Overview

- Provide an understanding of the ACES study.
- Explain the link between mental health, physical health outcomes and epigenetics.
- Discuss the impact of child abuse and the foster care system.
- Explain the link between racism, microaggressions, trauma and toxic stress on parents of African descent and their infants.
- Discuss protective factors to adverse childhood experiences.

What is ACES

- Study by Dr. Vincent Felitti in collaboration with Dr. Robert Anda of the Centers for Disease Control.
- Conducted in San Diego California using data gathered by Kaiser Permanente.
- Study identified 10 categories of risk experienced before the age of eighteen.
- Emotional Abuse, Physical Abuse, Sexual Abuse, Physical Neglect, Emotional Neglect, Substance Abuse in the household, Mental Illness in the household, Mother treated violently, Criminal behavior in the household, Divorce or Separation.
What you should know about ACES
produced by KPJR Films, and edited by Jen Bradwell

The ACE (Adverse Childhood Experience) Study

Female Participants
13% Emotional Abuse
21% Physical Abuse
24.7% Sexual Abuse

Male Participants
7.6% Emotional Abuse
29.9% Physical Abuse
16% Sexual Abuse

17,000 Participants Surveyed

Aces High?
The higher the number of identified ACES, the worse the outcomes.

Mental Health Conditions
including a higher risk for Depression, Anxiety, PTSD, Hallucinations and Suicide

Physical Health Conditions
including Cardiovascular Disease, Diabetes, Emphysema, Cancer, Obesity, Autoimmune disease, Fetal death

Source: http://www.cdc.gov/ace/prevalence.htm
Relations between ACES and Categories of Abuse

**ACES DEFINITION**
- Physical Neglect
- Emotional Neglect
- Physical Abuse
- Sexual Abuse
- Emotional Abuse
- Mother treated violently
- Substance by parent
- Incarcerated parent
- Household mental illness
- Parental separation or divorce

**DCFS AREA OF CONCERN**
- Physical Neglect
- Emotional Neglect
- Physical Abuse
- Sexual Abuse
- Emotional Abuse
- Intimate partner violence
- Substance by parent
- Incarcerated parent
- Parental mental illness

Statistics on Children in Foster Care by Race/Ethnicity

**California**

<table>
<thead>
<tr>
<th>Race and Hispanic Origin</th>
<th>California</th>
</tr>
</thead>
<tbody>
<tr>
<td>White, alone, percent</td>
<td>31.2</td>
</tr>
<tr>
<td>Black or African American alone, percent</td>
<td>11.5</td>
</tr>
<tr>
<td>American Indian and Alaska Native, percent</td>
<td>1.1</td>
</tr>
<tr>
<td>Asian, percent</td>
<td>2.7</td>
</tr>
<tr>
<td>Native Hawaiian and Other Pacific Islander, percent</td>
<td>1.0</td>
</tr>
<tr>
<td>Two or More Races, percent</td>
<td>0.6</td>
</tr>
<tr>
<td>Hispanic or Latino, percent</td>
<td>29.7</td>
</tr>
<tr>
<td>White, not Hispanic or Latino, percent</td>
<td>32.3</td>
</tr>
</tbody>
</table>

**Los Angeles**

<table>
<thead>
<tr>
<th>Race and Hispanic Origin</th>
<th>Los Angeles County</th>
</tr>
</thead>
<tbody>
<tr>
<td>White, alone, percent</td>
<td>31.4</td>
</tr>
<tr>
<td>Black or African American alone, percent</td>
<td>11.5</td>
</tr>
<tr>
<td>American Indian and Alaska Native, percent</td>
<td>1.1</td>
</tr>
<tr>
<td>Asian, percent</td>
<td>2.7</td>
</tr>
<tr>
<td>Native Hawaiian and Other Pacific Islander, percent</td>
<td>1.0</td>
</tr>
<tr>
<td>Two or More Races, percent</td>
<td>0.6</td>
</tr>
<tr>
<td>Hispanic or Latino, percent</td>
<td>29.3</td>
</tr>
<tr>
<td>White, not Hispanic or Latino, percent</td>
<td>32.1</td>
</tr>
</tbody>
</table>

Source: www.kidsdata.org

Census Data of Californians by Race/Ethnicity

<table>
<thead>
<tr>
<th>Race and Hispanic Origin</th>
<th>California</th>
</tr>
</thead>
<tbody>
<tr>
<td>White, alone, percent</td>
<td>31.4</td>
</tr>
<tr>
<td>Black or African American alone, percent</td>
<td>11.5</td>
</tr>
<tr>
<td>American Indian and Alaska Native, percent</td>
<td>1.1</td>
</tr>
<tr>
<td>Asian, percent</td>
<td>2.7</td>
</tr>
<tr>
<td>Native Hawaiian and Other Pacific Islander, percent</td>
<td>1.0</td>
</tr>
<tr>
<td>Two or More Races, percent</td>
<td>0.6</td>
</tr>
<tr>
<td>Hispanic or Latino, percent</td>
<td>29.3</td>
</tr>
<tr>
<td>White, not Hispanic or Latino, percent</td>
<td>32.1</td>
</tr>
</tbody>
</table>

Source: www.kidsdata.org
Epigenetics

Literally means “in addition to changes in genetic sequence”

Any process that alters gene activity without changing the DNA sequence and leads to modifications that can be transmitted to daughter cells.


