Trauma and Resiliency: Adverse Childhood Experiences versus Learning Experiences. Best Practices for All Children*

Dr. Nadine Burke Harris

https://www.youtube.com/watch?v=95ov1J3dsNk

*Adults too....
Thoughts:

• Whatever doesn’t kill you makes you stronger, right?
• My parents raised me to be tough, cos it’s a tough world.
• Sure, my parents weren’t perfect, but I turned out all right.
• Different Parenting Styles/Different Cultural Beliefs
ACEs (Adverse Childhood Experiences)

Dr. Vincent J. Felitti

http://www.azpbs.org/strongkids/
Quick Survey

Rate Your Awareness of the ACE Study:
- No Knowledge of ACE Research
- Some Knowledge
- More Than Most
- Expert
Complete ACE Questionnaire

- What does it make you think about?

- Keep in mind your thoughts as we continue?
What is Trauma?
Polyvagal Theory & Co-Activation of Sympathetic & Parasympathetic
Anterior Cingulate of the Cortex (ACC) and the Polyvagal System of activation

- ACC is one of the important information systems of the body
- Sits over the corpus collosum
- Acts an *environmental filtering system*, assessing threat in the immediate environment based on sensory input from the body

- The ACC is studying the environment in real time when the body is calm and relaxed.
- The ACC is extremely sensitive to dysregulation.
When activation occurs

(VVC) Ventral Vagal Complex: Signaling System for motion, emotion & communication. (Our Social Engagement System)

(SNS) Sympathetic Nervous System: Mobilization System for Flight or Fight Behaviors. (Our Aggressive Defense System)


Our Autonomic Nervous System fires muscular tensions triggered by feedback signals from the external & internal world at millisecond speeds below conscious awareness. These muscles tensions fire our Thoughts?
Every major system in the body is activated through the Poly-vagal system.
Ventral Vagal Complex

- A social engagement system
- System contributes to the richness of both social expressions and social experiences.
- System promotes calm states consistent with the metabolic demands of growth and restoration by slowing heart rate, lowering blood pressure, and inhibiting sympathetic activation at the level of the heart.
- Social nervous system functions from birth and rapidly develops to support communication with the environment.
- Emotional regulation and social behavior are functional derivatives of this system.
Ventral Vagal Complex --- the seat of warm positive feelings. The pleasure of normal touch, and relationships, the social engagement system.

Sympathetic Nervous System charges up aggressive and hostile physical responses to protect and escape pain and the potential of hurt.

An Activated Threat Response System which included the Sympathetic Nervous System (SNS) and the Dorsal Vagal system.

Dorsal Vagal system is alerted and on guard, but wants to make exactly the right move, so it is hyper alert to the environment, which causes the individual to freeze.
The bigger and stronger the activation, or the longer it lasts the more energy and focus it draws, essentially shirking the ability people should naturally have to enjoy relationships and find satisfaction in social engagement.
About the ACC?

Parasympathetic Nervous System and the VVC system give access to executive functioning

• A system that supports:
  1. Bodily Regulation and coordination of physiological responses
  2. Attuned Communications
  3. Emotional balance and regulation
  4. Flexibility in response (pause before reacting)
  5. Fear modulation
  6. Empathy
  7. Insight/discernment/judgment
  8. Moral awareness
  9. Intuition/spiritual feelings
  10. Identity

Sympathetic Nervous system reduces VVC activation and inhibits access to executive functioning

• A system that has the primary functions:
  1. Avoiding (real or perceived) threat through flight
  2. Reducing (real or perceived) threat through aggression
  3. Alter body tension and muscle readiness to act
Limbic & Paralimbic Structures

• The parts of the brain most involved in producing intense symptoms, like:
  • Panic
  • Anxiety
  • Flashbacks
  • Startle response
  • Emotional dysregulation and reactivity
  • Aggression/anger/rage
  • Physical somatic problems such as nausea, and throat or chest constriction

• *Are not directly affected by talking or listening without ATTACHMENT*
What is that makes so impactful?

- Whenever the threat response system is activated, our (VVC) social engagement system alters and becomes negatively impacted.
- Unaware of our autonomic nervous system’s alteration, our moods and our ability to attach relationally are adversely effected.
- Dr. Steven Porges has coined the term "neuroception" to explain the unconscious detection of safe or dangerous environments.
Ever had a sunburn?
What do you do when you have sunburn?

- Do something to make it hurt less

- Don’t let things come into contact with the sunburn (clothes or people) which we could call *avoidance*

- When touched we react by being cross or acting pained, to back the person touching us off and create distance.

- If someone intentionally pokes us it makes us mad and we are likely to say a bad word or two

- We adapt to avoid real or perceived *(possibility of)* pain
What Are ACEs?

