Adverse Childhood Experiences

Liz Altay
An adverse childhood experience (ACE) describes a traumatic experience in a person’s life occurring before the age of 18.

The Ten Adverse Childhood Experiences

<table>
<thead>
<tr>
<th>Child</th>
<th>Parents / household</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical abuse</td>
<td>Mother treated violently</td>
</tr>
<tr>
<td>Sexual abuse</td>
<td>Household substance misuse</td>
</tr>
<tr>
<td>Emotional abuse</td>
<td>Household mental illness</td>
</tr>
<tr>
<td>Physical neglect</td>
<td>Parental separation or divorce</td>
</tr>
<tr>
<td>Emotional neglect</td>
<td>Incarcerated household member</td>
</tr>
</tbody>
</table>

Robust evidence base linking ACEs to severe negative health and social outcomes across the life course
## Questions to define health harming behaviours – The ACEs Score Calculator

<table>
<thead>
<tr>
<th>Adverse Childhood Experiences</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Parental separation</td>
<td>Were your parents ever separated or divorced?</td>
</tr>
<tr>
<td>Domestic violence</td>
<td>How often did your parents or adults in your home ever slap, hit, kick, punch, or beat each other up?</td>
</tr>
<tr>
<td>Physical abuse</td>
<td>How often did a parent or adult in your home ever hit, beat, kick, or physically hurt you in any way? This does not include gentle smacking for punishment</td>
</tr>
<tr>
<td>Verbal abuse</td>
<td>How often did a parent or adult in your home ever swear at you, insult you, or put you down?</td>
</tr>
<tr>
<td>Sexual abuse</td>
<td>How often did anyone at least 5 years older than you (including adults) ever touch you sexually?</td>
</tr>
<tr>
<td></td>
<td>How often did anyone at least 5 years older than you (including adults) try to make you touch them sexually?</td>
</tr>
<tr>
<td></td>
<td>How often did anyone at least 5 years older than you (including adults) force you to have any type of sexual intercourse (oral, anal, or vaginal)?</td>
</tr>
<tr>
<td>Mental illness</td>
<td>Did you live with anyone who was depressed, mentally ill, or suicidal?</td>
</tr>
<tr>
<td>Alcohol abuse</td>
<td>Did you live with anyone who was a problem drinker or alcoholic?</td>
</tr>
<tr>
<td>Drug abuse</td>
<td>Did you live with anyone who used illegal street drugs or who abused prescription medications?</td>
</tr>
<tr>
<td>Incarceration</td>
<td>Did you live with anyone who served time or was sentenced to serve time in a prison or young offenders' institution?</td>
</tr>
</tbody>
</table>

All ACE questions were preceded by the statement “While you were growing up, before the age of 18...”
ACEs study USA

### Adverse Childhood Experiences Are Common

**Household dysfunction:**
- Substance abuse: 27%
- Parental sep/divorce: 23%
- Mental illness: 17%
- Battered mother: 13%
- Criminal behavior: 6%

**Abuse:**
- Psychological: 11%
- Physical: 28%
- Sexual: 21%

**Neglect:**
- Emotional: 15%
- Physical: 10%
ACEs study USA

ACE Score and Teen Sexual Behaviors

- Intercourse by Age 15
- Teen Pregnancy
- Teen Paternity

ACE Score and the Prevalence of Severe Obesity (BMI ≥35)

The ACE Score and Drug Abuse

- Ever had a drug problem
- Ever addicted to drugs
- Ever injected drugs

ACEs, Smoking, and Lung Disease

- Early smoking initiation
- Current smoking
- COPD
ACEs study USA

The ACE Score and a Lifetime History of Depression

The ACE Score and the Prevalence of Attempted Suicide

ACE Score and the Risk of Being a Victim of Domestic Violence
ACEs - the Life Course