Race/Ethnicity: Black (Nationally-13.8% California-6.5% per census)

<table>
<thead>
<tr>
<th>Location</th>
<th>2011</th>
<th>2012</th>
<th>2013</th>
<th>2014</th>
<th>2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>California</td>
<td>10,031</td>
<td>10,222</td>
<td>10,423</td>
<td>10,868</td>
<td>10,990</td>
</tr>
<tr>
<td>Contra Costa County</td>
<td>691</td>
<td>732</td>
<td>777</td>
<td>893</td>
<td>913</td>
</tr>
<tr>
<td>Fresno County</td>
<td>691</td>
<td>732</td>
<td>777</td>
<td>893</td>
<td>913</td>
</tr>
<tr>
<td>Los Angeles County</td>
<td>4,908</td>
<td>5,585</td>
<td>5,695</td>
<td>5,775</td>
<td>5,928</td>
</tr>
<tr>
<td>Orange County</td>
<td>1,998</td>
<td>2,075</td>
<td>2,183</td>
<td>2,427</td>
<td>2,470</td>
</tr>
<tr>
<td>Riverside County</td>
<td>1,002</td>
<td>1,057</td>
<td>1,158</td>
<td>1,291</td>
<td>1,286</td>
</tr>
<tr>
<td>San Bernardino County</td>
<td>575</td>
<td>637</td>
<td>681</td>
<td>868</td>
<td>853</td>
</tr>
<tr>
<td>State Total</td>
<td>21,350</td>
<td>23,014</td>
<td>24,246</td>
<td>26,349</td>
<td>26,825</td>
</tr>
</tbody>
</table>

Race/Ethnicity: Hispanic/LatinX (Nationally-24.4% California-39.1% per Census)

<table>
<thead>
<tr>
<th>Location</th>
<th>2011</th>
<th>2012</th>
<th>2013</th>
<th>2014</th>
<th>2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>California</td>
<td>47,464</td>
<td>49,214</td>
<td>49,014</td>
<td>47,310</td>
<td>48,370</td>
</tr>
<tr>
<td>Contra Costa County</td>
<td>1,600</td>
<td>1,650</td>
<td>1,700</td>
<td>1,800</td>
<td>1,900</td>
</tr>
<tr>
<td>Fresno County</td>
<td>2,200</td>
<td>2,250</td>
<td>2,300</td>
<td>2,400</td>
<td>2,500</td>
</tr>
<tr>
<td>Los Angeles County</td>
<td>10,000</td>
<td>10,100</td>
<td>10,200</td>
<td>10,300</td>
<td>10,400</td>
</tr>
<tr>
<td>Orange County</td>
<td>8,000</td>
<td>8,000</td>
<td>8,000</td>
<td>8,000</td>
<td>8,000</td>
</tr>
<tr>
<td>Riverside County</td>
<td>4,900</td>
<td>4,900</td>
<td>4,900</td>
<td>4,900</td>
<td>4,900</td>
</tr>
<tr>
<td>San Bernardino County</td>
<td>5,500</td>
<td>5,500</td>
<td>5,500</td>
<td>5,500</td>
<td>5,500</td>
</tr>
<tr>
<td>State Total</td>
<td>72,464</td>
<td>74,214</td>
<td>74,014</td>
<td>72,310</td>
<td>73,370</td>
</tr>
</tbody>
</table>

Source: https://www.childabuseinfo.org/sccisrc/childabuse/2017/05/is-epigenetics-inherited.html

Illustration by Jude Buffum
Generational Impact of Epigenetics
ACES experienced by one generation can impact the well-being of future generations.
The Dutch Hunger Winter, more at risk for diabetes, obesity and schizophrenia.
Impact of slavery on African-Americans

Synaptic Density Pruning
Children inherit 23,000 genes from their parents (Structural Genome).
The least experienced connections withdraw around the time of puberty.
You use it or lose it!

