




HOW TO DEVELOP A TRAUMA INFORMED SCHOOL: BRAIN BASED INTERVENTIONS FOR TEACHING SOCIAL EMOTIONAL LEARNING SKILLS IN CHILDREN AND ADOLESCENTS

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1

PRESENTATION GOALS




1. Define **trauma**, and discuss the prevalence rate of trauma and stress for school aged children.
2. Discuss the impact of the **COVID-19** pandemic, and steps taken to return children and staff back to school safely.
3. Discuss key **brain regions** impacted when students experience trauma, and the subsequent effect on academic and social skills' development.
4. Discuss **five** essential features toward the development of a "trauma-informed" school.
5. Present an **assessment algorithm** for psychologists to craft a "trauma-sensitive" assessment.

2

2

Dr. Feifer's Journey 1992 – present




- School psychologist 20+ years
- Diplomate in school neuropsychology (ABSNP)
- 2008 Maryland School Psychologist of the Year
- 2009 National School Psychologist of the Year
- Author: 8 books on learning and emotional disorders
- Test Author: FAR & FAM & FAW & PASS-12
- Currently in private practice at Monocacy Neurodevelopmental Center in Maryland

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3


3



PRESENTATION OUTLINE


- ➔ Defining Trauma
- Symptoms of Trauma
- The Impact of COVID-19
- ACES Study
- Trauma and the Brain
- Hope and Resiliency
- 5 Pillars of a Trauma Informed School
- Trauma Informed Assessment

4



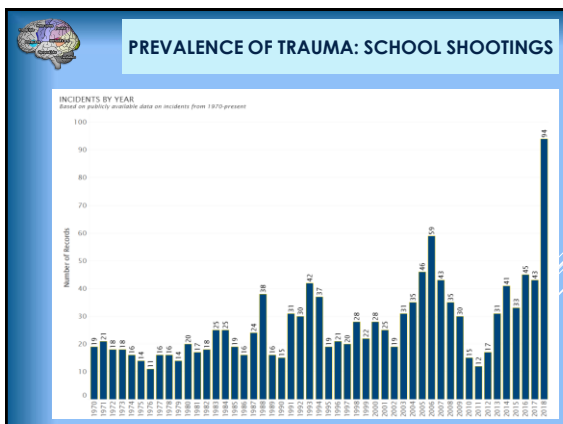
PREVALENCE OF TRAUMA

- * 26% of children will have experienced or witnessed a traumatic event by their 4th birthday (Briggs-Cowan et al, 2010).
- * A traumatic event is defined by APA as a direct or **perceived** threat rendering a child feeling overwhelmed and fearful of their safety.
- * Traumatic stress reactions in children often lead to difficulty self-regulating emotions, heightened aggression, lack of trust, and poor school performance (Diamanduros et al, 2018).

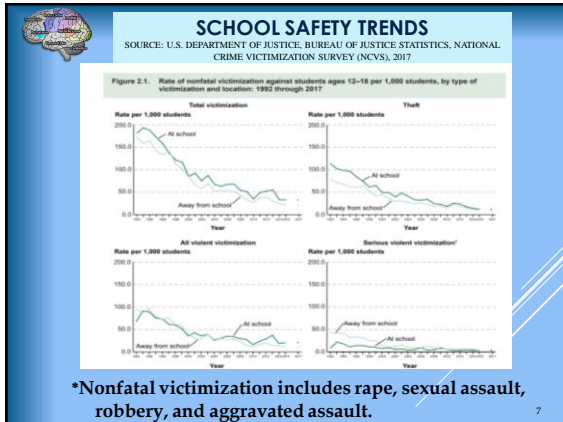


Washington DC: "March for our lives"
March 24th, 2018

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WHY THE DECLINE IN NONFATAL VICTIMIZATIONS?

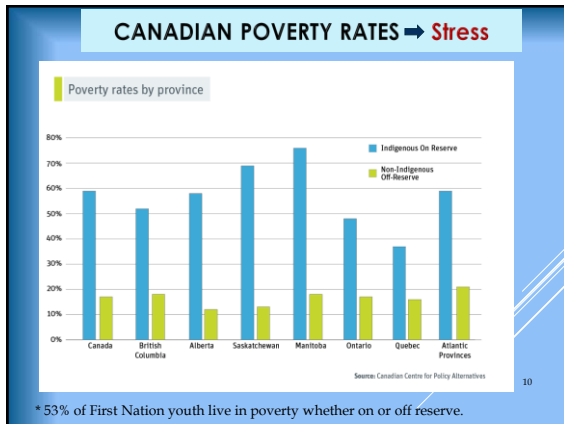
- Decline in crime in our society as a whole.
- Focus on school mental health and the changing role of the school psychologist.
- Positive behavior interventions and support (PBIS) schools.
- Peer mediation programs and access to counseling services.
- Bullying prevention programs.
- Mental health in Canada??

8

Centre for Addiction and Mental Health (CAMH, 2015)

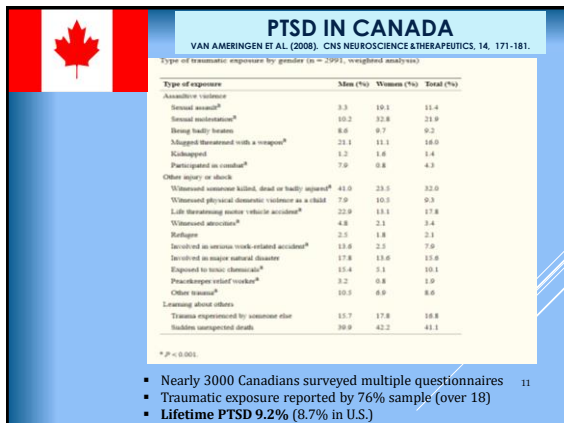
- Mental illness is a leading cause of disability in Canada, with **1 in 5** Canadians experiencing a mental health or addiction problem.
- **70%** of mental health problems have their onset during childhood or adolescence.
- Men have higher rates of addiction than women, while women have higher rates of mood and anxiety disorders.
- Mental and physical health are linked. People with a long-term medical conditions such as chronic pain are much more likely to also experience mood disorders.
- Canadians in the **lowest income group** are **3 to 4 times** more likely than those in the highest income group to report poor to fair mental health.

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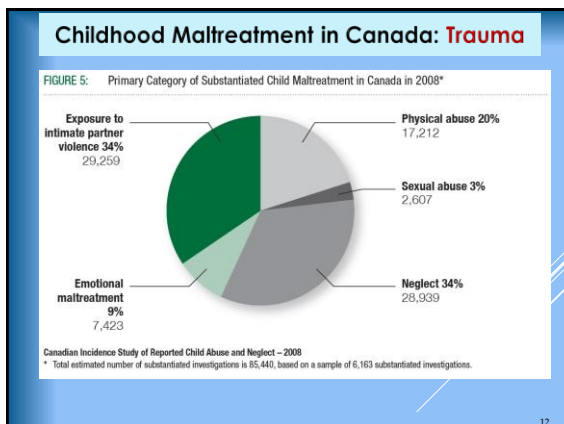


* 53% of First Nation youth live in poverty whether on or off reserve.

10



11



12

Centre for Addiction and Mental Health (CAMH, 2015)

- Nearly **4,000** Canadians die by suicide each year – an average of almost **11 suicides** a day.
 - ▶ After “accidents”, suicide is the second leading cause of death for people aged 15 to 34 in Canada.
 - ▶ First Nations youth die by suicide about **5 to 6 times** more often than non-Aboriginal youth.
- **Summary:** An estimated **75%** of children with mental disorders do not access specialized treatment services.



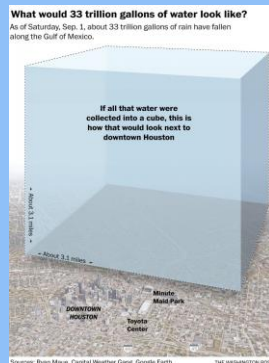
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NATURAL DISASTERS: “COMMUNITY” TRAUMA



- Hurricane Harvey dumps 60 inches of rain on Houston, Texas (Aug. 25, 2017).
- 1 ½ feet of water covered 70% of Harris County...where Houston resides.
- 1 million cars were ruined, and more than 240,000 homes damaged.
- The nation’s 7th largest school district had 75 of 275 schools closed due to damages.



