



The Human Flourishing Program

at Harvard's Institute for Quantitative Social Science

Presentation to

**Duke Spirituality & Health Research Seminar,
Tuesday, May 28, 2024, 12:00 ET**

Virtual Presentation by
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Research Associate



Welcome



Human Flourishing Program at Harvard University

- Founded in 2016, the Human Flourishing Program at Harvard's Institute for Quantitative Social Science aims to study and promote human flourishing, and to develop systematic approaches to the synthesis of knowledge across disciplines.
- The program produces research publications and sponsors educational activities, such as courses, seminars, and conferences, for the Harvard University community all aimed at bringing knowledge together across disciplines and reflecting upon how knowledge from different disciplines might form a coherent whole.





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Education

BS, Business Administration, University of Phoenix. MPH, and Doctorate in Public Health from the Fielding School of Public Health, UCLA (2005)

Academic Appointments

Research Associate, Human Flourishing Program, at Harvard's Institute for Quantitative Social Science; Associate, Research Professor, Claremont Graduate University, School of Global and Community Health; Lecturer, UCLA, Fielding School of Public Health.

Research Focus: Moral Injury, ACEs, flourishing and holistic wellbeing.

Professional Experience Highlights

Over 25 years experience as a health care executive and consultant for leading health institutions, and public health agencies: including UCLA Ashe Health Center; UCSD Health System, and Adventist Health. Served as National Director, PMO, Kaiser Permanente; Chief Innovation and Transformation Officer Riverside University Health System, and Chief Strategy Officer Ventura County Healthcare Agency

Founder and CEO, CoreSensum, Inc., & Spiritual Care Partners, LLC., 2023

Community Service

2018 – 2022 – Working Group II, Survivor Advisory Committee Member, Pontifical Commission for the Protection of Minors

International Work: Established a Global Collaborative and facilitated adoption of the Nov. 18, Annual UN World Day for the Prevention of, and Healing from of Child Sexual Abuse, Exploitation, and Violence (2022).

Awards and Honors

World Childhood Foundation: Children's Champion Award, 2023

American Hospital Association, Society for Healthcare Marketing and Strategy: Circle of Distinction Award 2000.

Today's Presentation

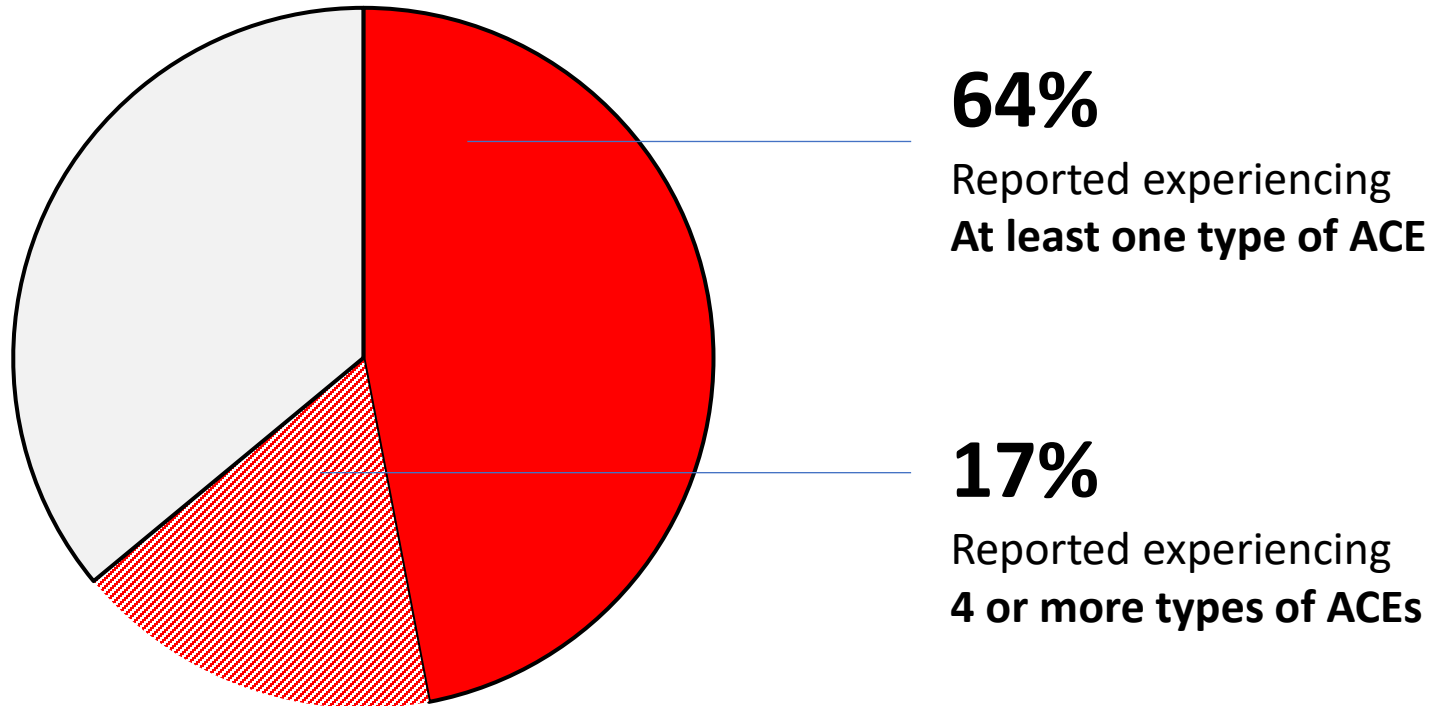
1. Overview of Adverse Childhood Experiences (ACEs)
2. Impact of Stress Vulnerability Diathesis Model
3. Strategies for addressing mental distress in persons with ACEs



