The Repressed Role of Adverse Childhood Experiences in Adult Well-being, Disease, & Premature Death

The Adverse Childhood Experiences Study is a collaborative effort between Kaiser Permanente and the Centers for Disease Control.

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Robert F. Anda, M.D.
Vincent J. Felitti, M.D.

Summary of the ACE Study

• The ACE Study is a retrospective and prospective analysis in 17,337 middle-class adults of the effects of ten categories of adverse life experiences in childhood on adult life a half-century later.

• The very prevalence of these experiences was unexpectedly high, but unrecognized because they are lost in time and protected by shame, by secrecy, and by social taboos against our routinely exploring certain realms of human experience.

• Their effect a half century later is powerfully and proportionately related to the number of categories of adverse life experiences in childhood, which are a major determinant of adult well-being, health risks, mental illness, occupational performance, social malfunction, biomedical disease, and premature death. If we are bold enough to get this information routinely, are we smart enough to use it?

What is the Core Diagnosis Here?

In 51 weeks:
408 to 132 lbs

Age 8
Age 28
Age 29

Which photo represents the patient’s problem?
ACE Study Design

Survey Wave I
71% response (9,508/13,454)
n=13,000
All medical evaluations abstracted

Survey Wave II
n=13,000
All medical evaluations abstracted

Mortality
National Death Index

Morbidity
Hospitalization
Doctor Office Visits
Emergency Room Visits
Pharmacy Utilization

Present Health Status

Prevalence of Adverse Childhood Experiences

<table>
<thead>
<tr>
<th>Abuse, by Category</th>
<th>Prevalence (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Psychological (by parents)</td>
<td>11%</td>
</tr>
<tr>
<td>Physical (by parents)</td>
<td>28%</td>
</tr>
<tr>
<td>Sexual (anyone)</td>
<td>22%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Neglect, by Category</th>
<th>Prevalence (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Emotional</td>
<td>15%</td>
</tr>
<tr>
<td>Physical</td>
<td>10%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Household Dysfunction, by Category</th>
<th>Prevalence (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alcoholism or drug use in home</td>
<td>27%</td>
</tr>
<tr>
<td>Loss of biological parent &lt; age 18</td>
<td>23%</td>
</tr>
<tr>
<td>Depression or mental illness in home</td>
<td>17%</td>
</tr>
<tr>
<td>Mother treated violently</td>
<td>13%</td>
</tr>
<tr>
<td>Imprisoned household member</td>
<td>5%</td>
</tr>
</tbody>
</table>
### Adverse Childhood Experiences Score

Number of categories (not events) is summed…

<table>
<thead>
<tr>
<th>ACE Score</th>
<th>Prevalence</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>33%</td>
</tr>
<tr>
<td>1</td>
<td>25%</td>
</tr>
<tr>
<td>2</td>
<td>15%</td>
</tr>
<tr>
<td>3</td>
<td>10%</td>
</tr>
<tr>
<td>4</td>
<td>6%</td>
</tr>
<tr>
<td>5 or more</td>
<td>11%*</td>
</tr>
</tbody>
</table>

- 67% experienced at least one category of ACE.
- If any one ACE is present, there is an 87% chance at least one other category of ACE is present, and 50% chance of 3 or >.
- Women are 50% more likely than men to have a Score >5.

### Molestation in Childhood

Obesity runs in this family. So does speaking English. Familial obesity does not mean genetic.

### Depression:

Most say depression is a disease. Many say depression is genetic. Some say it is due to a chemical imbalance.
Childhood Experiences Underlie Chronic Depression

ACE Score

Well-being

Childhood Experiences Underlie Suicide Attempts

ACE Score

Costs

ACE Score and Rates of Antidepressant Prescriptions

Prescription rate per 100 person-years

ACE Score

0 1 2 3 4+
Risk Behaviors: ‘Addictions’

The Functionality of Addictions

Addiction is due to the characteristics intrinsic in the molecular structure of some substance.

The traditional concept:

“Addiction is due to the characteristics intrinsic in the molecular structure of some substance.”