14

“NATIONAL TRAUMA”: DEPRIVATION




- Nicolae Ceausescu took control over the communist party in Romania 1966-1989.
- Women must bear a minimum of 5 children, and bearing 10 children earned the dubious honor of “heroine mothers”
- Banned all abortions for women under 45, and issued government crackdown on divorce.



- Romania eventually had one of the highest infant mortality rates and unwanted children living in orphanages in the world.




15




BUCHAREST EARLY INTERVENTION PROJECT

- Previous research exploring the relationship between neglected children suffered from selection bias.
- BEIP studied 126 children placed in six different institutions. Half placed in quality care and half in remained in institutions.
- Main finding was that the earlier a child was placed in foster care (<2), the better the recovery.



16


16



ENVIRONMENTAL DEPRIVATION AND ATTACHMENT

- Children who have experienced early institutionalization tend to display the following behaviors (Zeanah & Smyke, 2007).
- * Decreased play behaviors
- * Increased aggression
- * Social disinhibition
- * Poor social boundaries
- * Poor adaptive behavior


(Bucharest Early Intervention Project, 2007)



- Selective attachments tend to form between 6-9 mos for typically developing children (i.e. secure, insecure, avoidant, disorganized, etc.). This is often termed the "sensitive period".
- Children from institutions adopted prior to this period are more likely to display secure attachments.
- Dopamine interacts with oxytocin (hormone) pathways to form the neural basis of attachment.

17

17



DEFINING TRAUMA

- ❖ **Trauma:**
 - ❖ Childhood maltreatment
 - ❖ Violence exposure
 - ❖ Depriving care environments
 - ❖ Adverse community trauma (i.e. crime, gangs, poverty etc..)
 - ❖ Natural disasters or **pandemic**

- ❖ According to SAMSHA (2020), **2/3rds** of children report one traumatic event by age 16.
- ❖ **1 in 5** students report bullying... **1 in 6** cyberbullying.
- ❖ Approximately **8.7 percent** of all adults – 1 of 13 people in this country – will develop PTSD during their lifetime. Women twice as likely as men (Sidran Institute, 2018).

18

18

SUBTYPES OF TRAUMA
(NCTSN, 2021)

Bullying (peer victimization) - a deliberate attempt to inflict social, emotional, physical, and/or psychological harm to someone perceived as being less powerful. Bullying can be physical (hitting, tripping, kicking, etc.), verbal (teasing, taunting, threatening, sexual comments), social (spreading rumors, embarrassing someone in public) or include cyberbullying through social media.

Community Trauma - exposure to intentional acts of interpersonal violence committed in public areas by individuals not necessarily related to the victim. Includes homicides, sexual assaults, robberies, shootings, gang related violence and weapons attacks.

Complex trauma - exposure to multiple traumatic events often of an invasive and interpersonal nature, such as abuse, sexual abuse, or profound neglect. The trauma often occurs early and often in life, and can disrupt many aspects of the child's development and ability to form secure attachments.

Early childhood trauma - traumatic experiences that occur in children aged 0-6. These types of traumas can be the result of intentional violence, such as child physical or sexual abuse, or the result of natural disaster, accidents, or war. Young children also may experience traumatic stress in response to painful medical procedures or the sudden loss of a parent/caregiver

19

19

SUBTYPES OF TRAUMA
(NCTSN, 2021)

Intimate Partner Violence (IPV) - occurs when an individual purposely causes harm or threatens the risk of harm to a partner or spouse. Tactics used in IPV can be physical, sexual, financial, verbal, or emotional in nature and can also include stalking, terrorizing, humiliation, and intentional isolation from social supports and family. Children are silent victims of IPV, and some are directly injured, while others are frightened witnesses.

Pediatric medical trauma - refers to a set of psychological and physiological responses of children and their families to pain, injury, serious illness, medical procedures, and invasive or frightening treatment experiences. Medical trauma can occur as a response to a single or multiple medical events

Physical abuse - one of the most common forms of child maltreatment. Legal definitions vary occurs when a parent or caregiver commits an act that results in physical injury to a child or adolescent, such as red marks, cuts, welts, bruises, muscle sprains, or broken bones, even if the injury was unintentional

Sexual abuse -any interaction between a child and an adult in which the child is used for the sexual stimulation of the perpetrator or an observer. Non-touching behaviors can include voyeurism (trying to look at a child's naked body), exhibitionism, or exposing the child to pornography.

20

20

HOW DO WE HELP TRAUMATIZED CHILDREN LEARN
[HTTPS://WWW.YOUTUBE.COM/WATCH?V=G68HNDUJ-E](https://www.youtube.com/watch?v=G68HNDUJ-E)

Helping Traumatized Children Learn
safe and supportive school environments


5 Core Ideas
of Helping Traumatized Children Learn
Volumes 1 & 2

Trauma and Learning Policy Initiative
Massachusetts Advocates for Children
and Harvard Law School

Michael Gregory, J.D., M.A.T.
Assistant Clinical Professor
Harvard Law School
Senior Attorney
Trauma and Learning Policy Initiative


21

21




REFLECTION QUESTIONS

1. Which types of trauma do you tend to encounter most with children in your schools?
2. Do you feel you have the necessary assessment tools and intervention protocols to work with traumatized children in your schools?



22


22



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23



SYMPTOMS OF TRAUMA

- Anger
- Persistent feelings of sadness and despair
- Flashbacks
- Unpredictable emotions
- Physical symptoms, such as nausea and headaches
- Intense feelings of guilt, as if they are somehow responsible for the event
- An altered sense of shame
- Feelings of isolation and hopelessness
- Academic failure

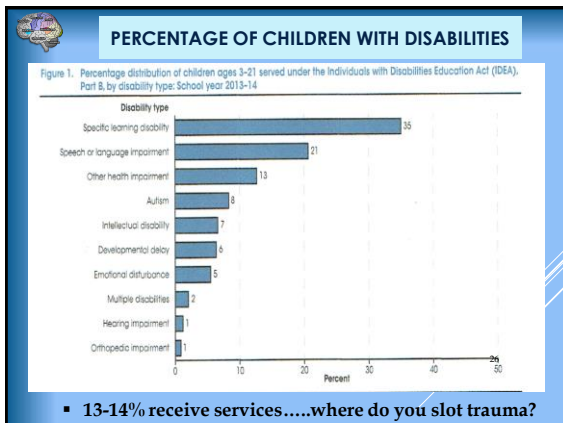


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SYMPTOMS OF TRAUMA		
Physiological Symptoms (anxiety disorder?)	Behavioral Symptoms (depression?)	Psychological Symptoms (ADHD?)
Shallow Breathing	Work Refusal	Inconsistent attention
Facial Flushing	School Refusal	Irritability
Excessive Sweating	Avoiding unstructured areas	Mind goes blank during tests
Hand Tremors	Sensitivity to loud sounds	Loses train of thought
Dizziness	Rarely volunteers in class	Poor organization
Dilated Pupils	Speaks in a hushed voice	Easily angered
Fatigue	Does not initiate peers	Poor emotional self-regulation
Muscle Tension	Avoids cafeteria	Distrusts authority figures
Chest pains	Often visits school nurse	Irrational fears

25



26

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27


COGNITIVE DEFICITS AND COVID-19: EXECUTIVE DYSFUNCTION AND BRAIN FOG

- Executive functioning deficits and brain fog symptoms persisting months after recovery from COVID-19 (Goldberg et al., 2021)
- 33% of patients reported dysexecutive syndrome including inattention, disorganization, and disorientation. Bilateral frontotemporal hypofusion was common MRI finding. Helms, J. (2020). Neurological features in severe SARS-COV-2 Infection. *New England Journal of Medicine*.
- Large **megakaryocytes**- which are bone marrow cells responsible for blood clotting- crossing blood-brain barrier in COVID-19 patients. This may be leading to brain fog and cluttering neural connections. Nauen et al (2021). Assessing brain capillaries in COVID-19. *JAMA Neurology*.