A History of ACEs can Significantly Influence One's State of Flourishing

Many People Report ACEs

According to data collected from adults across all 50 states and the District of Columbia between 2011 and 2020:



ACEs Impact on Health Outcomes

- Adverse Childhood Experiences (ACEs) are stressful or traumatic events occurring before the age of 18 (e.g., abuse, exposure to violence, loss of a parent, etc.) [Adverse Childhood Experiences \(ACEs\) \(cdc.gov\)](https://www.cdc.gov/ceas/index.html).
- A landmark study conducted by researchers at the CDC/Kaiser discovered that ACEs are associated with numerous **health, social, and behavioral problems throughout the lifespan, including substance use disorders, and suicide** (Felitti, et al., 1998).
- **Subsequent research found that frequent exposure to ACEs, without mediating factors (e.g., a supportive parent/adult), can dysregulate a child's stress response, and lead to a condition known as toxic stress** (National Scientific Council on the Developing Child, 2005/2014).
- Research indicates that toxic stress may impact memory, selective attention, self-control, and the ability to turn off the stress response. Toxic stress may also interfere with a child's ability to explore and learn from their environment or to socialize with others. **These physical, psychological, and social states can become imbedded traits as the brain is developing** (Nelson and Scott, 2020), leading to lifelong challenges with executive function.

ACEs and Incidence of Depression, Substance-use and Suicide...

- CDC / Kaiser ACEs Study Findings:
 - A male child with an **ACE score of 6** has a **4600% increase in the likelihood of later using intravenous drugs.**
 - In self-described depression a person with **ACE score ≥ 4** was **460% more likely to be depressed** than a person with **ACE score of 0**, and a **1220% historical increase in attempted suicide** between these two groups.
 - **For groups with higher ACE scores, the incidence of attempted suicide increases thirtyfold to fifty-one-fold!**
 - Using the analytic technique of population attributable risk, the CDC estimated that more than **two thirds of suicide attempts could be attributed to adverse childhood experiences.**
- In another study, logistic regression analyses indicated that physical, sexual, and emotional abuse, parental incarceration, and family history of suicidality **each increased the risk for suicidal ideation and suicide attempts in adulthood by 1.4 to 2.7 times** (Thompson et al. 2019).