Adverse Childhood Experiences ACEs - The Life Course

Mend Broken Adults
£€€

Health & Social, Educational and Criminal Justice
Investment in Early Life

Build Stronger Children

ACEs Adverse Childhood Experiences

Pre-conception and Fetal Epigenetic effects

Disrupted Nervous, Hormonal and Immune Development

Social, Emotional and Learning Problems

Adopt Health Harming Behaviours and Crime

Non Communicable Disease, Disability, Social Problems, Low Productivity

Early Death

Environment e.g. Alcohol

Bella 2016
## ACEs Study - UK

<table>
<thead>
<tr>
<th>Outcome</th>
<th>All</th>
<th>Adverse Childhood Experience %</th>
<th>χ²trend</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>%</td>
<td>0</td>
<td>1</td>
<td>2to3</td>
</tr>
<tr>
<td><strong>Sexual Behavior</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Unintended teenage pregnancy (&lt;18 years)</td>
<td>5.5</td>
<td>2.9</td>
<td>5.6</td>
<td>8.3</td>
</tr>
<tr>
<td>Early sexual initiation (&lt;16 years)</td>
<td>16.8</td>
<td>10</td>
<td>19.4</td>
<td>23</td>
</tr>
<tr>
<td><strong>Substance use</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Smoking (current)</td>
<td>22.7</td>
<td>17.7</td>
<td>21.8</td>
<td>28.3</td>
</tr>
<tr>
<td>Binge drinking (current)</td>
<td>11.3</td>
<td>9.3</td>
<td>13.2</td>
<td>12.6</td>
</tr>
<tr>
<td>Cannabis use (lifetime)</td>
<td>19.5</td>
<td>12.2</td>
<td>21.5</td>
<td>27</td>
</tr>
<tr>
<td>Heroin or crack cocaine use (lifetime)</td>
<td>2.2</td>
<td>0.9</td>
<td>1.5</td>
<td>4</td>
</tr>
<tr>
<td><strong>Violence and criminal justice</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Violence victimization (past year)</td>
<td>5.3</td>
<td>2.4</td>
<td>4.2</td>
<td>10.7</td>
</tr>
<tr>
<td>Violence perpetration (past year)</td>
<td>4.4</td>
<td>2</td>
<td>3.6</td>
<td>8.7</td>
</tr>
<tr>
<td>Incarceration (lifetime)</td>
<td>7.1</td>
<td>3.1</td>
<td>8.1</td>
<td>10.2</td>
</tr>
<tr>
<td><strong>Diet, weight and exercise</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Poor diet (current)</td>
<td>15.6</td>
<td>13.3</td>
<td>15.9</td>
<td>18.3</td>
</tr>
<tr>
<td>Low physical exercise (current)</td>
<td>43</td>
<td>44.1</td>
<td>41.4</td>
<td>41.2</td>
</tr>
</tbody>
</table>
ACEs Study - UK

UK: Compared with no ACEs, those with 4+ ACEs were:

- 2x more likely to binge drink
- 3x more likely to be current smoker
- 5x more likely to have had sex under 16 years
- 7x more likely to be involved in recent violence
- 11x more likely to have used heroin or crack
- 11x more likely to have been incarcerated

INDEPENDENT OF POVERTY

If they had no ACEs problems could be reduced by:

- Smoking: 16%
- Early Sex: 33%
- Heroin/Crack: 59%
- Binge Drinking: 15%
- Violence: 60%

Aged 18-70 years

Bellis et al. 2014, n=3885
ACEs Study - UK

Individuals Never Diagnosed with a Major Disease by Age (%)

Major Diseases
- Cancer
- Stroke
- Type II Diabetes
- Cardio Vascular Disease
- Digestive/Liver Disease
- Respiratory Disease

Cumulative percentage never diagnosed with Major Illness

Differences remain after adjusting for Deprivation

Aged 18 to 69 years; (n = 3,885) Bellis et al, Journal of Public Health, 2014
# ACEs study - Hertfordshire, Luton & Northamptonshire

## How many adults have suffered each ACE?

### CHILD MALTREATMENT
- Verbal abuse: 23%
- Physical abuse: 14%
- Sexual abuse: 6%

### CHILDHOOD HOUSEHOLD INCLUDED
- Parental separation: 18%
- Domestic violence: 16%
- Mental illness: 11%
- Alcohol abuse: 11%
- Drug use: 4%
- Incarceration: 3%

For every 100 adults, 44 have suffered at least one ACE during their childhood and 9 have suffered 4 or more.

