Building Flourishing Communities

Understanding NEAR

Neuroscience
Epigenetics
Adverse Childhood Experiences
Resilience
NEAR science: a cluster of fields of study that include Neuroscience, Epigenetics, ACEs and Resilience …

The term NEAR science gives a better, holistic picture of a person’s experiences over his or her lifetime; it also incorporates resilience, which is an important factor in the outcomes of a person’s life.
HUMAN NERVOUS SYSTEM

Nervous system ORCHESTRATES BODY FUNCTIONS & PERCEPTIONS

Neuroscience HELPS US UNDERSTAND WHY A C E s ARE SO POWERFUL

- Brain
- Spinal Cord
- Peripheral Nerves
- Single Nerve Cell
SYNAPTIC DENSITY

At Birth | Elementary Age | Puberty

Single Neuron
BRUCE PERRY’S MODEL OF THE BRAIN

- Thinking - Reason
- Feeling - Relate
- Reacting - Regulate
MALTREATMENT
0-3

SEXUAL ABUSE
Age 0-5

Amygdala
Hippocampus
POSITIVE FEELINGS
Perception
Attention

ADDICTION
Attention Problems
Mental Illness

Cerebellar Vermis
BRINGING BRAIN SCIENCE INTO THE LIBRARY

• Offer regulating activities/spaces
• Build a compassionate climate
• Ask what people need
• Practice self care
• Create a safe environment

• Consider reasons why patrons violate library rules i.e. bring books back damaged, talk loudly on the phone, or different ways to respond??
Early Adversity Increases Physical, Mental, Behavioral Problems, Scientists Report

Centers for Disease Control & Prevention, Kaiser Permanente Study

Over 17,000 study participants

The ACE Study confirms, with scientific evidence, that adversity early in life increases physical, mental and behavioral problems later in life.

Dr. Robert Anda & Dr. Vincent Felitti
Investigators
Adverse Childhood Experiences Study

- Largest Study of its Kind
- Over 17,000 participants
- Both Retrospective and Prospective
- Over 100 Peer-Reviewed Journal Articles
- Shifting the Paradigm
- Helps Us Understand Drivers of Population Health and Wellbeing

Death

Early Death

Disease, Disability, and Social Problems

Adoption of Health-risk Behaviors

Social, Emotional, & Cognitive Impairment

Adverse Childhood Experiences

Conception

Whole Life Perspective

Neurodevelopment & Epigenetic Influences
Adverse Childhood Experiences ARE COMMON

Household Dysfunction
- Substance Abuse  27%
- Parental Sep/Divorce  23%
- Mental Illness  17%
- Battered Mothers  13%
- Criminal Behavior  6%

Neglect
- Emotional  15%
- Physical  10%

Abuse
- Emotional  11%
- Physical  28%
- Sexual  21%

TOTAL 10 ACEs
ACE Score and Health Problems

% with Health Problems

Dose-Response Relationship

0 ACE  1 ACE  2 ACEs  3 ACEs  4 ACEs  <5 ACEs
<table>
<thead>
<tr>
<th>EXAMPLES OF ACE-ATTRIBUTABLE PROBLEMS</th>
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<tbody>
<tr>
<td>Alcoholism &amp; Alcohol Abuse</td>
</tr>
<tr>
<td>Chronic Obstructive Pulmonary Disease</td>
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<tr>
<td>Coronary Heart Disease</td>
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<tr>
<td>Depression</td>
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<td>Drug Abuse &amp; Illicit Drug Use</td>
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<td>Fetal Death</td>
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<td>Intimate Partner Violence</td>
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<td>Liver Disease</td>
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<td>Mental Health Problems</td>
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<td>Obesity</td>
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<td>Sexual Behavior Problems</td>
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<td>Smoking</td>
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<td>Unintended Pregnancy</td>
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<td>Violence</td>
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<td>Workplace Problems</td>
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Population Attributable Risk

- Drinking & driving past 30 days: 45%
- Cancer: 24%
- Cardiovascular disease: 26%
- Alcoholism: 65%
- Chronic depression: 41%
- Currently smoking: 31%
- High risk for HIV: 15%
- Diabetes (insulin): 17%
- >3 falls require treatment in 90 days: 22%

Controls: gender, age, income, education, race-ethnicity
Pathways to Poverty and Homelessness

Adaptations To Toxic Stress
- Cognition
- Attention
- Behavior

Risks
- Academic Failure
- Early Substance Use/Abuse
- Kicked Out
- Dropped Out
- Adult Adversity

Productivity
- Low Wage Jobs
- Worker Injury/Illness
- Disabilities
- Chronic Health Problems
PAUSE AND PONDER

• How will knowing this information about ACEs change the way you interact with library patrons and staff?
We have the power to shift the dynamics that lead to high ACE scores.
“Nurturing the healthy development of these protective systems affords the most important preparation or ‘inoculation’ for overcoming potential threats and adversities in human development. Similarly, damage or destruction of these systems has dire consequences for the positive adaptive capacity of individuals.”

*Ann Masten, 2009*
PAUSE AND PONDER

• Think about how you’ve been able to weather life's storms. What helped you to build your resilience?
  • Personal attributes?
  • Relationships?
  • Community activities, spirituality?
Attachment & Belonging

RELATIONSHIPS with caring and competent people are VITAL contributors to resilience & recovery
Culture Change

We create culture in our moment by moment interactions with one another
Community, Faith & Cultural Processes

foster thriving communities

WE
“Social support is the most powerful protection against becoming overwhelmed by stress and trauma. The critical issue is reciprocity: being truly heard and seen by the people around us, feeling that we are held in someone else’s mind and heart.”

Van der Kolk, 2014, The Body Keeps the Score,
PAUSE AND PONDER

• Think about a challenging patron:
  • Imagine what adversities that person may have faced
  • Recognize the amount of strength and resiliency that person must possess to make it into the library and continue to move through life.
  • What ways can you respond that will enhance their resilience?
BUILDING RESILIENCE IN LIBRARIES

- Put on your trauma lens
- Build relationships
- Accentuate the positive
- Be Inclusive
- Offer resources, supports and access to local services
- Consider additional staff training i.e. BFC-VT, Mental Health First Aid
UNLESS someone like you cares a whole awful lot, nothing is going to get better. It’s not.

— The Lorax

WHAT IS ONE THING YOU WILL DO AS A RESULT OF WHAT YOU HEARD TODAY?
SOURCES

• Self healing Communities – Laura Porter, Kimberly Martin, PhD. & Rob Anda, MD, MS
• Bruce Perry www.BDPerry.com