Impact of ACEs on Mental Health

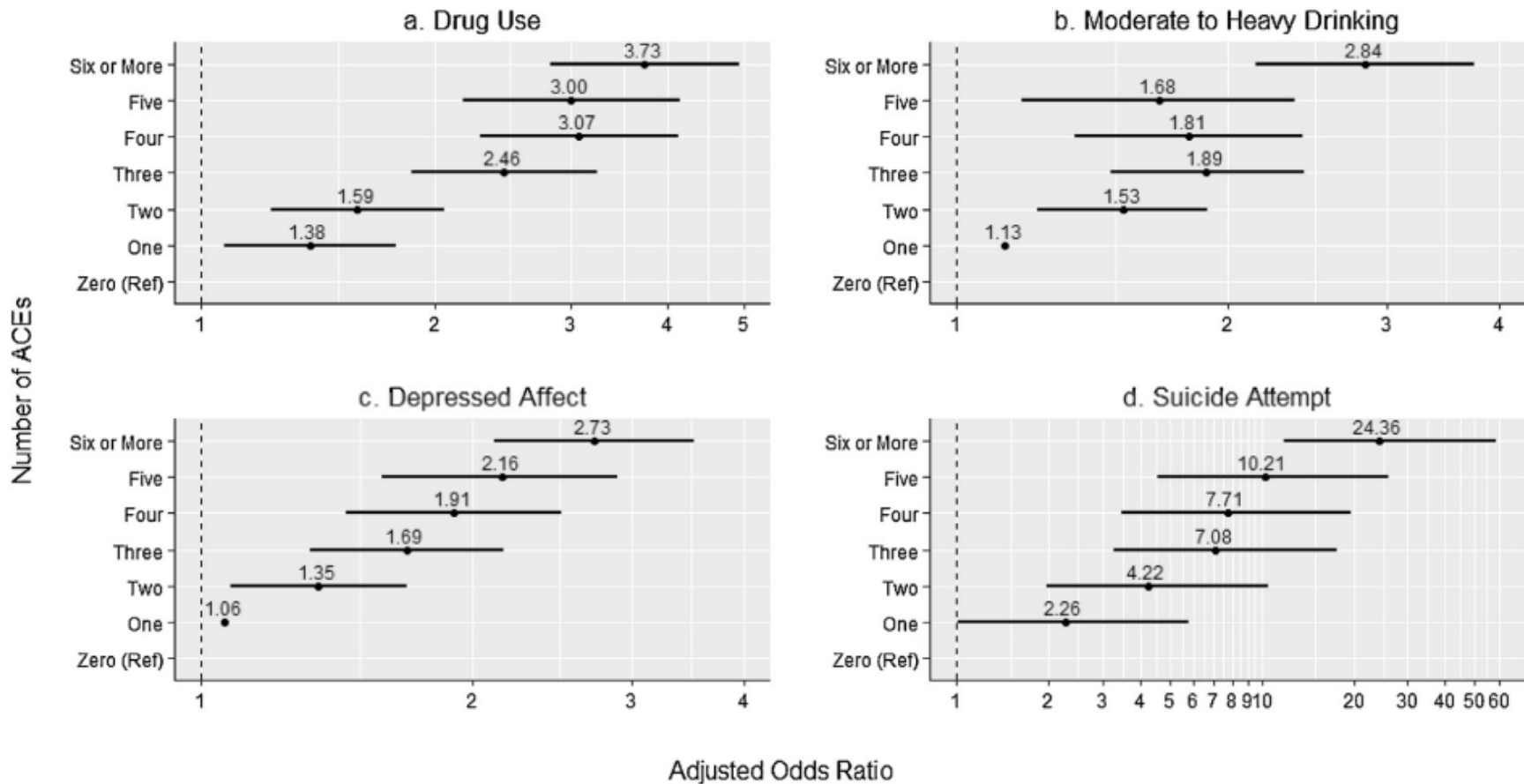


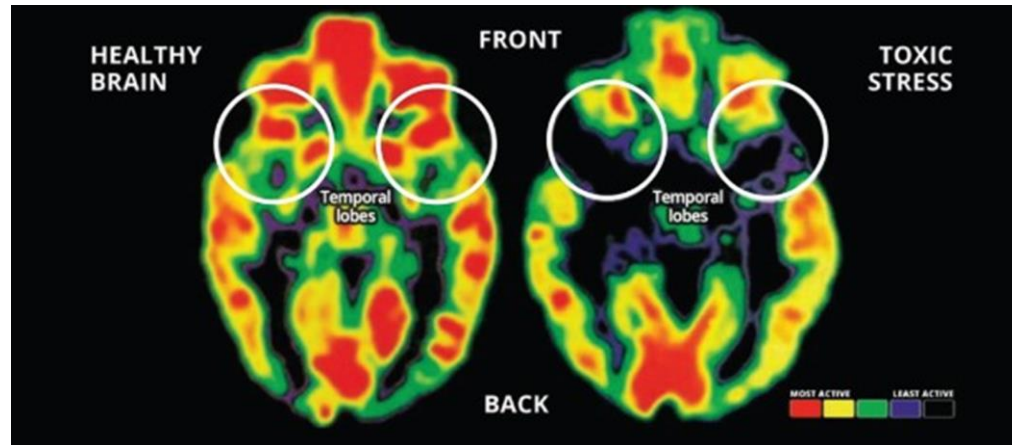
Fig. 1. Adjusted associations of adult mental health outcomes with ACE Score..

Merrick MT, Ports KA, Ford DC, Afifi TO, Gershoff ET, Grogan-Kaylor A. Unpacking the impact of adverse childhood experiences on adult mental health. *Child Abuse Negl.* 2017 Jul;69:10-19. doi: 10.1016/j.chiabu.2017.03.016. Epub 2017 Apr 15. PMID: 28419887; PMCID: PMC6007802.



