unexpected emotions or emotional swings or altered responses
- Neurobiological changes impact how memory is stored and can make recall of information difficult OR impossible

Understanding Neurobiology of Trauma

What impact should this have on our practice?

• Understand that the brain and subsequently the victims behavior can be impacted by trauma
• These changes can impact memory and recall
• Tonic Immobility is real and frightening

What Impact should this have on my practice?

• Recognize the importance of medical intervention in TBI
• Understand that there can be long term effects from trauma
• Encourage victims to seek care

Changing practice

• Let others know about this!
• Teach about Neurobiology in your classes and when you are training new employees- it will change the way you respond to victims!
• Take a look at what you are doing with any victim of trauma and start using this approach- can you think of any others who you work with that need to know about this?
Questions?

Kim Day
kimday@iafn.org
(410) 626-7805 ext. 103

www.SAFEta.org