EF Traits Particularly Impaired:

- Lexical Fluency
- Attention
- Processing Speed
- Working Memory

Beaud et al. (2020). Pattern of cognitive deficits in severe COVID-19. *Journal of Neurology, Neurosurgery, Psychiatry*.

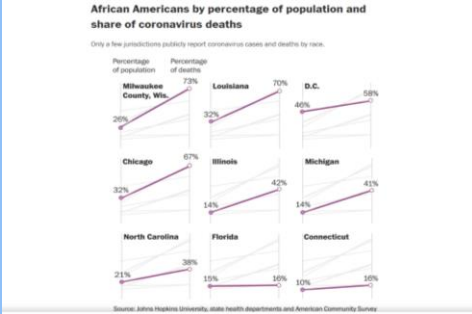


31

COVID-19 STATISTICS: DISPROPORTIONALITY OF TRAUMA

African Americans by percentage of population and share of coronavirus deaths

Only a few jurisdictions publicly report coronavirus cases and deaths by race.



Location	Percentage of population	Percentage of deaths
Milwaukee County, Wis.	20%	73%
Louisiana	32%	70%
D.C.	46%	58%
Chicago	32%	67%
Illinois	14%	42%
Michigan	14%	47%
North Carolina	21%	38%
Florida	10%	16%
Connecticut	10%	16%

Source: Johns Hopkins University, state health departments and American Community Survey.

- Higher rate of lung disease, heart disease, hypertension, and diabetes.
- Social distancing difficult in more densely populated areas.


32

COVID-19: HOW DO WE RETURN TO SCHOOL?

- Nearly **1.6 billion** students in **190** countries out of school.
- There will need to be a transition or buffer period to allow students and teachers to feel safe and comfortable in the building. Start with a re-entry plan...work in a celebration!
- Educators will need to be patient with academic skills as there may be gaps in learning (i.e. *math and foreign language*).
- Social distancing may need to continue so expect schedule adjustments and/or hybrid distance models.
- Masks, gloves, thermal temperature checks, sanitizer stations, etc.. may be needed.
- Access to mental health services.
- Limitations on extra-curricular activities and sports.
- Work with parents to discuss coronavirus myths and best practices moving forward.




33



pass¹²
Pandemic Anxiety Screener
for Students ~12


Learn more...

- **Purpose:** Assesses the impact of the pandemic on a student's everyday functioning.
- **Format:** Online administration and score report with specific recommendations via PARiConnect.
- **Age range:** 4 years to 18 years
- **Time:** 3 - 5 minutes to administer and score




34

34




REFLECTION QUESTIONS

1. What safety steps have your schools taken as students returned back from the pandemic this year?
2. How has your role as a school psychologist changed as a result of COVID-19?
3. Do you feel children with trauma should receive special education services, a 504 plan, or neither?



35

35



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36

36

ADVERSE CHILDHOOD EXPERIENCES

➤ The Adverse Childhood Experiences Study (ACE Study) conducted by both Kaiser Permanente and the Centers for Disease Control and Prevention, examined the long term impact of childhood trauma from participants recruited more than 20 years ago from 1995-1997.

- **Conclusion 1:** Adverse childhood experiences are common. For example, 28% participants reported physical abuse and 21% reported sexual abuse.
- **Conclusion 2:** Adverse childhood experiences often occur together. Almost 40% of the original sample of 17,000 participants reported two or more ACEs and 12.5% experienced four or more.
- **Conclusion 3:** The cumulative impact of adverse childhood experiences leads health, social, and behavioral problems throughout the lifespan.

37

ACES CRITICISM!

1. **Sample** – non randomized as all 17,000 participants were members of Kaiser Permanente and therefore had access to **excellent health care**, resided in **southern California**, and were mostly **white** and **college educated** with an average age of **57 years old**.
2. The use of a binary or “yes-no” scoring system to a set of heterogeneous questions lacks psychometric sophistication and assumes each ACE carries an equivalent weight (McLennan et al., 2020).
3. Numerous questions omitted such as peer victimization, exposure to community violence, and lower socio-economic status (Finkelhor et al., 2015).

Number of Adverse Childhood Experiences (ACE Score)	Women	Men	Total
0	34.5	38.0	36.1
1	24.5	27.9	26.0
2	15.5	16.4	15.9
3	10.3	8.6	9.5
4 or more	15.2	9.2	12.5

- The brain does not care about the source of an ACE and cannot distinguish one type of toxic stress from another.

38

ACES QUESTIONS

1. Did a parent or other adult in the household often or very often... Swear at you, insult you, put you down, or humiliate you? or Act in a way that made you afraid that you might be physically hurt?
2. Did a parent or other adult in the household often or very often... Push, grab, slap, or throw something at you? or Ever hit you so hard that you had marks or were injured?
3. Did an adult or person at least 5 years older than you ever... Touch or fondle you or have you touch their body in a sexual way? or Attempt or actually have oral, anal, or vaginal intercourse with you?
4. Did you often or very often feel that ... No one in your family loved you or thought you were important or special? or Your family didn't look out for each other, feel close to each other, or support each other?
5. Did you often or very often feel that ... You didn't have enough to eat, had to wear dirty clothes, and had no one to protect you? or Your parents were too drunk or high to take care of you or take you to the doctor if you needed it?

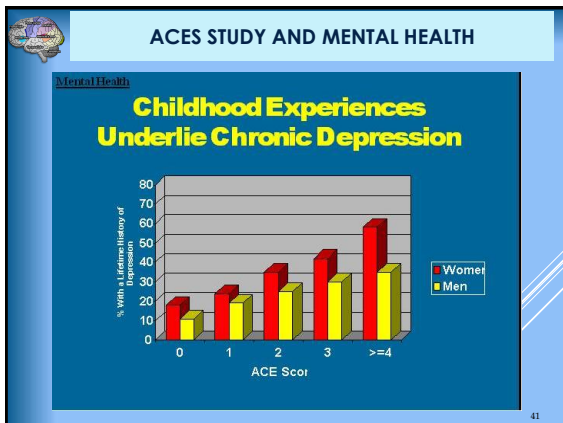
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ACES QUESTIONS

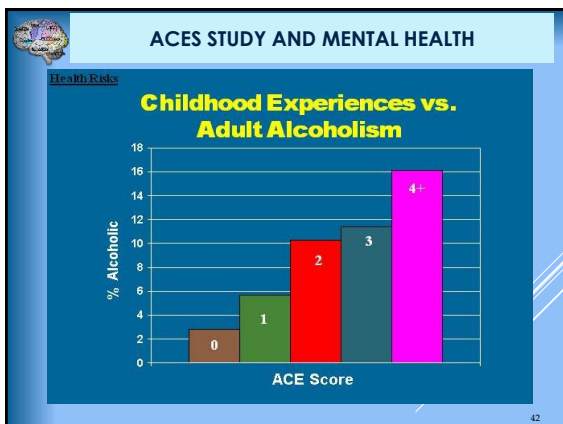
6. Were your parents ever separated or divorced?
7. Was your mother or stepmother: Often or very often pushed, grabbed, slapped, or had something thrown at her? or repeatedly hit over at least a few minutes or threatened with a gun or knife?
8. Did you live with anyone who was a problem drinker or alcoholic, or who used street drugs?
9. Was a household member depressed or mentally ill, or did a household member attempt suicide?
10. Did a household member go to prison?