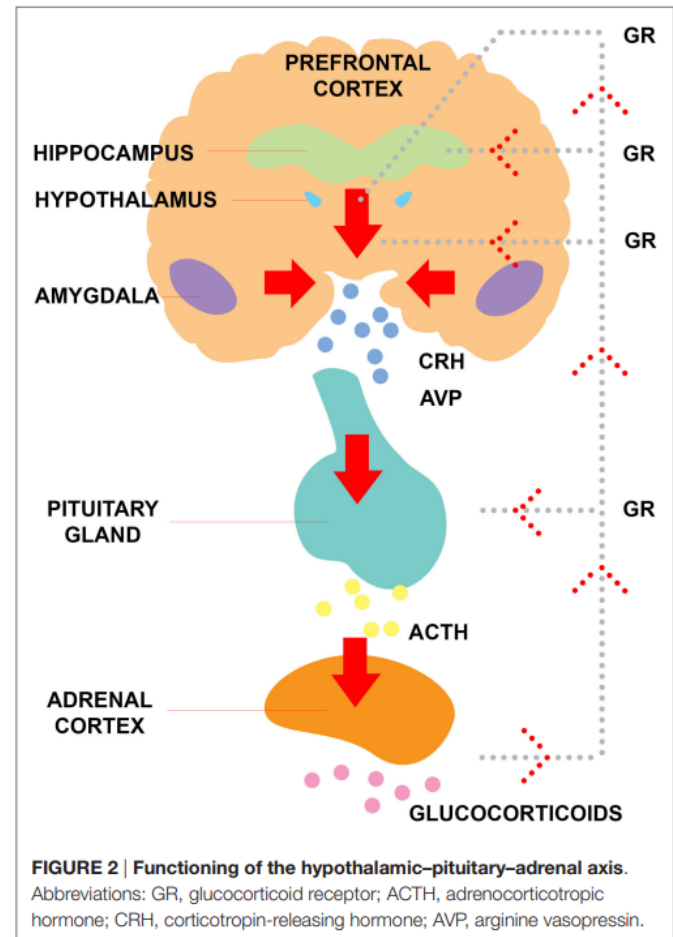
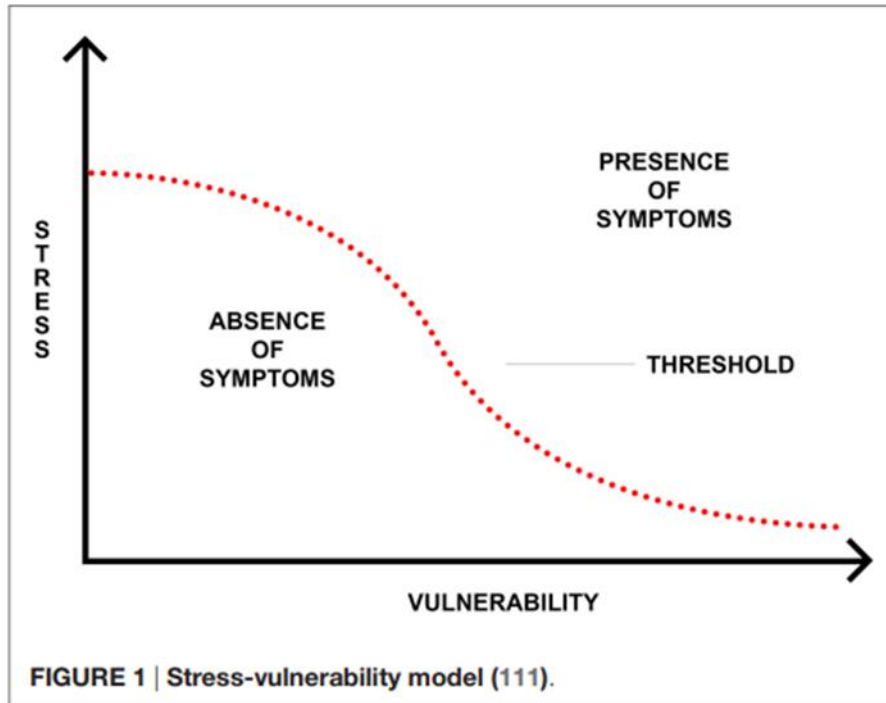
ACEs and Toxic Stress

- Children who do not have time to decompress between adverse events, and those lacking supportive structures may experience chronic stress which can become toxic. These physical, psychological, and social states can become imbedded traits as the brain is developing.
- Toxic stress is defined as the “prolonged activation of the stress response systems that can disrupt the development of brain architecture and other organ systems and increase the risk for stress related disease and cognitive impairment” (Nelson, et al, 2020).



