Normative Adolescent Development

A Refresher
Developmental Domains

Cognitive

Emotional

Psychosocial

Brain

Physical/Biological
Brain Development

- Developmental Plasticity
- Order of development
- Timing of development
Developmental Plasticity

Graph showing the brain's ability to change in response to experiences and the amount of effort such change requires over different ages from birth to 70.
Order of Development

Exhibit 1 – Functions of Brain Regions

- **Cortex**
  - Abstract Thought
  - Concrete Thought
  - Affiliation
  - Attachment
- **Limbic**
  - Sexual Behavior
  - Emotional Reactivity
  - Motor Regulation
- **Midbrain**
  - Arousal
  - Appetite/Satiety
  - Sleep
- **Brainstem**
  - Blood Pressure
  - Heart Rate
  - Body Temperature

Higher

Lower

Bruce D. Perry, M.D., Ph.D.
www.ChildTrauma.org
Timing of Development

- Limbic regions
- Prefrontal cortex

Level of Functional Development vs. Age
Cognitive vs. Psychosocial Development

![Graph showing the comparison between Cognitive and Psychosocial Development over age]

- Logical Reasoning
- Psychosocial Maturity

Age: 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25
Diminished Adolescent Decision Making

- Lack of impulse control
- Sensation seeking
- Short term orientation
- Highly Aroused
- Immature emotional regulation
- Decision making
U.S. Supreme Court decisions have affirmed a differential jurisprudence for youth. Youth are:

- immature and reckless
- more susceptible to peer pressure
- developing and therefore transient by nature

Roper v. Simmons (2005)

“...because juveniles have lessened culpability they are less deserving of the most severe punishments.”

Court says that youth “often lack the experience, perspective, and judgment to recognize and avoid choices that could be detrimental to them…”

Miller v. Alabama (2012)
“The penalty when imposed on a teenager, as compared to an older person, is therefore “the same ... in name only.””
Hallmarks of Youth

• Three key characteristics differences between youth and adults recognized by SCOTUS
  • Objective immaturity
  • Vulnerability
  • Capacity for change

• Common foundations:
  • Developmental plasticity
  • Order of development
  • Timing of development
Trauma Overview
### Trauma Defined

- **Frequency of stress:**
  - Acute
  - Chronic
  - Generational

- **Degree of stress:**
  - Positive
  - Tolerable
  - Toxic

- Trauma is a type of stress
  - Chronic toxic stress
  - ACEs are illustrative not exhaustive

- Secondary/Vicarious Trauma
Prior to your 18th birthday, were you often or very often by someone in your household:

- Physical abused
- Emotional abused
- Sexual abused
- Physical neglected
- Emotional neglected
- Domestic violence in the household
- Incarcerated household member
- Biological parent lost to divorce, abandonment, or other reason
- Household alcoholism or street drug use
- Household member depression/mental health/suicide attempts
## ACEs Study

<table>
<thead>
<tr>
<th>ACE Score</th>
<th>Women</th>
<th>Men</th>
<th>Total</th>
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<tbody>
<tr>
<td>0</td>
<td>34.5%</td>
<td>38.0%</td>
<td>36.1%</td>
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<td>1</td>
<td>24.5%</td>
<td>27.9%</td>
<td>26.0%</td>
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<tr>
<td>2</td>
<td>15.5%</td>
<td>16.4%</td>
<td>15.9%</td>
</tr>
<tr>
<td>3</td>
<td>10.3%</td>
<td>8.6%</td>
<td>9.5%</td>
</tr>
<tr>
<td>4+</td>
<td>15.2%</td>
<td>9.2%</td>
<td>12.5%</td>
</tr>
</tbody>
</table>
ACEs Study (cont.)