40

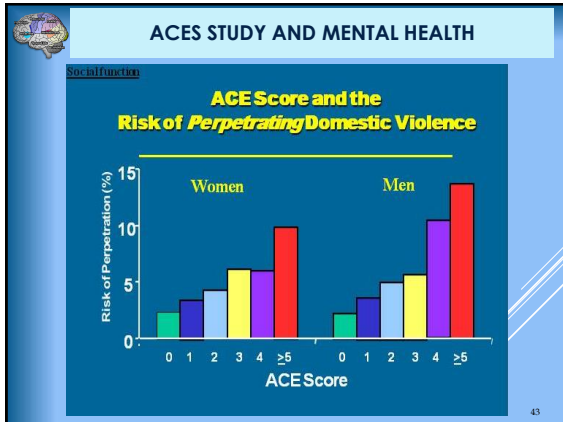
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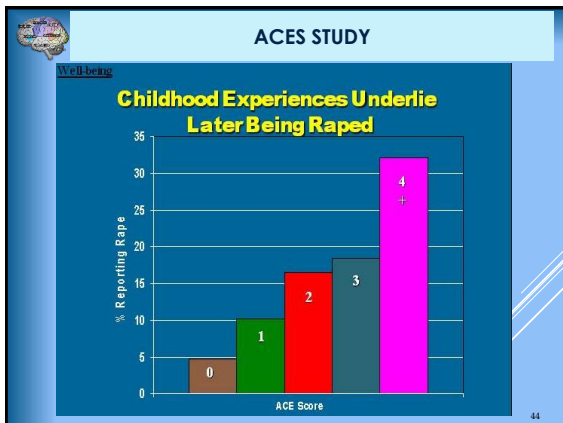


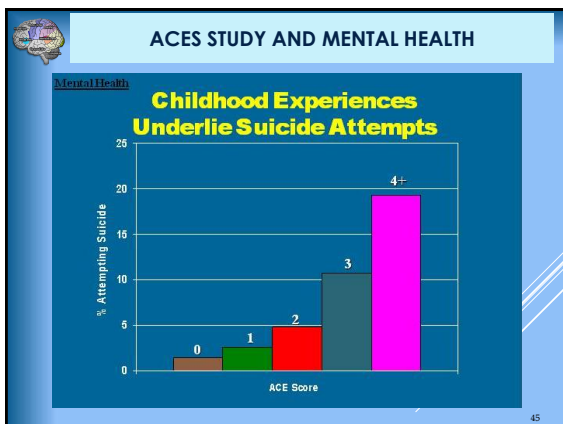
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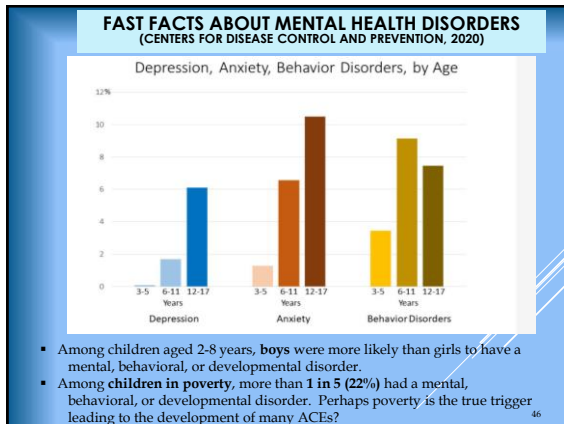


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46

SCHOOL MENTAL HEALTH SERVICES

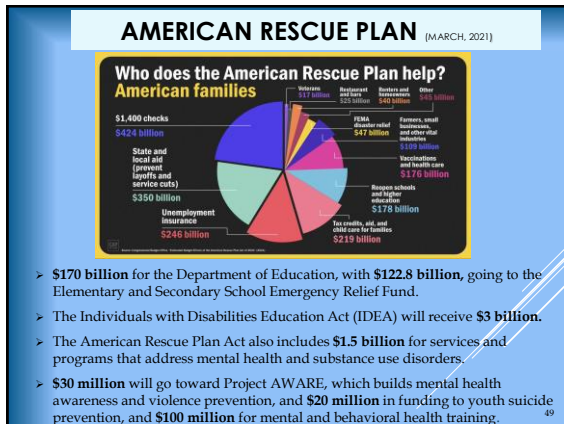
- NASP recommends 1 psychologist for every 500-700 students. Reality is 1 for every **1,381**.
- American School Counselor Association recommends 1 counselor for every 250 students. Reality is 1 for every **482** students.
- The Every Student Succeeds Act (ESSA) authorizes various funding streams for schools to improve access to coordinated school mental health services including:
 - * Positive behavior interventions and supports (PBIS).
 - * Social emotional learning
 - * Conflict resolution
 - * **Trauma informed practices**

47

47



48



49

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50

POLYVAGAL THEORY: HOW THE NERVOUS SYSTEM BECOMES SENSITIZED TO FEAR?


Vagus Nerve – 10th cranial nerve and longest in body. Literally “wanders” from brain to the digestive system. Arranged in a hierarchical fashion and functions to calm the body through homeostasis

Polyvagal Theory - Stephen Porges (2009)

- **Dorsal Vagus** – older pathway that triggers “freeze” response, immobilization, or dissociation (parasympathetic)
- **Fight-Flight** – dominated by physiological responses of sympathetic nervous system. Takes body 15-20 min to self-calm (sympathetic)
- **Ventral Vagus** – newer pathway that inhibits older pathways and triggers calming influence of parasympathetic nervous system through **social engagement and trust**. Provides **brakes** to behavior!

* Primitive systems activated when more evolved system fails*

51




POLYVAGAL THEORY: HOW WE PSYCHOLOGICALLY RESPOND TO TRAUMA

(BESSEL VAN DER KOLK, 2014)

- **Depersonalization** – a survival tactic by walling ourselves off emotionally from the traumatic event. There is a **numbing** of emotions and a cognitive dissociation takes place by freezing the mind and body (*dorsal vagus*). A precursor for developing **dissociative disorders**.
- **Sensitization** – our nervous system becomes hyper-aroused and panic is easily triggered (*fight-flight*), as we become engulfed by fear and anxiety. **Depression, anxiety, PTSD, and mood disorders** are often the psychological manifestations of an easily triggered sympathetic nervous system.
- **Adaptation** – the key to **resilience**, as this newer pathway (*ventral vagus*) inhibits older pathways and triggers calming influence of sympathetic nervous system through **social engagement and trust**.

* “The challenge of trauma is to re-establish ownership of the body and mind” – (Bessel Van Der Kolk, 2014)


52



FEAR VS ANXIETY

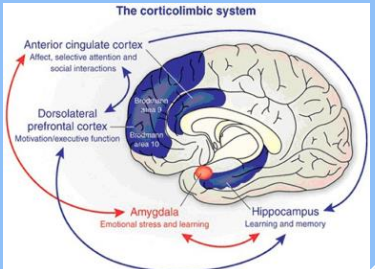
FEAR	ANXIETY
* Related to a tangible stimulus and immediate threat (i.e. snakes)	* Often irrational and related to anticipation of threat.
* Perpetuated by our nervous system	* Perpetuated by maladaptive cognitions.
* Sympathetic nervous system is triggered.	* Sympathetic nervous system is triggered.
* No specific temperament characteristics.	* Inhibited temperament driven by sensory threshold of amygdala leading to approach or withdrawal behaviors (Kagan, 2007).
* Over-active anterior cingulate leading to group conformity (Goldberg, 2018)	* Underactive anterior cingulate which cannot regulate amygdala and results in hyper-focus of internal states.

53



CORTICOLIMBIC SYSTEM AND TRAUMA

The corticolimbic system



Anterior cingulate cortex: Affect, selective attention and social interactions

Dorsolateral prefrontal cortex: Motivation/Executive function

Amygdala: Emotional stress and learning

Hippocampus: Learning and memory


1. **Amygdala** – responds to **unfamiliar and unexpected** events (Kagan, 2007). ...Trauma alters our **threat perceptions**, and interprets benign situations as dangerous.

54

54

STRESS RESPONSE SYSTEM

Cortisol – a glucocorticoid (glucose-cortex-steroid) that regulates the metabolism of glucose in the brain. A homeostasis of cortisol is needed for optimal brain functioning and efficient mobilization. Too much (*Cushing's Syndrome*)...too little (*Addison's Disease*).