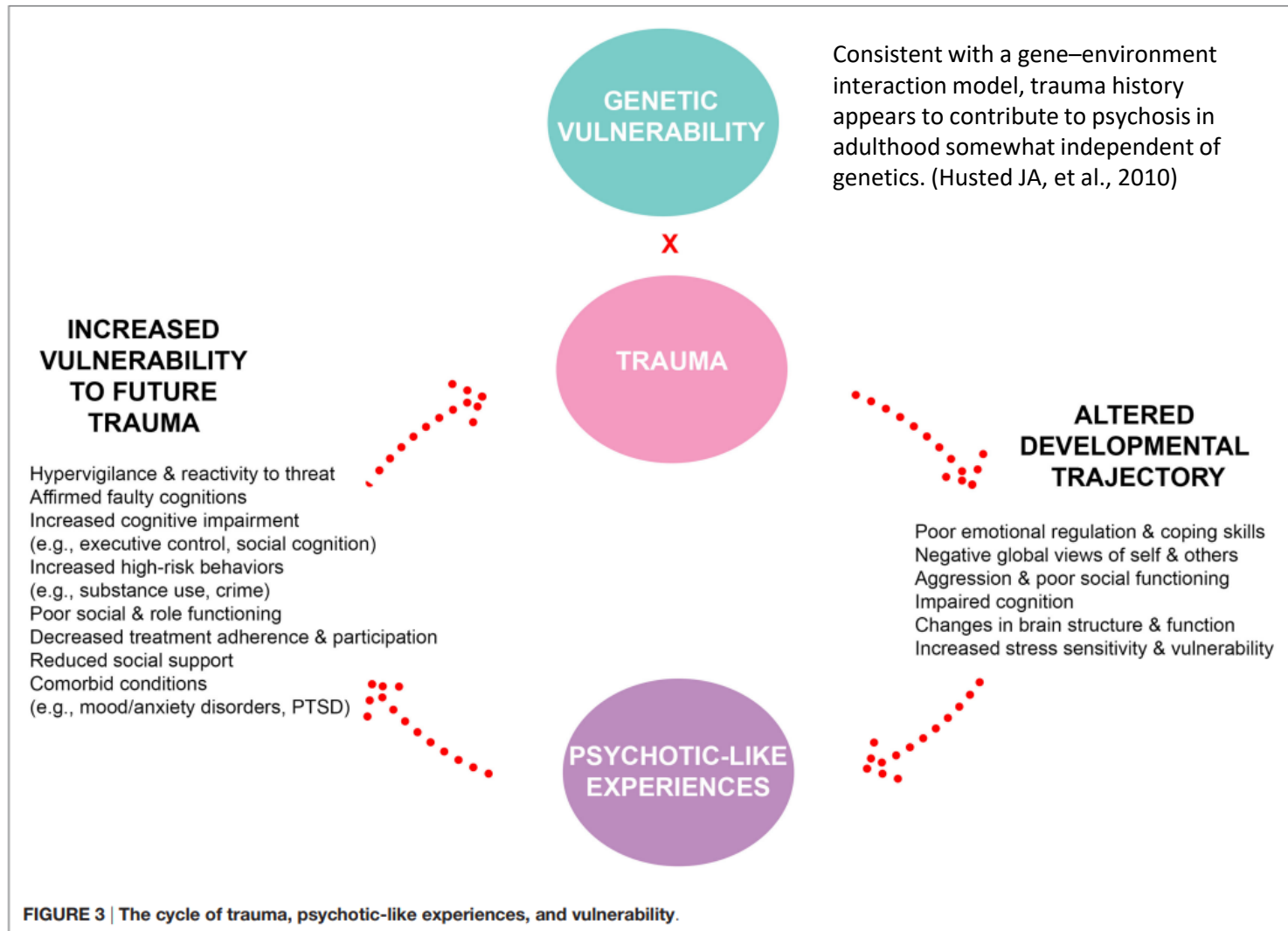
Impact of Toxic Stress on Brain Development in Patients with a Diagnosis of Psychosis

The Role of Trauma and Stressful Life Events among Individuals at Clinical High Risk for Psychosis