Adverse Childhood Experiences

- Traumatic experiences in childhood
- Sometimes referred to as toxic stress or childhood trauma

https://www.youtube.com/watch?v=OQTfmnYB7Io

https://www.youtube.com/watch?v=jYyEEMlMMbo&list=UUjp1JGSu3eMboGjEAXxZt3g&index=5
Traumagenesis

- Traumagenic is a label for a type of environment that can create traumatic stress reactions and lead to traumagenesis which is an origination of symptomatic behaviors and biological alterations that increase the risk to health and emotional and psychological development.

- In simple terms...the environment activates real physical, emotional and psychological change that becomes enduring characteristics in the individual.

- One way this can happen is Epigenetics
Why is Environment Important?

- Each human being comes with a potentiality ready to sprout with decent caring. When the care-giving system breaks down then potential is impacted.

- If the environment of care is not “good enough” then the brain is altered. There seems to be a link between care giving environments and genetic expression in the Dopamine and Serotonin transport system. Good enough environments generally equal good transporter systems, less good environments lead to maladaptive transporter systems and greater risk for anxiety, depression and unstable mood.

  Weaver, I., Cervoni, N., Champagne, F.A. et all (2004)
Why is Environment Important?

- The stress of poor attachments disrupts the sequence in which the myelin-making cells, the oligodendrocytes produce myelin. Leading to greater emotional instability, reactivity and impulsivity *Karen Dietz, PhD*

- alpha2/delta-1 protein production is restricted often when there is developmental trauma, this restriction is related to obesity. *January 8, 2014 The Journal of Neuroscience,*

- New research links Alzheimer's to Epigenetic changes in the DNA where the the *dusp22 gene* is being switched off. There is also a relationship between Diabetes and epigenetic switching. *Promoter hypermethylation of the phosphatase DUSP22 mediates PKA-dependent TAU phosphorylation and CREB activation in Alzheimer's disease. Hippocampus, January 2014*
Why is Environment Important?

*Harvard University Center for the Developing Child*
*National Council on the Developing Child, May 2010*

Like the software in a computer’s operating system, the epigenome determines which functions the genetic "hardware" does and does not perform.

- Early prenatal or postnatal experiences and exposures influence long-term outcomes by chemically altering the structure of genes.
- The brain is particularly responsive to experiences and environments during early development, which influences how well or poorly its architecture matures and functions.
- Modification of the epigenome caused by stress during fetal and child development affects how well or poorly we respond to stress as adults and can result in increased risk of adult disease.
In addition to adverse experiences, a wide variety of chemicals, nutrients, and drugs are also capable of modifying the epigenome for long-lasting effects on gene expression.

Adverse fetal and early childhood experiences can—and do—lead to physical and chemical changes in the brain that can last a lifetime.

The documented effects of toxic stress in creating negative epigenetic adaptations demonstrate the urgent need to alleviate sources of significant adversity as early as possible in the lives of children who live in threatening environments.

Certain epigenetic changes in humans can be transferred across generations, thereby underscoring important, long-term implications for treatment, and why treatment should be family centered rather than child focused. We must strive to positively impact the circumstances in which young children are raised.
Range of Adaption

Trauma exceeds an individual’s ability to adapt

Loss of Range, less adaptability and increased rigidity

New Range of Adaption

Emotional Baseline or the ZERO point of emotional arousal
What ACEs Look Like?
Two Categories of ACEs

1) Growing up (prior to age 18) in a household with abuse:

- Recurrent physical abuse
- Recurrent emotional abuse
- Sexual abuse
- Emotional or physical neglect

https://aces too high.com/got-your-ace-score/
Two Categories of ACEs, cont.

2) Growing up with Household Dysfunction:

- Alcohol or drug abuser
- Incarcerated household member.
- Someone chronically depressed, suicidal, institutionalized or mentally ill
- Family and intimate partner violence.
- One or no parents.
Why is This Important?

Because ACEs are:

- Surprisingly common
- Occur in clusters
- Basis for common public health problems
- Strong predictors of later social functioning, well-being, health risks, disease, and death
Question

How do you see ACEs manifested in kids and families in your community?
ACEs Often Last a Lifetime . . . But They Don’t Have To

- Healing can occur
- The cycle can be broken
- Safe, stable, nurturing relationships heal parent and child
Additional Resources

http://az.pbslearningmedia.org/resource/488b10f6-b60f-4314-a56b-a7ab9d82cb22/ace-adverse-childhood-experiences/

https://www.youtube.com/watch?v=jYyEEMlMMbo&list=UUjp1JGSu3eMboGjEAXxZt3g&index=5
What’s Missing?