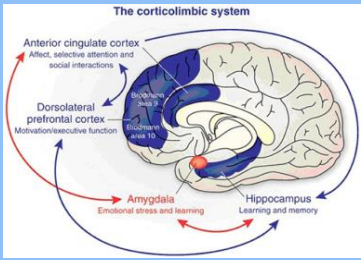


- Stress impacts body by lowering **immune system**, and also by reducing sleep.
- Stress alters amygdala to PFC connections leading to impairments in **executive functioning** (Berens et al., 2017).
- Anxiety impacts cognition and learning by way of **working memory** (Dowker et al., 2015).

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CORTICOLIMBIC SYSTEM AND TRAUMA

The corticolimbic system



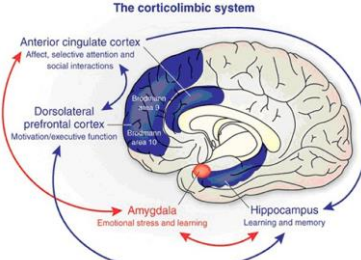
2. Hippocampus - A key **memory center** and more sensitive to cognitive than emotional memories. Helps to inhibit amygdala. **Chronic stress** from abuse or neglect releases cortisol which can reduce hippocampal volume. (Johnston & Olson, 2015).

* Neurogenesis can occur in dentate gyrus.

56

CORTICOLIMBIC SYSTEM AND TRAUMA

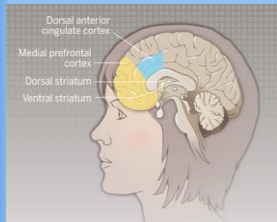
The corticolimbic system



3. Anterior Cingulate Cortex - Directs our **attention inward** toward becoming overly aware of nervous system fluctuations and visceral responses (i.e. heart rate increases, breathing rate, perspiration, etc.). ***Trauma is felt in the body!**

57

FRONTAL LOBE AND TRAUMA: DORSAL ANTERIOR CINGULATE



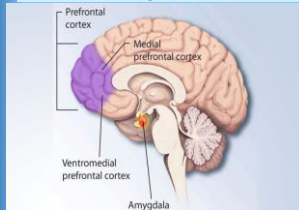
- Dorsal anterior cingulate helps regulate emotional functioning and supervises fear-based system.
- Helps interpret and regulate our emotional experiences with **language**.

- **Alexithymia** - emotional intensity of an experience impacts the ability to identify, label, and verbally communicate one's emotional state.
- 85% of PTSD patients experience alexithymia... brain imaging studies showing greater cortical thickness in dorsal anterior cingulate (Demers et al., 2015).

58

58

FRONTAL LOBE AND TRAUMA: VENTROMEDIAL PREFRONTAL CORTEX



- Damage leads to **emotional impulsivity** and social emotional judgement becomes compromised.

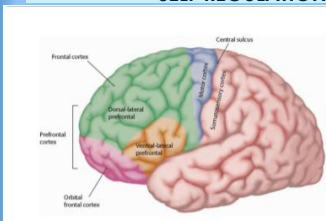
4. **Ventromedial prefrontal cortex** - allows children to utilize social conventions to guide decision making in order to maintain long-term goals...requires emotional patience (Immordino-Yang, 2016).

- Underdevelopment leads to **insensitivity to rewards and punishment**, aggression, and antisocial attitudes.
- ❖ Behavior plans not terribly useful to address mental health component of trauma.

59

59

ORBITAL FRONTAL CORTEX AND TRAUMA: SELF REGULATION SKILLS



- * **Self-regulation of social skills functioning** - children who have been abused or neglected often experience tremendous challenges developing **trust with others** and establishing stable interpersonal relationships.

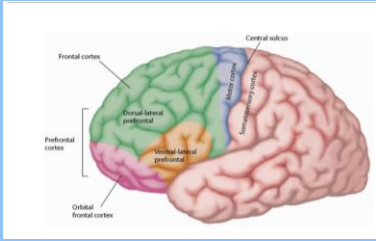
5. **Orbital-frontal Cortex** - children who have experienced have difficulty accurately identifying their own emotions, as well as comprehending the emotional states of others. **Emotional EF DEFICITS!**

- **Social Dyslexia** - misread social cues and highly reactive to misperceived slights and inability to comprehend how behavior may disrupt the learning environment. **Emotionally egocentric.**

60

60


DORSOLATERAL PREFRONTAL CORTEX AND TRAUMA: SELF REGULATION SKILLS



6. **Dorsolateral Prefrontal Cortex** – traumatized children often experience significant academic problems, often due to deficits with various aspects of **cognitive executive functioning** and **indecisive decision making**.

61


SUMMARY OF TRAUMA ON THE BRAIN (BERENS ET AL., 2017)



<p>Brain Alterations</p> <ul style="list-style-type: none"> * Global gray matter changes * Decreased volume in PFC and hippocampus. * Aberrant amygdala activity * Alterations in amygdala-PFC connectivity. * Systemic immune suppression * Impaired glucose regulation * Elevated cortisol levels leading to hyper and hypo-stress system responses. 	<p>Functional Implication</p> <ul style="list-style-type: none"> * Impairments in executive functions, working memory, and cognitive control. * Emotional dysregulation * Poor stress regulation * Increased risk of disease & sickness * Heightened risk for diabetes * Dysregulation of sympathetic and parasympathetic pathways
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62

PRESENTATION OUTLINE




- Defining Trauma
- Symptoms of Trauma
- The Impact of COVID-19
- ACES Study
- ➔ ▪ Hope and Resiliency
- Trauma and the Brain
- 5 Pillars of a Trauma Informed School
- Trauma Informed Assessment

63



THE IMPACT OF HOPE




Curt P. Richter

- 1957- Curt Richter, a geneticist and psychologist at Johns Hopkins University was studying the physiology of survival for the navy.
- He first took a dozen domesticated rats, put them into jars half-filled with turbulent water, and watched them drown. 9 of 12 rats did not give up and swam for up to 48 hours before perishing.
- He had his graduate students capture 12 more rats from the streets of Baltimore. They were much more fierce and aggressive. Yet virtually all drowned within the first few minutes.
- He then tweaked the experiment...took wild rats and before they drowned...picked them up and coddled them. Afterwards, he put them back in the jar, and they survived much longer.

64

64




THE IMPACT OF HOPE

Complex Trauma - multiple traumatic experiences which occur in childhood and adolescence, including multiple occurrences of emotional abuse and neglect, sexual abuse, and physical abuse.

- Meta-analysis of 80 studies containing **12,252** survivors of child sexual abuse found the mean prevalence of sexual revictimization across studies was **47.9%**, suggesting that almost half of child sexual abuse survivors are sexually victimized in the future (Walker et al., 2019)
- Complex trauma recovery involves both **external factors** (i.e. access to mental health care, financial assistance, education, family support, etc...) and **internal protective factors** such as emotional competence, feelings of optimism, external attribution of blame, and **hope**.

65

65



MODIFIERS OF TRAUMA ON THE BRAIN

(BERENS ET AL., 2017; TRAUB & BOYNTON-JARRETT, 2017)

- Pre-existing health conditions
- Family structure, stability and supports
- Timing of stress (early critical periods are worst)
- Type of traumatic event (i.e. sexual, emotional, physical, etc.)
- Cumulative occurrences
- Access to mental health services
- Mental health of caregivers (maternal)
- Positive temperament
- Get back into a routine

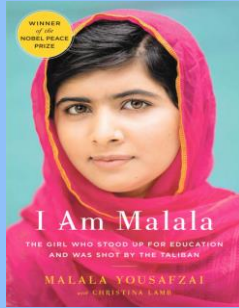
Developing Resiliency?

* **Epigenetics** is the study of gene expression in the wake of environmental circumstances.

