

THE BEHAVIOUR INSTITUTE

Diploma in Trauma-Informed Psychotherapy

UNIT 1 • CORE READING 3 OF 6

03

The ACE Study

How we got here — the research that quietly reshaped an entire field

What This Document Covers

Trauma-informed care didn't emerge from theory or intuition alone. It emerged, in large part, from a specific, large-scale piece of research that most practitioners in this field now consider foundational. This document covers the Adverse Childhood Experiences (ACE) study — what it found, why it mattered, and why its findings still shape how trauma-informed practice is understood today.

An Unexpected Discovery

The ACE study began almost by accident. In the mid-1990s, physician Vincent Felitti was running a weight-loss programme at Kaiser Permanente in San Diego, and noticed a troubling pattern: a significant number of patients who lost substantial weight through the programme would, seemingly inexplicably, regain it rapidly afterward — sometimes accompanied by real psychological distress at the weight loss itself.

In interviews, Felitti began to notice something unexpected: a striking number of these patients disclosed histories of childhood sexual abuse, and described their weight, in various ways, as something that had served a protective function — making them feel less visible, less vulnerable, or less likely to be approached in ways that felt unsafe. This observation prompted a much larger, more rigorous research question: how common was significant childhood adversity in the general population, and what relationship, if any, did it have with adult health outcomes?

The Study Itself

Working with epidemiologist Robert Anda at the CDC, Felitti helped design what became the Adverse Childhood Experiences study, surveying over 17,000 adult patients — a large, mostly middle-class, insured population, notably not a population already presumed to be at high risk. Participants were asked about ten categories of adverse childhood experience occurring before age 18, spanning abuse (physical, emotional, sexual), neglect (physical, emotional), and household dysfunction (domestic violence, substance abuse in the household, mental illness in the household, parental separation or divorce, and having an incarcerated household member).

Each category present in a person's childhood contributed one point to their overall ACE score, from 0 to 10. Researchers then examined how ACE scores correlated with a wide range of adult health and behavioural outcomes, tracked through participants' medical records over subsequent years.

What the Study Found

The findings, published from 1998 onward, were considerably more striking than researchers had anticipated. Adverse childhood experiences turned out to be far more common than previously assumed, even in this relatively advantaged population — roughly two-thirds of participants reported at least one ACE, and a significant proportion reported four or more.

More significant still was the dose-response relationship the study revealed: as ACE scores rose, so did the risk of a remarkably wide range of adult outcomes, including heart disease, diabetes, autoimmune disease,

depression, substance use disorders, suicide attempts, and early death — with the relationship holding in a strikingly linear, cumulative way. Someone with an ACE score of four or more showed dramatically elevated risk across nearly every category measured, compared to someone with a score of zero.

Pause and Consider

Before reading this, would you have expected childhood adversity to show a measurable, statistical relationship with adult physical illnesses like heart disease or diabetes — not just mental health outcomes? What does that connection suggest about how separately we tend to think about physical and psychological health?

Why This Changed the Field

The ACE study's significance goes well beyond any single statistic. It provided robust, large-scale, quantitative evidence for something clinicians working directly with trauma had long observed anecdotally: that early adversity doesn't simply cause psychological distress in isolation — it appears to have a genuine, measurable, cumulative effect on the body and on long-term health, operating through pathways that plausibly include chronic stress hormone exposure, altered nervous system development, and trauma-driven coping behaviours (like Felitti's original patients' relationship with weight) that carry their own long-term health costs.

This evidence base gave the emerging trauma-informed care movement something it had previously lacked: a strong, replicable scientific foundation, rather than solely a compassionate but harder-to-quantify clinical philosophy. It became considerably easier to make the case for trauma-informed service redesign — covered in Documents 1 and 2 — once the argument could be grounded in demonstrable, population-level health data, not simply clinical intuition.

A Word of Caution

The ACE study is foundational, but it's worth understanding its limitations too, particularly since ACE scores are referenced constantly throughout trauma-informed literature and training. The original ten categories don't capture every form of childhood adversity — notably, they don't directly measure poverty, racism, community violence, or many forms of chronic social adversity, which subsequent research has shown carry their own significant, sometimes overlapping, health impacts. An ACE score is also a blunt instrument at the individual level: it counts categories of adversity, not severity, duration, or the presence of protective factors (like one stable, caring adult relationship) that can meaningfully buffer against negative outcomes even at higher ACE scores.

In other words, an ACE score is genuinely useful as a population-level research tool and a broad clinical prompt — but it should never be used as a precise predictor of any individual's outcome, and it should never be treated as a complete inventory of everything that might constitute meaningful childhood adversity.

What's Next

With the research foundation established, the next document turns to an important conceptual distinction that trips up a lot of new practitioners: the difference between being trauma-informed as a service or clinician, and delivering trauma-specific treatment.

A Few Things to Take With You

- The ACE study began from an unexpected clinical observation in a weight-loss programme, leading Felitti and Anda to a large-scale study of over 17,000 adults
- The study measured ten categories of childhood adversity and found a striking, cumulative dose-response relationship with adult physical and mental health outcomes

- This research gave the trauma-informed care movement a strong scientific foundation, not just a compassionate clinical philosophy
- ACE scores are a useful population-level and clinical prompting tool, but should never be used as a precise individual predictor, nor treated as a complete inventory of adversity

Before You Move On

- What surprised you most about the ACE study's findings — the prevalence of adversity, the breadth of outcomes affected, or something else?
- Why do you think it mattered, for the credibility and spread of trauma-informed care, that this evidence came from a large, mostly middle-class, insured population rather than an already high-risk group?
- Thinking about the study's limitations, what forms of adversity do you think are important but under-captured by the original ten ACE categories?