- Health risk factors and poor health outcomes increase in a strong and graded fashion

- Health risk factors (4+ ACEs):
  - 2x as likely to smoke cigarettes
  - 4x as likely to suffer depression
  - 7x as likely to be an alcoholic
  - 10x as likely to inject drugs
  - 12x as likely to attempt suicide

- Poor health outcomes (4+ ACEs):
  - 2x as likely to have ischemic heart disease
  - 2x as likely to have cancer
  - 4x as likely to have chronic bronchitis
<table>
<thead>
<tr>
<th>Subsequent ACEs Research</th>
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<tbody>
<tr>
<td>• Chronic obstructive pulmonary disease</td>
</tr>
<tr>
<td>• Fetal death</td>
</tr>
<tr>
<td>• Liver disease</td>
</tr>
<tr>
<td>• Risk for intimate partner violence</td>
</tr>
<tr>
<td>• STDs</td>
</tr>
<tr>
<td>• Unintended pregnancies</td>
</tr>
<tr>
<td>• Adolescent pregnancy</td>
</tr>
<tr>
<td>• Incarceration</td>
</tr>
<tr>
<td>• Poor educational outcomes</td>
</tr>
<tr>
<td>• Poor employment outcomes</td>
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</tbody>
</table>
ACE Pyramid

Mechanisms by Which Adverse Childhood Experiences Influence Health and Well-being Throughout the Lifespan
The Impact of Trauma
The Stress Response System

Homeostasis

Allostasis
The Neurological Impact of Trauma

Healthy Brain
This PET scan of the brain of a normal child shows regions of high (red) and low (blue and black) activity. At birth, only primitive structures such as the brain stem (center) are fully functional; in regions like the temporal lobes (top), early childhood experiences wire the circuits.

An Abused Brain
This PET scan of the brain of a Romanian Orphan, who was institutionalized shortly after birth, shows the effect of extreme deprivation in infancy. The temporal lobes (top), which regulate emotions and receive input from the senses, are nearly quiescent. Such children suffer emotional and cognitive problems.
Impact on DNA

- Telomeres (protective tips)
- Paired Strands of DNA
- Telomeres
The Generational Impact

Millennial  
Born 1981-96

Gen X  
Born 1965-80

Boomer  
Born 1946-64

Silent  
Born 1928-45
Behavioral Manifestations of Childhood Trauma

- Hypervigilance
- Hyperarousal
- Diminished Executive Functioning
- Increased risk of anxiety, depression, PTSD
(Even More) Diminished Adolescent Decision Making

- Sensation seeking
- Lack of impulse control
- Super short term orientation
- Immature emotional regulation
- Hyperarousal
- Hypervigilance

Decision making
Resiliency Overview
Resiliency Defined

• The process of adapting well in the face of adversity, trauma, tragedy, threats or significant sources of stress — such as family and relationship problems, serious health problems or workplace and financial stressors.

• It means "bouncing back" from stressful experiences.
Keys to Resiliency

- Healthy Mind/Body
- Positive Mindset
- Protective Community
ACES Critiqued
Examples of Extended ACES

- Have someone close to you die or move away permanently?
- Observed someone be seriously injured or killed?
- Victimization in household by someone other than parent?
- Been bullied on social media or in person?
- Been homeless or coach surfed?
- Been treated unfairly because of race/ethnicity/sexual orientation or identity
Prevalence by Race/Income/Immigration
Trauma and Social Location

Adverse Childhood Experiences
- Disease, Disability, and Social Problems
- Adoption of Health-risk Behaviours
- Social, Emotional, & Cognitive Impairment
- Adverse Childhood Experiences

Historical Trauma/Embodiment
- Early Death
- Burden of disease, distress, criminalization, stigmatization
- Coping
- Allostatic Load, Disrupted Neurological Development
- Complex Trauma/ACE
- Race/Social Conditions/Local Context
- Generational Embodiment/Historical Trauma

*http://www.cdc.gov/violenceprevention/acestudy/pyramid.html

RYSE 2015
Prevalence of Protective Factors

- Study exploring intersection of ACEs and protective Factors on child well being
  - 2011-12 National Survey of Children’s Health
  - Limitations => More research is needed but instructive

- Key Findings:
  - More ACEs = Less likely to enjoy positive well-being
  - More protective factors significantly related to positive well-being
  - Greater number of ACEs inversely related to most protective factors (exceptions out of home mentor and activities)
Trauma-Responsive Lawyering for Youth Defenders
Prevalence of Trauma in Justice-Involved Youth (FL)
Prevalence of Trauma in Justice-Involved Youth (FL)
Trauma & Delinquency