The ACE Study challenges that by showing:

Addiction highly correlates with characteristics intrinsic to that individual’s childhood experiences.
Health Risks

Adverse Childhood Experiences vs. Smoking as an Adult

ACE Score vs Injection Drug Use

p<0.001

0 1 2 3 4-5 6 or more

ACE Score

0 1 2 3 4% Have Injected Drugs

ACE Score

p<0.001

0 1 2 3 4 or more

ACE Score

p<0.001

0 1 2 3 4+ % Alcoholic

ACE Score

0 1 2 3 4 or more

ACE Score
An ad from the 1940s, for the Profession

The Hidden Threat of Weight Loss

The Silent Benefits of Obesity

Lost 158 pounds, but why did he gain it?
Health risks & Social function:

**Looking for Love**

**ACE Score vs > 50 Sexual Partners**

<table>
<thead>
<tr>
<th>Adjusted Odds Ratio</th>
<th>0</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4 or more</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACE Score</td>
<td></td>
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Social function

**ACE Score and Teen Sexual Behaviors**

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<thead>
<tr>
<th>Percent With Health Problem (%)</th>
<th>Intercourse by 15</th>
<th>Teen Pregnancy</th>
<th>Teen Paternity</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td></td>
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<tr>
<td>5</td>
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<td>45</td>
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ACE Score and the Likelihood of Perpetrating Domestic Violence

ACE Score and Indicators of Impaired Worker Performance

The ACE Score and the Prevalence of Liver Disease (Hepatitis/Jaundice)


Biomedical Disease

**ACE Score vs. COPD**

![Graph showing the correlation between ACE scores and COPD](image)

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**Biomedical Disease**

**ACEs Increase Likelihood of Heart Disease**

- Emotional abuse 1.7x
- Physical abuse 1.5x
- Sexual abuse 1.4x
- Domestic violence 1.4x
- Mental illness 1.4x
- Substance abuse 1.3x
- Household criminal 1.7x
- Emotional neglect 1.3x
- Physical neglect 1.4x

*(After correction for age, race, education, and conventional risk factors like smoking and diabetes. Circulation, Sept 2004)*

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How and why do Adverse Childhood Experiences exert their influence throughout life?

Why is treatment so difficult?
In Summary, the ACE Study indicates:

Adverse childhood experiences are the *most basic and long-lasting* cause of health risk behaviors, mental illness, social malfunction, disease, disability, premature death, and healthcare costs.

**A Public Health Paradox**

What are conventionally viewed as Public Health *problems* are often personal *solutions* to long-concealed adverse childhood experiences.
An Individual, Population-based Health Appraisal System: A Biopsychosocial Concept

- Comprehensive history (not symptom-initiated) obtained at home by detailed questionnaire, better by Internet.

Includes ACE Questions

Unconventional Questions of Demonstrated Value

- Have you ever lived in a war zone?
- Have you been a combat soldier?
- Who in your family has committed suicide?
- Who in your family has been murdered?
- Who in your family has had a nervous breakdown?
- Were you ever molested as a child?
- Have you ever been held prisoner?
- Have you ever been tortured?
- Have you been raped?
Benefits of Incorporating a Trauma Approach

Biomedical evaluation: 11% reduction in DOVs in subsequent year. (Control group) (700 patient sample)

Biopsychosocial evaluation: 35% reduction in DOVs in subsequent year. (Incl. trauma-oriented Qs) (130,000 patient sample)

Effect of Interventions

Final Insights from the ACE Study

• Adverse childhood experiences are common but typically unrecognized.
• Their link to major problems later in life is strong, proportionate, and logical.
• They are the nation’s most basic public health problem.
• It is comforting to mistake intermediary mechanism for basic cause.
• What presents as the ‘Problem’ may in fact be an attempted solution.
• Treating the solution may threaten people and cause flight from treatment.
• Change will be resisted in spite of huge personal and economic benefits.

Further Information

www.AVAHealth.org (4-hour DVD on the ACE Study)
www.ACEsConnection.org
Medline/PubMed, Google (Anda or Felitti as authors)
www.HumaneExposures.com (3 insightful books)
VJFMDSDCA@mac.com