66

66

Developing Resiliency: Malala Yousafzai



<https://www.youtube.com/watch?v=CXvs1vwID0M>

67

67

DEVELOPING RESILIENCY: CHARLES HUNT

[HTTPS://WWW.YOUTUBE.COM/WATCH?V=3QELIW_1DDG](https://www.youtube.com/watch?v=3QELIW_1DDG)



68

68




Developing Resiliency

(Traub & Boynton-Jarrett, 2017)

- Access to mental health care
- School engagement
- Positive temperament and being hopeful.
- Adaptable executive functioning skills that allows for positive cognitive restructuring.
- Supportive caregivers and emotional security.
- Parental mental health (maternal).
- Family education and enhanced understanding of trauma.
- Stay connected with the community.
- Get back into a consistent routine.


69

69




REFLECTION QUESTIONS

1. What could schools do better to help put less **stress** on students (*i.e. changes in curriculum, extra-curricular activities, etc.*).
2. Do you feel **resiliency** is something that can be taught, cultivated, and nurtured in our schools?



70

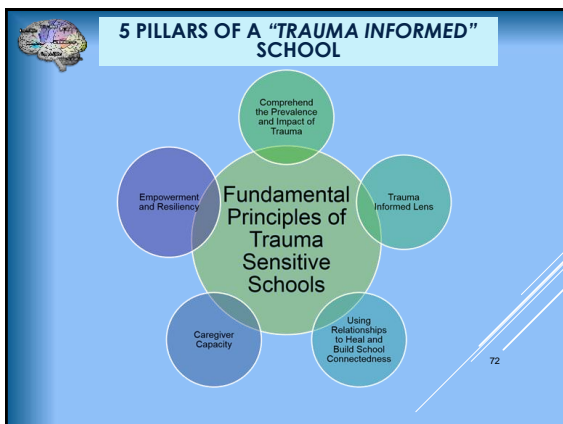
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PRESENTATION OUTLINE

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71



72

1. UNDERSTANDING CHILDREN'S TRAUMATIC STRESS RESPONSES

(NCTSN, 2012)

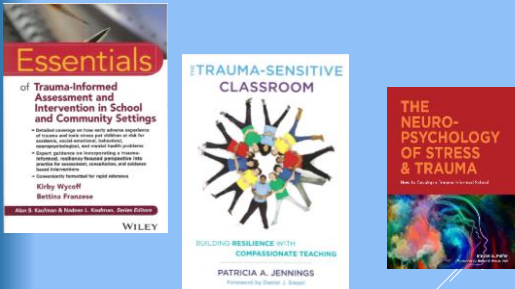


1. Traumatic experiences are inherently complex: *(There is no signature emotional reaction that all children exhibit.)*
2. Danger and safety are core concerns in the lives of traumatized children.
3. Traumatic experiences affect the family and broader caregiving systems.
4. Developmental neurobiology underlies children's reactions to traumatic experiences.

73

73

1. TRAUMA BOOK CLUB



74

74

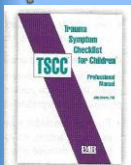
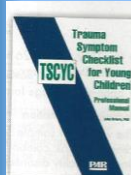
2. TRAUMA SCALES

(1) Measure Name	(2) Measure Type	(3) Audience	(4) ACEs	(5) Strengths	(6) Limitations	(7) Other Considerations
Childhood Trauma Questionnaire [®]	Self-reported survey	12 years +	emotional abuse sexual abuse emotional neglect physical neglect	Satisfactory validity and reliability when compared with other methods such as staff observations.	Multiple primary studies report differing results for the appropriate structuring/interpreting of the questions.	Time: 5 minutes Fee: None Qualifications: Master's degree or equivalent
Juvenile Victimization Questionnaire-second revision (JVQ-2) [®]	Structured interview and child self-reported survey	8-17 years	emotional abuse physical abuse sexual abuse emotional neglect physical neglect mother treated violently witnessed violence substance abuse	Demonstrated reliability with community and child welfare samples in the U.S. and wider populations.	None reported.	Time: 10-30 minutes Fee: None Qualifications: Experienced and educated, qualified professional for interpretation
Trauma Symptom Checklist for Children (TSCC; TSCC-A) [®]	Self-reported survey	8-18 years	emotional abuse physical abuse sexual abuse emotional neglect physical neglect mother treated violently	Several studies report that TSCC-A is a statistically reliable and valid tool that has been studied for large samples of racial and socio-economically diverse populations.	TSCC-C requires additional studies on reliability and validity in children under age 7. Studies evaluating TSCC-A may not be representative of the nationwide population due to their small and geographically limited sample populations.	Time: 10 minutes Fee: \$19 for introductory kit Qualifications: Undergraduate training or baccalaureate degree with clinical training or use of psychological tests
Adolescent Dissociative Experiences Scale (A-DES) [®]	Self-reported survey	11-18 years	emotional abuse physical abuse sexual abuse emotional neglect physical neglect	Strong reliability and validity as reported by several studies.	Mean scores of the results have varied greatly and no validated cut-off score has been established.	Time: Unknown Fee: Minimal Qualifications: Undergraduate degree, clinical training

75

75

2. TRAUMA SCALES

- **Trauma Symptom Checklist for Children**
 - 54 item self report checklist (15-20min)
 - Ages 8-16
 - Scoring software on PAR iconnect
 - Anxiety, Depression, Anger, PTSD, Dissociation, and Sexual Concerns
 - Gender appropriate norms
- **Trauma Symptom Checklist for Young Children**
 - 3- 12 years old
 - Caretakers rate 90 symptoms on a 4 point scale (20 min)
 - Eight clinical scales
 - Focus on child abuse, peer assault, community violence.

76

ANXIETY RATING SCALES


Test	Age range	Total questions/form
Revised Children's Manifest Anxiety Scale (RCMAS-2; 2008)	6-19	49, self-report
Multidimensional Anxiety Scale for Children Second Edition™ (MASC-2; 2012)	8-19	50, parent and self-report
Behavior Assessment System for Children, Third Edition (BASC-3; 2015)	2-22 parent/teacher; 6-college (self)	105-165, teacher; 139-175, parent
Beck Youth Inventories, Second Edition (BYI-2; 2005)	7-18	100 (20 about anxiety), self-report
Conners 3 (2008)	6-18 teacher/parent; 8-18 self-report	Long and short forms: 42/110, parent; 39/115, teacher; 39/59, self-report
Conners Comprehensive Behavior Rating Scales (Conners CBRS; 2008)	6-18 teacher/parent; 8-18 self-report	204, teacher; 203, parent or caregiver; 179, self-report
Conners Early Childhood (Conners EC; 2008)	2-6 parent and teacher/caregiver report	191 parent; 187 teacher/caregiver
Piers-Harris 3 (2018)	6-22 self-report	58
Multidimensional Anxiety Questionnaire (MAQ; 1999)	18-89	40
Personality Assessment Inventory-Adolescent (PAI-A; 2007)	12-18 self-report	264

77

FEIFER ASSESSMENT OF SCHOOL TRAUMA (SUMMER 2021)

- **Purpose:** Assesses the impact of stress and trauma on a student's everyday functioning.
- **Primary Scales:**
 1. Physiological Index
 2. Behavioral Index
 3. Emotional Index
 4. Academic Index
- **Secondary Scales:**
 - a) Resiliency Scale
 - b) Critical Items
 - c) Validity Scale
- **Time:** 10 - 12 minutes to administer and score digitally.
- **Ages:** 4-18
- **Forms:** Teacher, Parent, Self-Report (8-18 yrs old)

78




3. CAREGIVER CAPACITY AND RESILIENCY

(TRAUS AND BOYNTON-JARRETT, 2017)



1. Positive appraisal style impacts executive functioning skills and facilitates cognitive restructuring.
2. Following trauma exposure, caregivers play a critical role influencing a child's overall social-emotional response and adaptation (McLeod et al., 2007).
 - a) Neglectful
 - b) Democratic
 - c) Authoritative
 - d) Authoritarian
3. Maternal mental health most influences coping
(*16 million children live with a depressed parent)
4. Family routines foster resilience.

