

■ BOOK REVIEW

Childhood Disrupted: How Your Biography Becomes Your Biology, and How You Can Heal

by Donna Jackson Nakazawa

David D Clarke, MD

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The Adverse Childhood Experiences (ACE) Study¹ is the most wide-ranging and illuminating public health research of our generation. But most health care professionals, focused as we are on relatively narrow silos of information, are unaware that ACEs increase the risk for a large number of health conditions. Fortunately, health journalist Donna Jackson Nakazawa's *Childhood Disrupted*² lucidly reviews nearly two decades of research that is likely to produce better outcomes for millions of people. The studies are brought to life by Nakazawa's lively interviews with scientists and touching stories of adults struggling to cope with their ACEs.

ACE research focuses on ten types of childhood adversity: physical, sexual, or verbal abuse; physical or emotional neglect; a family member who is mentally ill, addicted to a substance, or in prison; witnessed abuse of the mother; and losing a parent (to separation, divorce, or death). Other forms of what the author describes as Chronic Unpredictable Toxic Stress (abuse of siblings, community violence, bullying at school, family tension or secrets, early medical trauma, and others) can have similar impact.

The prevalence of ACEs is extraordinary. Sixty-eight percent of the adult population has at least 1, 40% at least 2, and 15% at least 4. The health impact of ACEs is even more remarkable. If a public health study uncovers a risk factor associated with, say, a 30% increase in one health condition, it will readily be published. ACE research has found vastly stronger associations for a shocking range of problems. In round numbers, people with 4 or more ACEs compared with those with none have a

- 1220% increased risk of suicide attempts
- 1000% increased risk of intravenous drug use
- 460% increased risk of depression
- 430% increased risk of alcohol abuse
- 400% increased risk of experiencing intimate partner violence
- 170% increased risk of multiple body symptoms.

It is not only mental health and behavior that suffers. Again, comparing the 4 or more ACEs group with those with none, there is a

- 140% greater risk of emphysema
- 100% greater risk of hospitalization for autoimmune disorders
- 100% greater risk of cancer
- 80% greater risk of obesity.

In those with 7 or more ACEs compared with those with none, the risk of heart disease was 360% greater even *after* correcting for cholesterol, obesity, diabetes, and tobacco or alcohol use.

Other conditions for which ACEs are a risk factor include irritable bowel syndrome, migraines, stroke, chronic back pain, chronic fatigue syndrome, diabetes, asthma, peptic ulcer, uterine fibroids,

schizophrenia, bipolar disorder, anxiety, attention deficit hyperactivity disorder, and eating disorders.

Nakazawa also presents research that is beginning to reveal the pathophysiology that might account for the ACE-related outcomes described above. Findings include decreases in gray matter volume and density of neuron connections, increased levels of stress hormones, increased inflammatory cytokines, epigenetic changes affecting stress response genes, the impact of gene variants affecting serotonin and cortisol, and reduced generation of new neurons in the hippocampus.

Controlled trials showing improved health outcomes when ACEs are addressed are beginning to appear. Such trauma-informed care is now being applied in schools and in patients with medically unexplained symptoms, addictions, eating disorders, and criminal behavior. Nakazawa describes a range of techniques for readers to heal themselves from the long-term impact of ACEs. This includes ideas for becoming better parents, thereby breaking the generational cycle of ACE-affected parents producing ACE-affected children.

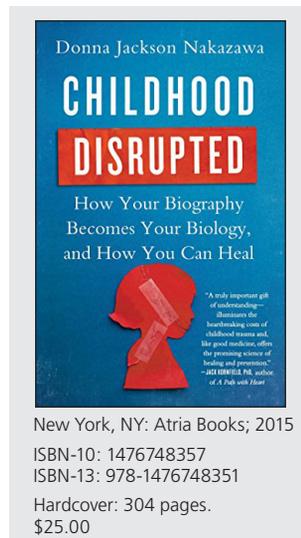
Most health care professionals will find their perspective on patients transformed by Nakazawa's fascinating presentation of a tremendous range of research findings. In many cases, patients' presenting concerns will now be recognized, in whole or in part, as a manifestation of ACEs. As we learn to address these, our patients' outcomes will improve and a major source of clinical frustration will find relief. ❖

How to Cite this article

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References

1. Felitti VJ, Anda R, Nordenberg D, et al. Relationship of childhood abuse and household dysfunction to many of the leading causes of death in adults. The Adverse Childhood Experiences (ACE) Study. *Am J Prev Med* 1998 May;14(4):245-58. DOI: [http://dx.doi.org/10.1016/S0749-3797\(98\)00017-8](http://dx.doi.org/10.1016/S0749-3797(98)00017-8).
2. Nakazawa DJ. *Childhood disrupted: How your biography becomes your biology, and how you can heal*. New York, NY: Atria Books; 2015.



David D Clarke, MD, is a retired Gastroenterologist from Northwest Permanente. He is President of the Psychophysiology Disorders Association and an Assistant Director at the Center for Ethics at Oregon Health and Science University. He lectures internationally on stress-related symptoms. E-mail: DrDave@stressillness.com.