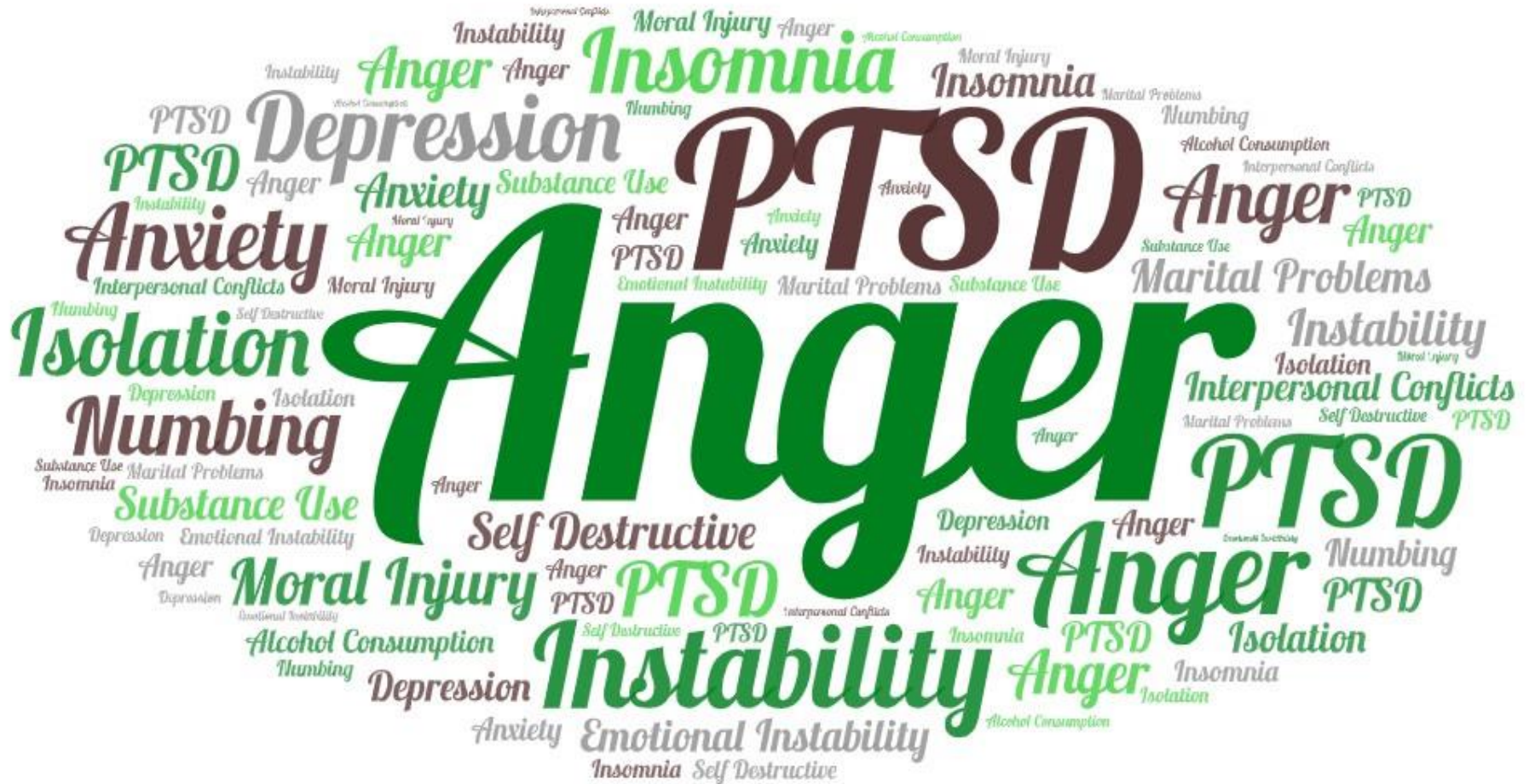


Mayo D, Corey S, Kelly LH, Johannes S, Youngquist AL, Stuart BK, Niendam TA and Loewy RL (2017)

The Cycle of Trauma, Psychotic-like Experiences, and Vulnerability



What is the Impact of Toxic Stress in Untreated Adults



Symptoms of Emotional Dysregulation in Individuals with ACEs

- 1. Intense Anger:** Individuals may struggle with controlling their anger, leading to frequent outbursts, aggressive behavior, or a short temper.
- 2. Emotional Instability:** Fluctuations in mood may be common, with individuals experiencing rapid shifts between extreme emotions such as sadness, anger, and anxiety.
- 3. Difficulty Coping with Stress:** Individuals may have a diminished ability to cope with stressors, leading to heightened anxiety, panic attacks, or feeling overwhelmed by everyday challenges.
- 4. Self-Destructive Behavior:** Some individuals may engage in self-destructive behaviors such as substance abuse, self-harm, or reckless behaviors as a way to cope with overwhelming emotions.
- 5. Difficulty Forming and Maintaining Relationships:** Emotional dysregulation can affect interpersonal relationships, leading to challenges in forming and maintaining connections with others. This may manifest as difficulty in trusting others, fear of abandonment, or engaging in unhealthy relationship dynamics.
- 6. Emotional Numbing:** In an effort to cope with overwhelming emotions, individuals may engage in emotional numbing, where they disconnect from their feelings altogether, leading to a sense of emptiness or detachment.
- 7. Impulsivity:** Individuals may struggle with impulse control, leading to impulsive behaviors such as overspending, substance abuse, or engaging in risky sexual behaviors.
- 8. Difficulty Expressing Emotions:** Some individuals may have difficulty identifying and expressing their emotions effectively, leading to a sense of emotional numbness or feeling emotionally disconnected from others.
- 9. Hypervigilance:** ACEs can lead to hypervigilance, where individuals are constantly on edge and hyperaware of potential threats in their environment. This heightened state of arousal can contribute to feelings of anxiety and difficulty relaxing or feeling safe.
- 10. Avoidance of Emotions:** Some individuals may actively avoid or suppress their emotions as a way to cope with past trauma, leading to emotional avoidance and difficulty in processing and resolving underlying issues.



Moral & Spiritual Dimensions of ACEs/Trauma

- Trauma often extends beyond the physical and mental dimension to include moral and spiritual dimension.
- R/S struggles often involve a questioning of one's beliefs, feelings of betrayal by a higher power, and difficulties reconciling a traumatic experience with one's faith.
- Existential crisis includes questioning one's connectedness to God, God's benevolence, God's discontent, forgiveness of others, and religious support and coping, etc.
- Clinical practice often neglects the moral and spiritual dimensions of trauma. However, we will not bring the fullest possible healing without attending to these important facets of recovery.
- Such conflicts can lead to a loss of meaning, purpose, and connection with the sacred or Transcendent, which are crucial elements of one's spiritual identity (Brémault-Phillips, S., Morin, J.-S., 2018).



Child Abuse and Moral Injury

Moral Injury is the “persistent distress that arises from a personal experience that disrupts or threatens: (a) one’s sense of the goodness of oneself, of others, of institutions, or of what are understood to be higher powers, or (b) one’s beliefs or intuitions about right and wrong, or good and evil.”¹

- A moral injury can occur when a person experiences, perpetrates, witnesses, or fails to prevent acts that transgress their own moral beliefs, values, or ethical codes of conduct.
- Childhood abuse is often experienced as a betrayal and/or a significant violation of trust that alters one’s sense of safety and security in the world.
- Because ACEs often result in mal-adaptive behavior, and developmental and emotional regulation disorders, individuals may experience multiple types of MI (victim, perpetrator, and witness) which compounds their mental health challenges and adversely impacts their potential for recovery.