79

79




3. MEASURING CAREGIVER CAPACITY AND RESILIENCY

- **Parenting Stress Index: 4th Edition**
 - *Ages 1-12
 - *120 item inventory focusing on child characteristics, parent characteristics, and situational life stressors.
 - *20 minutes
 - *On-line administration and scoring
- **Stress Index for Parents of Adolescents**
 - *11-19 years old
 - *112 items identifying parent-adolescent interactions.
 - *On-line administration and scoring

80

80




4. CLASSROOM ACCOMMODATIONS


- Extended time on tests and quizzes.
- Structure and routine (schedules and emotive responses)
- Preferential seating in class (by door if needed).
- Access to lecture notes when needed.
- Agenda/organization notebooks.
- Frequent breaks when needed.
- Use of a crisis pass.
- Alternative ways to demonstrate mastery
(i.e. projects instead of tests)
- Allow for test re-takes to demonstrate subject mastery.
- Use of technology for note-taking and written language assignments (*Avoid grading in red pen!).
- Scheduling more challenging subjects in morning.
- Allow for partial school days.
- **Awareness of trauma triggers.**
- Access to "In-school" coach.
- Provide access to on-line learning if needed.

81

81



5. TEACHING RESILIENCY: MINDFULNESS




Mindfulness – focus on breathing from the diaphragm, not the chest, and exhaling on longer slower breaths.


- Strive for 6-8 breaths per minute.
- Practice breathing techniques when visualizing an anxiety provoking situation.
- Enhances parasympathetic nervous system.

82

82



5. TEACHING RESILIENCY: YOGA




Yoga – assumes the footprint of trauma is in the body and tissues.

- We cannot talk it out, and fear our own bodily sensations (Van Der Kolk, 2012).
- Pain, headaches, muscle tension, tics, panic attacks
- Some research (Albracht-Schulte & Robert-McComb, 2018) suggests Yoga can reduce anxiety and heart rate variability following a stressor, though the induced calmness wears off after 30-40 minutes. More research needed!



83

83



5. USING CBIT AND COGNITIVE RESTRUCTURING TO CHANGE THINKING PATTERNS

- **Extremist** – all or none thinking. Everyone is either great or bad, or my emotions are either positive or negative and there is no nuance of in-between.
- **Inflator** – always over-exaggerating anything bad that may happen and undervalue what is good.
- **Mind Reader** – convinced that others have a bad opinion of you.
- **Predictor** – always focused on the future and not the present, and convinced the future has negative outcomes.
- **Blamer** – always blames others for our own misgivings and never accept responsibility.
- **Perfectionist** – highly critical of others and constantly demeaning and pointing out faults in others.





84

84

CBIT: TRAUMA AND THE BRAIN

Fear and Anxiety Affect the Brain Architecture of Learning and Memory



PREFRONTAL CORTEX
Center of executive functions; regulates thought, emotions, and actions. Especially vulnerable to elevation of brain chemicals caused by stress. Matures later in childhood.

AMYGDALA
Triggers emotional responses; detects whether a stimulus is threatening. Elevated cortisol levels caused by stress can affect activity. Matures in early years of life.

HIPPOCAMPUS
Center of short-term memory; connects emotion of fear to the cortex in which the threatening event occurs. Elevated cortisol levels caused by stress can affect growth and performance. Matures in early years of life.

85

85

5. TAKE TARGETED APP BREAKS



Breathe, Breathe & Think
Breathe, Breathe & Think
Breathe & Think
Breathe & Think
Breathe & Think

Take a Chill
Take a Chill
Take a Chill
Take a Chill
Take a Chill

THE ZONES OF REGULATION
THE ZONES OF REGULATION
THE ZONES OF REGULATION
THE ZONES OF REGULATION
THE ZONES OF REGULATION

Breethr
Breethr
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Calm
Calm
Calm
Calm
Calm

Headspace
Headspace
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Headspace

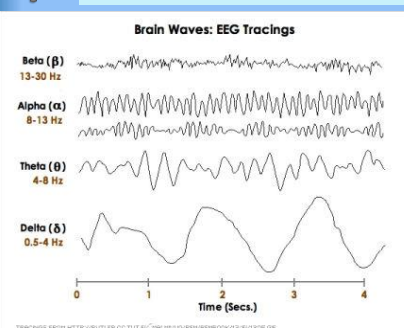
Square Breathing :
<https://www.youtube.com/watch?v=YFdZXwE6IRE>

86

86

5. NEUROFEEDBACK

Brain Waves: EEG Tracings



Beta (β)
13-30 Hz

Alpha (α)
8-13 Hz

Theta (θ)
4-8 Hz

Delta (δ)
0.5-4 Hz

Time (Secs.)

87

87

5. PBIS: CHANGE THE SCHOOL CULTURE

Tier 3/Targeted Interventions
Includes: Individualized interventions for high-risk behaviors

Tier 2/Selected
Classroom & Small Group Strategies (10-20% of students)
Includes: Social skills groups, daily check-ins with adult, classroom behavior interventions

Tier 1/Universal
School-wide, Community-Wide Strategies (80-90% of students)
Includes: Expectations training, classroom management, social-emotional skills training

Source: Swanson & Henggeler, 2009

- Focus on prevention and not punishment.
- Establish universal rules, consequences, and school climate.
- Gather data to make decisions on children.
- Teach social-emotional academic learning.

91

91

SOCIAL EMOTIONAL ACADEMIC LEARNING

Self-Management
Managing emotions and behaviors to achieve one's goals

Self-Awareness
Recognizing one's emotions and values as well as one's strengths and challenges

Responsible Decision-Making
Making ethical, constructive choices about personal and social behavior

Relationship Skills
Forming positive relationships, working in teams, dealing effectively with conflict

Social Awareness
Showing understanding and empathy for others

Social & Emotional Learning

Is this the future of school psychology?

92

92

SUMMARY: 5 PILLARS OF TRAUMA INFORMED SCHOOLS

- Promote **awareness** of the impact of trauma:
 - In-service presentations
 - Brochures and pamphlets (NASP & NCTSN)
 - Parent workshops
- Develop a school wide **trauma screenings**.
- Empower parents**....do not blame them.
- De-escalate Stress** – mindfulness, visualize, stay in present, CBIT.
 - Structure and routine
 - Recognize trauma triggers
 - Design “safe” zones
- Academic **accommodations**.

93

93



SAMSHA

(SUBSTANCE ABUSE AND MENTAL HEALTH SERVICES ADMINISTRATION)


- Public health initiative enacted in 1992 to lead federal efforts in addressing trauma in the U.S.

1. **Realize** the widespread impact of trauma
2. **Recognize** the signs and symptoms of trauma in families.
3. **Respond** by fully integrating knowledge about trauma into policies and procedures.
4. Actively resists **Re-traumatization**.



94

94



NASP **PREPaRE** TRAINING


The Every Student Succeeds Act (ESSA)

- Requires state assistance to LEA's to address bullying, harassment, and discipline.
- Requires annual reporting of safety, climate, bullying, and harassment data.
- Authorizes funds that may be used to improve school safety, improve crisis planning, and response.
- 33 states require every school and district to have a comprehensive school safety plan

➤ NASP provides **PREPaRE** training to aid school districts in meeting the legal requirements to create a positive and safe school climate. It promotes consistent crisis prevention through a recovery framework.

95

95

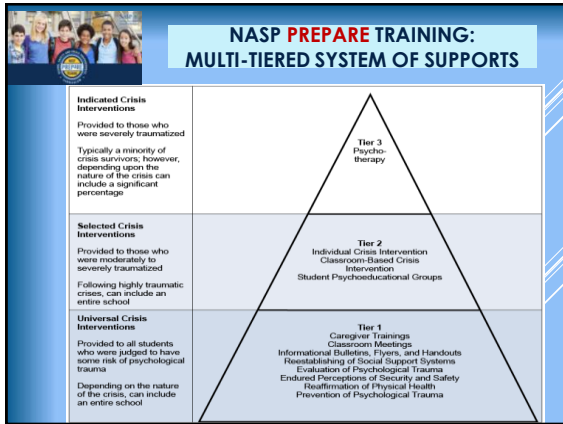


NASP **PREPaRE** CONCEPTUAL FRAMEWORK

P	Prevent and prepare for psychological trauma.
R	Reaffirm physical health and perceptions of security and safety.
E	Evaluate psychological trauma risk.
P R	Provide interventions and Respond to psychological needs
E	Examine the effectiveness of crisis prevention and intervention.

