203: Adverse Childhood Experiences and Their Lasting Impact on Health: A Comprehensive Guide

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In today's episode post, we embark on an in-depth exploration of adverse childhood experiences (ACEs) and their profound impact on adult mental and physical health. The CDC defines ACEs as, “potentially traumatic events that occur in childhood.” ACEs include (but are not limited to) physical, emotional, sexual abuse, neglect, household dysfunction, such as domestic violence or parental substance abuse. We'll investigate how these early negative events are critical predictors of adult psychiatric diagnoses, including substance use disorders (SUDs), depression, anxiety, PTSD, psychosis, and personality disorders. Our analysis extends to the intricate ways ACEs affect an individual's physiology and psychology. This episode will be the first of a mini-series of several episodes surrounding the impact of ACEs and how we can treat patients who experienced trauma.

Introduction: Why care about adverse childhood experiences?

ACEs are common and their effects can add up over time. According to the CDC, 61% of adults had at least 1 ACE, and 16% had 4 or more types of ACEs. ACEs occur throughout the entire world population, ACEs can happen to both patients *and* providers. ACEs can be challenging for both patients and providers; discussing, recalling, and learning about traumatic events can affect body sensations and perhaps lead to dissociation. When providers inquire about ACEs, it should not be something that is done in a hurried or impersonal and detached way. When mental health professionals are beginning to form a therapeutic alliance with the patient, it can be difficult at first to know how to ask the difficult questions regarding trauma. Yet, it is important because a patient may otherwise never bring it up on their own. It can be helpful to first ask the patient, “Have you ever been sexually, emotionally, verbally, or physically abused?” It is important to approach emotional responses with empathy. It is also important to give the patient the freedom to say as much or as little as they feel comfortable. For example, “It is ok if you decide to not tell me any details about what happened, but it is helpful to know if it did happen.” Providing the patient with a sense of control over the conversation is key, as they did not have a sense of control when the trauma was occuring. This then also allows the provider to assess the patient's level of trust. By asking the patient the hard questions, the patient may feel that you are ready to know, and able to hold space for the patient to share, whenever that may be.

When people describe trauma there may be tremendous shame, with thoughts such as “I am bad” or “I did something bad”, “I deserve what happened to me” are often described. Providers

should thank patients for sharing something so painful and recognize the courage it took to do so. The core of trauma-focused therapy is helping patients move out of a place of shame and recognize that they are, in fact, not to blame for what happened. Acknowledging a massively impactful life event, such as an ACE, can give providers a greater understanding of the incredible challenges patients have had to overcome throughout their lives, and therefore improve diagnosis and treatment of both mental and physical illnesses.

This understanding naturally brings us to a central principle of Dialectical Behavior Therapy (DBT): “Given your experiences and the challenges you've faced, it's completely understandable why you're struggling right now. At the same time, I recognize your strong desire for growth and overcoming these obstacles. Together, we'll strive to turn this aspiration into reality.” This balance between acknowledging current difficulties and fostering a commitment to positive change lies at the heart of DBT.

Creating space for discussing trauma can strengthen the therapeutic alliance and minimize negative transference. Sometimes the emotions and situations are experienced towards the provider before they can be understood in the context of their developmental narrative. For example, strong anger and primitive emotions might be projected onto the provider, or even processed through projective identification– where the provider gets pulled into behaving in alignment with the projections.

For many patients, trauma impacts the formation of healthy, stable relationships, and can potentially interfere with a healthy therapeutic alliance with therapists. Demonstrating empathy and compassion as a provider can be a corrective emotional experience, potentially enhancing the patient’s relationship not only with the therapist, but also with others. This is one of the reasons that the specific type of therapy may not matter as much as the therapeutic alliance. In a previous episode with Dr. Robert Feinstein, we discussed common factors in effective therapies. About 89% of outcomes in psychotherapy have to do with factors common to all therapy types: giving the patient empathy, for the patient to be heard and understood, observed, validated, and having a structure to the psychotherapy. Only 10-12% of outcomes are based on patients that need specific treatments because of certain problems where some treatments do work better than others.