<table>
<thead>
<tr>
<th>0 ACEs</th>
<th>1 ACEs</th>
<th>2-3 ACEs</th>
<th>4+ ACEs</th>
</tr>
</thead>
<tbody>
<tr>
<td>56%</td>
<td>16%</td>
<td>17%</td>
<td>9%</td>
</tr>
</tbody>
</table>

Compared with people with no ACEs, those with 4+ ACEs are:

- 2 times more likely to currently binge drink or have a poor diet
- 3 times more likely to be a current smoker
- 4 times more likely to have had sex while under 10 years old or to have smoked cannabis
- 4 times more likely to have had or caused unintended teenage pregnancy
- 8 times more likely to have been a victim of violence in the last year or ever been incarcerated
- 10 times more likely to have been a perpetrator of violence in the last year

## Preventing ACEs in future generations could reduce levels of:

- Early sex (before age 16) by 36%
- Unintended teen pregnancy by 44%
- Smoking (current) by 25%
- Binge drinking (current) by 22%
- Violence perpetration (past year) 61%
- Violence victimisation (past year) 56%
- Incarceration (lifetime) 50%
- Poor diet (current: <2 fruit & veg portions daily) 14%
- Heroin/crack use (lifetime) 54%
- Cannabis use (lifetime) 46%
Adverse Childhood Experiences (ACEs) in Wales

ACEs are stressful experiences occurring during childhood that directly harm a child (e.g. sexual or physical abuse) or affect the environment in which they live (e.g. growing up in a house with domestic violence).

How many adults in Wales have been exposed to each ACE?

- Child maltreatment
  - Verbal abuse 23%
  - Physical abuse 17%
  - Sexual abuse 10%

Childhood household included

- Parental separation 20%
- Domestic violence 16%
- Mental illness 14%
- Alcohol abuse 14%
- Drug use 5%
- Incarceration 5%

For every 100 adults in Wales 47 have suffered at least one ACE during their childhood and 14 have suffered 4 or more.

ACEs increase individuals' risks of developing health-harming behaviours

Compared with people with no ACEs, those with 4+ ACEs are:

4 times more likely to be a high-risk drinker
6 times more likely to have had or caused unintended teenage pregnancy
6 times more likely to smoke e-cigarettes or tobacco
6 times more likely to have had sex under the age of 16 years
11 times more likely to have smoked cannabis
14 times more likely to have been a victim of violence over the last 12 months
15 times more likely to have committed violence against another person in the last 12 months
16 times more likely to have used crack cocaine or heroin
20 times more likely to have been incarcerated at any point in their lifetime

Preventing ACEs in future generations could reduce levels of:
Systematic Review (2017)

- 4+ ACEs increased risk **all** health outcomes
- Weak association: inactivity, obesity & diabetes
- Moderate: smoking, alcohol, cancer, heart disease, respiratory disease
- Strong: sexual risk taking, mental health, problematic alcohol use
- Strongest: drug use & violence
- Outcomes for multiple ACEs represent ACE risks for next generation-
  - Violence, mental illness & substance use
What should we do?
What can Be Done About ACES?

These wide-ranging health and social consequences underscore the importance of preventing ACES before they happen. Safe, stable, and nurturing relationships and environments (SSNREs) can have a positive impact on a broad range of health problems and on the development of skills that will help children reach their full potential. Strategies that address the needs of children and their families include:

- Voluntary home visiting programs can help families by strengthening maternal parenting practices, the quality of the child's home environment, and children's development. 
  **Example: Nurse-Family Partnership**

- Home visiting to pregnant women and families with newborns
- Parenting training programs
- Intimate partner violence prevention
- Social support for parents
- Parent support programs for teens and teen pregnancy prevention programs
- Mental illness and substance abuse treatment
- High quality child care
- Sufficient Income support for lower income families
Routine Enquiry about Adversity in Childhood

- 10 years before individual discloses. May ask 1 or 2 ACEs
- Don’t ask: risk repeating interventions that don’t address issue
- Chronic Diseases & behaviours: determined decades earlier, in childhood

Public Health – Commissioned LCFT to train front line staff
How can we respond?

- **Primary Prevention**
  - **Prevent** ACEs occurring
  - Ensuring best start in life, supporting parents, building resilience

- **Secondary Prevention**
  - **Identify** adverse events as/when they occur to reduce impact (trauma informed approach)

- **Tertiary Prevention**
  - **Enquiry** to identify past ACEs in those with established physical or emotional problems/illness & provide support or therapeutic care to enable change