96

96



97

REFLECTION QUESTIONS

1. Do you feel your school is a “*trauma informed*” school and would benefit from the PREPaRE training or a similar program?
2. What additional academic, behavioral or social-emotional supports would you recommend for students experiencing trauma, stress, and emotional dysregulation?

98

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99


TRAUMA MEASURES

"Thinking about Thinking"
Higher Reasoning
Executive Function

Prefrontal Cortex

9 Functions of the Prefrontal Cortex

1. Empathy
2. Insight
3. Response Flexibility
4. Emotion Regulation
5. Body Regulation
6. Morality
7. Intuition
8. Attuned Communication
9. Fear Modulation



Limbic Brain

1. Fight, flight, freeze stress response
2. Thinks, "Am I safe? Do people want me?"
3. Emotions live here


- Executive Functioning
- Memory
- Attention
- Social-Emotional Regulation

100

100


BEHAVIOR RATING INVENTORY OF EXECUTIVE FUNCTIONING (BRIEF2)

- **Behavior Regulation Index (BRI)**
 - Evaluates a child's ability to modulate behavior via appropriate inhibitory control. It is comprised of the **Inhibit** and **Self Monitor** scales.
- **Emotional Regulation Index (ERI)**
 - Evaluates a child's ability to regulate emotional responses and adjust to changes in the environment. It is comprised of the **Shift** and **Emotional Control** scales.
- **Cognitive Regulation Index (CRI)**
 - Evaluates a child's ability to manage cognitive processes and problem solve effectively. Includes **Initiate**, **Working Memory**, **Planning**, **Task-Monitor**, and **Organization** scales.




101

MEMORY TESTS



WIDE RANGE ASSESSMENT OF MEMORY AND LEARNING : 2nd Edition (WRAML-2)

- Visual and Verbal Memory Tasks
- **Memorize information in context and isolation.**
- Attention-Concentration Index
- Immediate Memory
- Delayed Memory
- Recognition Memory
- Ages 5-90




CHILD AND ADOLESCENT MEMORY PROFILE (ChAMP)


- 35 minutes
- Visual and Verbal Memory Tasks
- Immediate and Delayed Memory
- **Memorize information in context and isolation.**
- Ages 5-21
- Screening Index

102

102



TEST OF EVERYDAY ATTENTION FOR CHILDREN; 2ND EDITION (TEA-CH2)



- 5-7 years old. Normed on 394 children in UK.
- 8-16 years old. Normed on 621 children in UK.
- Measures the cognitive components of attention:
 - Selective attention**
 - Sustained attention**
 - Switching attention**
- Both paper and pencil and computerized tasks.
- Measures reaction time and also auditory vs. visual attention.
- 40-45 minutes

103


103



SOCIAL-EMOTIONAL AND BEHAVIORAL ASSESSMENTS


TEST	AGE RANGE	AUTHORS
BASC-3 Teacher Rating Scale	2-21	Randy Kamphouse & Cecil Reynolds
BASC-3 Parent Rating Scale	2-21	
BASC-3 Self-Report Scale	6-college	
BASC-3 Behavioral and Emotional Screen System	3-18	
Conners Comprehensive Behavior Rating Scales	6-18	Keith Conners
Achenbach System of Empirically Based Assessment (ASEBA)	6-18	Thomas Achenbach & Leslie Rescorla
Devereux Behavior Rating Scale	5-18	Jack Naglieri, Paul LeBuffe, Steven Pfeiffer
Beck Youth Inventory II- (anxiety, depression, anger, disruptive behavior, self concept)	7-18	Judith & Aaron Beck
Children's Depression Inventory	7-17	Maria Kovacs
Revised Children's Manifest Anxiety Scale - 2	6-19	Cecil Reynolds & Bert Richmond
Multidimensional Anxiety Scale for Children-2	8-19	
RCDS-2/RADS-2	7-13/11-20	William Reynolds
Personality Inventory for Children-2 nd Edition (caregiver observations)	5-19	David Lachar & Christian Gruber
*Millon Adolescent Clinical Inventory	13-19	Theodore Millon
*MMPI-A	14-18	Bulcher et al.
*Personality Assessment Inventory	11-18	Lesley Morey

104




PERSONALITY ASSESSMENT INVENTORY (PAI)

- PAI-A & PAI use the same scales and subscales
- Adolescent item set is a derivative of the adult, with fewer items
- Anxiety subtypes (i.e. cognitive, affective, physiological) **anxiety related disorders (i.e. PTSD)**, depression, thought disorders, social detachment, borderline personality, antisocial behaviors, aggression, and substance abuse,
- 264 items on PAI-A
- 12-18 years
- Treatment recommendations included with computerized scoring system.
- Published in 2007...Lesley Moray

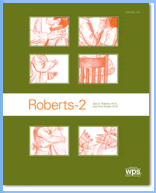


105

105




ROBERTS APPERCEPTION TEST-2ND EDITION




- Projective measure assessing maladaptive or atypical social perception.
- Record student responses for scoring.
- 11 picture cards depicting common experiences.
- Scoring involves problem identification, resolution, emotion, outcome, atypical responses.
- Roberts 2 computer scoring program and clinical casebook.

106

106




TRAUMA AND INTELLECTUAL DEVELOPMENT



- An 8 year longitudinal study of children who experienced interpersonal trauma by their primary caregiver, Enlow and colleagues (2012) found these children scored one-half of a standard deviation (*i.e. 6-8 points*) lower on IQ tests even after controlling for maternal IQ, birth-weight, and the home environment.
- Earlier studies (Delaney-Black et al., 2002) that found trauma related distress and violence exposure lead to a **7.5 point** decrement in IQ, and approximately a 10 point drop in reading scores on standardized achievement tests.

107

107




KEYS TO A "TRAUMA INFORMED" ASSESSMENT

1. Aggressively measure the **frontal lobes** by selecting tests of attention, memory, and executive functions.
2. Balance **rating scales** with **direct observations**.
 - a) **Classroom observations** should focus on time on task, work production, and social interactions.
 - b) **Testing observations** should focus on fatigue, attention drift, blunted affect, and trust.
3. **Do not** rely on just one data source (*i.e. projectives*).
4. **Developmental history** may be the most essential component of the report.
5. Consider all current **stressors** (*i.e. grades, friendships, poverty, teacher, physical, environment, etc.*)
6. Use **DSM5** criteria to establish a condition, **IDEA** to establish eligibility for special education.
7. Avoid using simple **correlations** to explain complex emotional and behavioral problems.


108

108




CONCLUDING THOUGHTS


- 1) All children **respond differently** to stress and trauma in their lives. Therefore, it is important for schools to have multi-tiered systems of emotional support for all children.
- 2) Schools should be at the forefront for teaching **social-emotional academic learning** and **adaptive responses** to stress and trauma.
- 3) Being a “**trauma-informed**” school recognizes the need for parent communication as well as community support.
- 4) Be a **change agent** for kids!
 - a. Be a role model
 - b. Accurate assessment
 - c. Intervention provider
 - d. Build a relationship ☺



109



LET'S STAY CONNECTED



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Licensed Psychologist

Workshops: feifer@comcast.net

Books: www.schoolneuropsychpress.com

Trauma Links: *<https://www.nasponline.org/>
 *<https://www.parentcenterhub.org/national-child-traumatic-stress-network/>
 *<https://news.istd.org/animal-assisted-therapy-for-trauma/>
 *<https://www.mindful.org/the-science-of-trauma-mindfulness-ptsd/>
 *<https://www.wiley.com/enus/Essentials+of+Trauma+Informed+Assessment+and+Intervention+in+School+and+Community+Settings-p-9781119474612>
 *<https://www.amazon.com/Trauma-Sensitive-Classroom-Building-Resilience-Compassionate/dp/03593711804>

110

110