**Delinquency Risk Factors**
- **Community**
  - Neighborhood violence
  - Poverty
- **Family**
  - Abuse and neglect
  - Intrafamily violence
  - Parental psychopathology
  - Familial antisocial behavior
  - Divorce
- **Individual**
  - Hypervigilance
  - Hyperarousal
  - Poor impulse control
  - Poor cognitive development

**Adverse Childhood Experiences**
1. Physically abused
2. Emotionally abused
3. Sexually abused
4. Physically neglected
5. Emotionally neglected
6. Loss of a loved one through divorce, abandonment, or other loss
7. Intrafamily violence
8. Household substance abuse
9. Household mental health issues
10. Household criminality

**Manifestations of trauma**
- Hypervigilance
- Hyperarousal
- Poor executive functioning
Ethical & Practical Concerns

1. Know Your Role
2. Careful with Labeling
3. Always Be Strategic
1. Identify
   • Listen
   • Records (medical, school, mental health)
   • Court-ordered evaluations
   • Home visits
   • Ask (sometimes – be careful in how you ask)
Trauma-Responsive Defense

1. Identify

2. Reframe
   - Overall case frame
   - Individual behavior
   - Diagnosis
Trauma-Responsive Defense

1. Identify

2. Reframe

3. Litigate
   • Mens rea
   • Self-defense
   • Voluntariness of waiver/confessions
   • Placement decisions
Trauma-Responsive Defense

1. Identify
2. Reframe
3. Litigate
4. Mitigate
   - Reframing victimhood
   - Youth can change (and heal)
   - Do not further harm
Trauma-Responsive Defense

1. Identify
2. Reframe
3. Litigate
4. Mitigate
5. Support
   - Remember your role
   - Evidence based, trauma informed practices
Trauma-Responsive Defense

1. Identify
2. Reframe
3. Litigate
4. Mitigate
5. Support
6. Reform
Keys to Healing

- National Council of Juvenile and Family Court Judges recognizes that traumatized kids need:
  - Safety
  - Self-determination
  - Social supports

- Overlap between healing and building resilience
Healthy Mind/Body

- Counteracting physiological and neurological impacts of stress
- Impact of meditation = helps increase mindfulness
  - Physiological effects
  - Attention regulation
  - Emotional regulation
  - Positive change in mindset
Positive Mindset

Wêmer research:

- Autonomous
- Independent
- Positive social orientation
- Sought out new experiences
- Used skills they had effectively
- **KEY: Internal locus of control**

- Resilient youth had a Growth Mindset
Growth Mindset
Growth Mindset

- Mindset: _____________ can be developed
- Mindset leads to a desire to improve and leads to a tendency to:
  - Seek challenges
  - Push through obstacles
  - See effort as critical to mastery
  - Learn from criticism
  - Learn from success of others
Fixed Mindset

• Mindset: ______________ is static

• Mindset leads to a desire to appear successful and leads to a tendency to:
  • Avoid challenges
  • Get defensive and/or give up quickly
  • Perceive effort as fruitless
Promoting Resilience

• Why Does Growth Mindset Promote Resilience

• Control over:
  • Challenge
  • Potential
  • Self-image

• Growth Mindset reframes stress in a positive manner
Identifying the System’s Fixed Mindset

• Adult imposed conditions
• Compliance-driven
• Deficits-focused
• Labeling (delinquent, respondent, bodies, etc.)
Developing a Growth Mindset

- Praise wisely
  - Hard work/effort
  - Strategy
  - Process
  - Perseverance

- Adopting “Yet” and “Not Yet” into our vocabulary

- Teaching brain development and ability to grow
Protective Community

- Buffering theory
  - Protective community helps the individual interpret the stress as less intense
  - Protective community helps the individual respond and recovery
Key Takeaways

- Trauma has substantial and far-reaching impacts on adolescent development that further diminish decision-making abilities.
- Like all youth, traumatized youth have an incredible capacity for healing and change with the right support.
- Use this information strategically within the confines of client’s expressed interests.