1. VanderWeele, T.J.*, Wortham, J.S.*, Carey, L.B., Case, B.W., Cowden, R.G., Duffee, C., Jackson-Meyer, K., Lu, F., Mattson, S.A., Padgett, R.N., Peteet, J.R., Rutledge, J., Symons, X., and Koenig, H.G. (2024). Moral trauma, moral distress, moral injury and moral injury disorder: definitions and assessments. Working Paper Under Review.

Emerging Research Linking a History of ACEs to MI, in Workers Exposed to PMIEs

- Emerging research indicates that ACEs may be a predictor of moral injury in those exposed to traumatic and potentially morally injurious events.
- **Path analysis** revealed that ACEs significantly predicted adverse mental health symptoms in adulthood in a population of public safety personnel; this effect was mediated by symptoms of MI and moderated by difficulties with emotion regulation (Roth, et al., 2022).
- In a study conducted by the Canadian Armed Forces (CAF) members and veterans, analyses revealed a significant relation between childhood emotional abuse and the presence of MI in adulthood.
 - Specifically, emotional abuse during childhood was correlated with total score on the MIES ($p = 0.006$) and with its two subscales, perceived betrayals ($p = 0.022$) and perceived transgressions ($p = 0.016$).
 - These correlations remained significant when controlling for age and gender (Battaglia AM, et al., 2019).



Religious & Spiritual Practices Improve Stress & Trauma Adaptability

- Many religious traditions offer frameworks that help adherents understand and contextualize their experiences, including stressful events. One of the primary ways religion and spirituality affect stress perception is through the promotion of meaning and purpose.
- **Individuals who engage in regular spiritual practices report higher levels of meaning in life, which can mitigate the adverse effects of stress (Smith, 2016).**
- Spiritual practices such as prayer, meditation, and participation in religious services can enhance social support, which is a crucial factor in stress management.
 - Positive religious coping strategies, such as seeking spiritual support and reframing stressful situations in a religious context, have been associated with better psychological well-being.
 - Pargament et al. (1998) found that individuals who utilize positive religious coping methods report lower levels of stress and anxiety.



Protective Factors for Individuals with ACEs

- **The experience of trauma is highly subjective thus, a one size fits all response is not effective. Protective factors should be tailored to the specific needs of the individual at-risk.**
- Protective factors are of importance when considering the interaction of diatheses and stress.
- Protective factors can mitigate against the effects of major stressors by providing a buffer that arms the individual with adaptive outlets to deal with stress during moments of crisis/trauma.
- Examples of protective factors include healthy culture (i.e., a supportive work environment); a positive and supportive peer network; resilience training; diet, exercise, and sleep; mindfulness practices; **religious service attendance and spiritual practices**; individual social and emotional competence; and pro-active therapeutic interventions.

A photograph of several lit candles on a table, with the text "Treatment and Pastoral Care" overlaid in the center. The candles are in various stages of being lit, with some showing significant melting. The background is softly blurred, showing more candles and a warm, ambient light. The text is in a clean, white, sans-serif font, centered horizontally and vertically.

Treatment and Pastoral Care

Multidisciplinary Approach

- Psychological Care
- Social Services Support
- Peer Support & Counselors
- Restorative Justice
- **Pastoral / Spiritual Care**



Building Resilience Among Adults Survivors: Pathways to Healing

1. **Traditional cognitive processing therapy – some benefit – mixed results.**
2. **Rapid Eye Movement (REM) therapy**, also known as Eye Movement Desensitization and Reprocessing (EMDR) therapy, is a psychotherapy approach used to treat trauma and other distressing memories.
3. **Restorative Justice and Reconciliation:** promote opportunities for compassion, and understanding through dialogue, mediation, and leadership involvement to achieve healing and accountability.
4. **Support Groups:** Establish support groups to provide survivors, and their families a sense of community, validation, and understanding, reducing feelings of isolation, stigma, and shame.
5. **Self-Care:** Practicing self-care activities such as mindfulness, exercise, healthy eating, and adequate sleep can help reduce stress and improve overall well-being.
6. **Setting Boundaries:** Learning to set and maintain boundaries in relationships can help survivors feel more empowered and in control of their lives.
7. **Education and Awareness:** Educating oneself about the impact of child sexual abuse and raising awareness can help reduce stigma and promote understanding.
8. **Building Supportive Relationships:** Cultivating healthy, supportive relationships with friends, family, and professionals can provide a strong network of support.
9. **Finding Meaning and Purpose:** Engaging in activities that provide a sense of meaning and purpose, such as volunteering or creative pursuits, can foster resilience.
10. **Positive Self-Image:** Working on developing a positive self-image and self-esteem can counteract negative beliefs that may have resulted from the abuse.
11. **Forgiveness:** Forgiveness can lead to reduced feelings of anger, resentment, and hostility, which can contribute to reducing stress, and improving mental health and well-being.