- Deficits versus strength-based perspective.
- Is everyone’s trauma presented in Dr. Filettis 10 questions? How would you feel if yours was not on the survey?
- Trauma does not require violence or even abuse to occur, it simply requires that the threat response system be continually and repeatedly activated.
- We need more than just Scarey Surveys, we need trauma-informed care.
Other things to consider (paradigm shift):

• Reframing Mental Health Diagnosis: http://www.nimh.nih.gov/about/director/2013/transforming-diagnosis.shtml
• The most important lesson from 83,000 brain scans: https://www.youtube.com/watch?v=esPRsT-Imw8
• Remember, there is often a 20 year gap between the latest research and best practices!
Protective Factors:

Protective Factors: Original Language
1. Enhance Parental Resilience
2. Develop Social Connections
3. Build Knowledge of Parenting and Child Development
4. Offer Concrete Support in Times of Need
5. Foster Social and Emotional Competence
6. Promote Healthy Parent-Child Relationships

Protective Factors: Everyday Language
1. Be Strong & Flexible
2. Parents Need Friends
3. Being a Great Parent Is Part Natural & Part Learned
4. We All Need Help Sometimes
5. Parents Need to Help Their Children Communicate
6. Give Your Children the Love & Respect They Need
Circle of Courage

https://www.youtube.com/watch?v=MoOXeFZgzhI
Ways to Inoculate your Children against ACEs

- Threat Reaction (Cortisol, Adreneline) vs. Learned Response (Oxytocin)

http://postinstitute.com/blog/2010/12/03/oxytocin-video-session-2/
Teach First According to the Child’s Emotional Age


*Here’s the big idea. What if we taught children first from their emotional age and then forward, regardless of age? Whether they are chronologically eight, twelve, or sixteen, if they are emotionally three, or four, maybe five, what if that’s where we started them? Learning the same things a five year old would be taught and then advancing them as they progressed?*
Preventative and Proactive Practices for Children and Adults

- Stress Color Wheel:
  - How full is your stress cup?
  - What are your triggers?
- Circles of Support
  - What/Who are your supports?
  - Flow of support?
  - Quality of Support:
- Emotional Recognition and Empathy
Trauma Informed Care

- The Post Institute [www.thepostinstitute.com](http://www.thepostinstitute.com)
- Trauma Sensitive Schools: [https://traumasensitiveschools.org/tlpi-publications/](https://traumasensitiveschools.org/tlpi-publications/)
- Circle of Courage Institute [http://circleofcourageinstitute.org](http://circleofcourageinstitute.org)
- Reclaiming Children and Youth Journal [http://www.reclaimingjournal.com](http://www.reclaimingjournal.com)
- Reclaiming Youth International [http://www.reclaiming.com](http://www.reclaiming.com)
- Starr Commonwealth [http://www.starr.org](http://www.starr.org)
Resources for Healing

- Forgiveness Tree Rituals [https://asu.useed.net/projects/98/home](https://asu.useed.net/projects/98/home)
  - ~~"The health humanities offer a formidable remedy for what ails contemporary psychiatry because it expressly explores the human side of medicine.~~
  - Poets, musicians, and artists have been contemplating suffering for longer than psychiatrists and have much to teach. They also give permission to rediscover the Art in what we do and to fully imagine what makes our work beautiful. If psychiatry is about the brain, why not use both sides of it?"~~

Mindfulness and Meditation
https://www.youtube.com/watch?v=RVA2N6tX2cg

What I find remarkable about this video is how well the children appear to understand the neuro-physiological processes that they are experiencing. My hypothesis is based on the idea that our developmental needs drive our behavior and therefore our learning processes.

I often break this down for parents and teachers into 3 things that children are driven by development to learn: 1) They are trying to become competent in their motor skills (i.e. they need to move around); 2) They are trying to navigate the world of emotions (i.e. all learning begins at the emotional level); 3) They need to learn to use language to get their needs met (i.e. spoken language has a powerful emotional, cognitive and relational impact on a child's sense of competency.)

Thus, it makes sense that these children are so articulate at describing complex neuro-physiological processes, because young children are driven by their development to acquire this very knowledge.

Wow! Who are teachers and who are the students?

Adults have so much to learn.
**Additional resources:**

- **Building Adult Capabilities to Improve Child Outcomes: A Theory of Change**
  [https://www.youtube.com/watch?v=urU-a_FsS5Y](https://www.youtube.com/watch?v=urU-a_FsS5Y)

- **Center for the study of Social Policy:**

- **Films:**
  - [http://kpjrfilms.co/paper-tigers/host-a-screening/](http://kpjrfilms.co/paper-tigers/host-a-screening/)
  - [http://kpjrfilms.co/resilience/](http://kpjrfilms.co/resilience/)