Toxic Stress
Prolonged activation of these response systems in the absence of protective relationships
Toxic stress can disrupt normal development.
Children who are exposed to toxic stress in the severe case may never catch up.
They are at risk for developing mental health issues and difficulty maintaining positive relationships.
Toxic Loop

Source of Image: https://www.setinc.org/SET/How-We-Do-It/Science-With-Compassion/Science.htm

Source: Rethinking the Brain, Families and Work Institute, Rinna Shore, 1997

Source: http://harvardmagazine.com/2017/05/is-epigenetics-inherited

Illustration by Jude Buffum
Immediate Impact of Trauma
Can interfere with the child’s normal healthy attachment to caregivers.
Overwhelming sense of fear, helplessness, horror and a bodily reaction: increased heart rate, shaking, dizzy, rapid breathing, release of stress hormones “fight or flight” response.

Is it TRAUMA or SOMETHING ELSE???
- Signs that your client has possibly experienced TRAUMA
  - Anger/Destructive
  - Disruptive
  - Yells
  - Talks nonstop/mutism
  - Non-Compliant
  - Cries/Calls out
  - Can’t sit still
  - Runs
  - Can’t Focus
  - Developmental delays

Philadelphia ACES Study
- 5 Newly identified urban ACE indicators: Experiencing racism, witnessing violence, living in an unsafe neighborhood, living in foster care, or witnessing bullying
- 40% White, 44% Black, 3% Latino, 3% Asian, 3% Biracial
- Behavior and Health Outcomes: worse with higher ACE scores and more adverse if lower income as well.
- More Sexual partners
- More Substance use
- More Diabetes
- More Obesity
- More Asthma
- More Mental illness
- More Suicide attempts
- More Smoking, more Cancer
- 2 of 5 adults experienced violence
- 1/3 experienced racism
- 1/10 reported feeling unsafe

Source Image: http://www.slvtucasa.net/understanding-trauma-responses
Philadelphia ACES Study
- 5 Newly identified urban ACE indicators: Experiencing racism, witnessing violence, living in an unsafe neighborhood, living in foster care, or witnessing bullying
- 40% White, 44% Black, 3% Latino, 3% Asian, 3% Biracial
- Behavior and Health Outcomes: worse with higher ACE scores and more adverse if lower income as well.
- More Sexual partners
- More Substance use
- More Diabetes
- More Obesity
- More Asthma
- More Mental illness
- More Suicide attempts
- More Smoking, more Cancer
- 2 of 5 adults experienced violence
- 1/3 experienced racism
- 1/10 reported feeling unsafe

Source Image: http://www.slvtucasa.net/understanding-trauma-responses
Perceived Discrimination

- **Racism**: a belief that race is the primary determinant of human traits and capacities and that racial differences produce an inherent superiority of a particular race.
- **Implicit Bias**: relatively unconscious attribution of particular qualities to a member of a certain social group.
- **Microaggressions**: a comment or action that subtly and often unconsciously or unintentionally expresses a prejudiced attitude toward a member of a marginalized group (such as a racial minority).

Perceived Discrimination decreases the quality of mother child relationships

<table>
<thead>
<tr>
<th>Maternal perceived racial discrimination</th>
<th>Maternal Stress (life events, financial strain, job stress, etc)</th>
<th>Level of maternal psychological functioning (Rates of anxiety and depression)</th>
<th>Nurturing mother/child relationship</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low</td>
<td>Low</td>
<td>Low</td>
<td>High</td>
</tr>
<tr>
<td>No</td>
<td>High</td>
<td>High</td>
<td>Low</td>
</tr>
<tr>
<td>Yes</td>
<td>High</td>
<td>Higher</td>
<td>Higher</td>
</tr>
</tbody>
</table>

Adapted from (Jory et al., Journal of Marriage and Family 2001)

How does this all relate to ACES

- Perceived discrimination, Epigenetics and Toxic stress in people of African descent have lead to an increased exposure of our infants to adverse childhood experiences.
- Thus, leading to disproportionate interactions with DCFS and entry into the foster care system.

https://learn.genetics.utah.edu/content/epigenetics/rats/
How do we stop the cycle?

- Protective factors
  - Parental resilience
  - Social connections
  - Knowledge of parenting and child development
  - Concrete supports in times of need
  - Extended Family Caring

- Access to adequate medical care/informed health professionals
- Ethnic/cultural pride
- Children’s social and emotional health
- Communities and social systems that support health and development, nurture human capital
- Spirituality/Religiosity

Protective Factors Cont.

- Home Visiting with pregnant Women and Families of Newborns
- Parent Training Programs such as PCIT, PPP, etc.
- Intimate Partner Violence Prevention
- Access to treatment for Mental Health and Substance Abuse

- Adequate Income to support lower income families
- Responsive, Supportive Professionals
- Trauma Informed Systems
- High Quality Childcare

InBrief: The Science of Resilience
Center on the Developing Child at Harvard University
In Brief: How Resilience is Built

In brief: How Resilience is Built

Center on the Developing Child at Harvard University

There is always hope!

Even the negative consequences of ACEs, perceived discrimination, epigenetics, and toxic stress can be ameliorated by nurturing, supportive, competent adults who are able to intervene and provide support.

QUESTIONS?
References