In a previous podcast with Dr. William Miller, we discussed research that has shown there is no correlation between therapist outcomes and how many years a therapist has been performing therapy (Anderson et al, 2009). This underscores the importance of deliberate practice in the area of psychotherapy. In the words of Dr. William Miller, “It’s a way of being with people to help people make changes.” This method emphasizes a collaborative and empathetic interaction style, focusing on empowering individuals to drive their own change, making it a valuable asset in any change or growth-oriented setting.

In a study by Reese et al. (2022), a study of 482 married or cohabiting couples who had a child between the ages of 3 and 13 years old completed a survey that analyzed the relationship

Liam Browning, Manal Piracha, Annabel Kuhn, M.D., David Puder, M.D.

between parental ACEs and adverse family experiences (AFE). Both parents' adverse childhood experiences were associated with an increase in their child's adverse family experiences (a measurement that parents filled out with questions like "Did your child ever live with anyone who was mentally ill or suicidal, or severely depressed for more than a couple weeks?"). Only the fathers adverse childhood experiences impacted a measure of "family health" which had questions like "we support each other."

Table 2

Significant family-health-mediated indirect pathways.

Indirect Pathways	Beta	Z-Score	*p*-Value
Father's ACE → Family Health → Child's AFE	0.039	2.460	0.014
Mother's ACE → Family Health → Child's AFE	0.023	1.754	0.079
Father's PCE → Family Health → Child's AFE	−0.045	−2.904	0.004
Mother's PCE → Family Health → Child's AFE	−0.033	−2.470	0.014

In a 2024 study from Italy involving 645 psychiatry residents (trainees), it was observed that these psychiatry residents had a higher incidence of adverse childhood experiences and greater attachment insecurity compared to their peers in other medical specialties. Additionally, psychiatry residents were more inclined to seek social support. Despite the higher rates of emotional abuse, emotional neglect, and physical neglect, they exhibited lower neuroticism and higher openness, according to the Big Five personality traits (Castellini and Tarchi et al., 2024). This trend suggests a potential link between personal trauma and the motivation to pursue psychiatry in order to aid others in similar situations.

In 2014, the worldwide self-reported prevalence of physical and sexual abuse was 22.6% and 12.7%, respectively. Neglect occurred at similar rates, with 16.3% and 18.4% of respondents reporting physical and emotional neglect respectively (Stoltenborgh et al. 2015).

According to a systematic review and meta-analysis published in the Lancet in 2019 by Bellis et al., ACEs were attributed to about 30% of cases of anxiety and 40% of cases of depression in North America and to significant healthcare costs. The study estimated the annual costs of ACEs in North America to $748 billion and $581 billion in Europe.

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The ACE Study

History of ACEs and the ACE study

The ACE study by Felitti et al. (1998) was one of the first large-scale efforts to investigate how exposure to multiple types of maltreatment in childhood are linked to negative mental and physical health outcomes throughout the lifespan. It was a cross-sectional questionnaire study on over 8,000 mostly white, middle class, middle-aged adults through Kaiser Permanente in San Diego.

The original ACEs questionnaire included seven categories of abuse and household dysfunction which occurred at the following rates:

- Emotional abuse 11%
- Physical abuse 11%
- Sexual abuse 22%
- Substance abuse in the immediate family 26%
- Mental illness in the immediate family 19%
- Witnessing domestic violence 13%
- Household member went to prison 3%

In all, 50.5% of the sample reported experiencing at least one ACE. Of those who experienced one ACE, half reported experiencing at least one additional ACE, meaning 25% of the sample experienced two or more ACEs. Certain ACEs such as emotional abuse and domestic violence were particularly associated with other ACEs, as around 90% of participants who had experienced either of these ACEs also reported experiencing an additional ACE.

Compared to zero ACEs, those with four or more ACEs (6.5% of participants) demonstrated (aORs adjusting for age, gender, race, and educational attainment):

Maladaptive health behaviors:

- Considers self alcoholic 7.4 (5.4–10.2)
- Ever used illicit drugs 4.7 (3.7–6.0)
- Ever injected drugs 10.3 (4.9–21.4)
- 50 or more intercourse partners 3.2 (2.1–5.1)
- Current smoking 2.2 (1.7–2.9)
- Poor self-rated health 2.2 (1.8–2.7)

Adverse health outcomes:

- Suicide attempt 6.6 (4.5–9.8)
- Two or more weeks depressed 4.6 (3.8–5.6)
- Obesity (BMI>35) 1.6 (1.2–2.1)
- Ischemic heart disease 2.2 (1.3–3.7)

- Cancer 1.9 (1.3–2.7)
- Stroke 2.4 (1.3–4.3)
- Chronic bronchitis or emphysema 3.9 (2.6–5.8)
- Hepatitis or jaundice 2.4 (1.8–3.3)
- Diabetes 1.6 (1.0–2.5)
- STI 2.5 (1.9–3.2)
- Skeletal fractures 1.6 (1.3–2.0)

Dr. Vincent Felitti's lecture on YouTube has a chilling quote:

"The most powerful relationship we saw, was suicide, an individual with an ACE score of six or higher was 4,600% more likely to attempt suicide than an individual with an ACE score of 0."

Are these negative health outcomes and mortality mediated by health-risk behaviors?

During Dr. Vincent Felitti's lecture on ACEs, he stated with a microexpression of pain, that people with 6 or more ACEs died on average, 20 years earlier than those without ACEs. This could seem like a death sentence for those who have many childhood traumas, but the results from the study he's citing has some nuance worth discussing (Brown et al., 2009).

Interestingly, after multivariable adjustment, adults with six or more ACEs were only 1.7 times more likely to die at age ≤75 years (≥6 vs 0 ACEs: HR=1.73; 95% CI=1.06, 2.83), and this increased risk was not seen in those with 1-5 ACEs.

When controlling for "variables for prevalent disease conditions, risk factors, poor mental health, sexual and reproductive health, social problems, and prescription medication utilization (i.e., 'ACE-related' conditions)," the hazard ratio dropped from significance 1.2 (95% CI=0.70, 1.95), suggesting that earlier mortality risk was mediated by "ACE-related conditions."

Another study by D'Arcy-Bewick et al. (2023), attempted to control for chronic disease prospective study of 6319 participants who were followed from 1995-2018 suggested that there is still a mortality risk of ACEs even when controlling for chronic conditions that are the leading causes of death (hypertension, cardiac disease, cancer, stroke, diabetes). After controlling for these conditions, each additional ACE (there were 20 in this study, as they included additional ACEs related to socioeconomic status) was associated with a hazard ratio (HR) of 1.033 (95% CI=1.014–1.053), suggesting a linear association between ACEs and increased mortality risk. Given the persistent increased risk of mortality controlling for chronic diseases, this may mean that other causes of death, such as suicide and accidental death, may mediated the increased risk.

This suggests that the increased risk of death in those with ACEs are likely related to the mental health and psychosocial related risks (which can potentially be treated).

Numerous studies have attempted to determine the extent to which the increased morbidity and mortality associated with ACEs is mediated by poor health behavior such as smoking, drug use, alcohol, and obesity, or if it is a result of the the direct biological disruptions by ACEs (Godoy et al., 2020). And while there is still limited consensus, there is a link nonetheless between ACEs and mortality.

This understanding is indeed sobering: the immense pain caused by polytrauma often leads to the use of coping strategies that, while adaptive in the short term, will inevitably shorten a person's life.

However, there is also potential for hope. In episode 142, we presented a study showing that the mortality risk associated with low cardiovascular fitness compared to elite fitness was associated with an adjusted HR of 5.04. This shows us that a high ACE score is not a death sentence and that there are other stronger modifiable factors that can influence longevity. As mental health providers, we can collectively work to mitigate the effects of ACEs on health and lifespan by encouraging our patients to engage in these lifestyle changes and by supporting social initiatives that promote increased access to psychotherapy and psychiatry.

Conclusion

Trauma can be difficult for both patients and providers to discuss. Further, trauma can be challenging to address through therapy, particularly when individuals do not have access to the necessary resources. Despite all the known benefits of therapy, there are many barriers to accessing care, some of those include limited availability of providers, financial means, personal or societal biases against going to therapy. Unfortunately, there is not a simple solution, but the goal is to improve mental healthcare access for all. Psychiatrists work and purpose is to heal the patient, and hopefully with this episode and future episodes on adverse childhood experiences, we can learn and grow together.

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