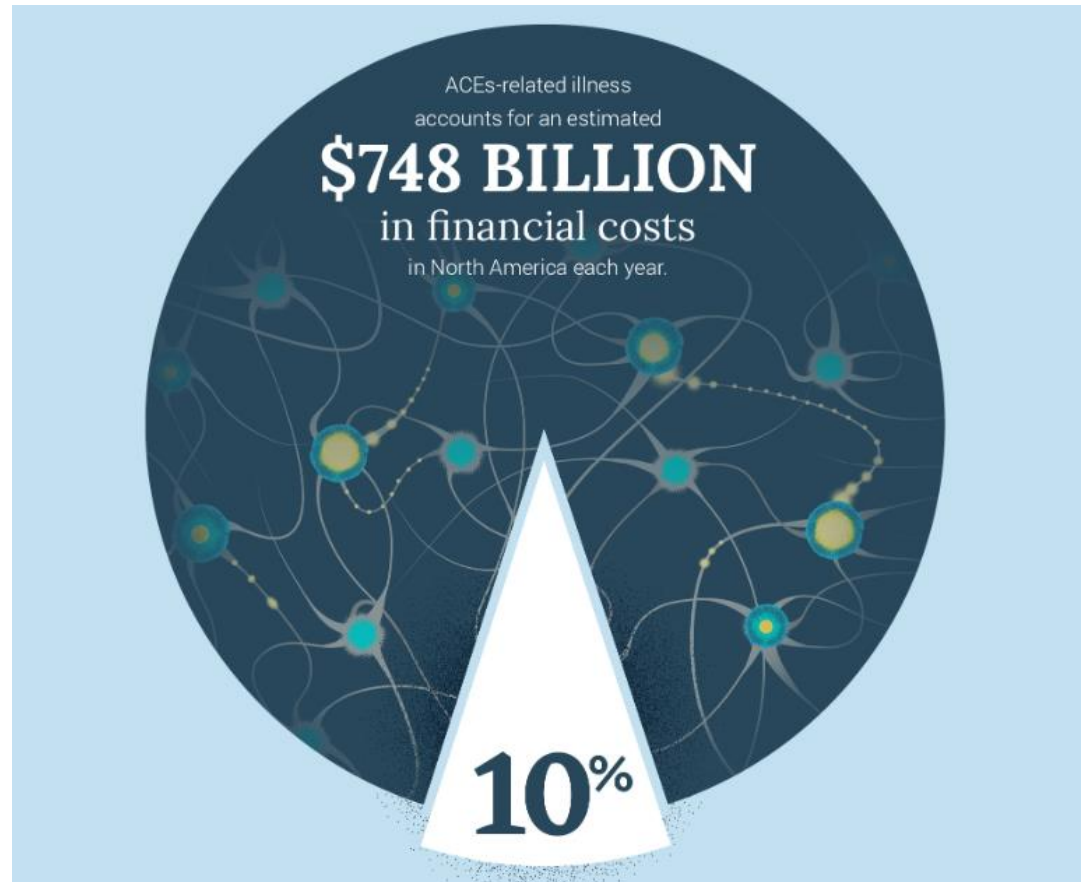
Resources for Supporting Healing

- Additional resources and interventions for addressing ACEs, moral injury and trauma:
 - Addressing Self-loathing, loss of meaning, etc.: (R/S Cognitive Processing Therapy (Harold Koenig, et al. 2023)
 - Addressing betrayal / resentment: Path to REACH Forgiveness (Everett Worthington, PhD) [REACH Forgiveness — Everett Worthington \(evworthington-forgiveness.com\)](http://evworthington-forgiveness.com)
 - Mindfulness Resources (Mind Body Institute)
 - Addressing sadness / mild depression: Feeling Good (David Burns)
 - Addressing Anxiety: *Thriving with Anxiety* (David Rosmarin, MD)
 - Enhancing Self-esteem: VIA Character Strengths (Tayyab Rashid, PhD)



Questions

Reduction in ACEs Could Equate to an Estimated \$56 Billion in Annual Savings at the National Level



Appendix

Adverse Childhood Experience Questionnaire for Adults

California Surgeon General's Clinical Advisory Committee



ACEs Screening

Our relationships and experiences—even those in childhood—can affect our health and well-being. Difficult childhood experiences are very common. Please tell us whether you have had any of the experiences listed below, as they may be affecting your health today or may affect your health in the future. This information will help you and your provider better understand how to work together to support your health and well-being.

Instructions: Below is a list of 10 categories of Adverse Childhood Experiences (ACEs). From the list below, please place a checkmark next to each ACE category that you experienced prior to your 18th birthday. Then, please add up the number of categories of ACEs you experienced and put the *total number* at the bottom.

1. Did you feel that you didn't have enough to eat, had to wear dirty clothes, or had no one to protect or take care of you?	<input type="checkbox"/>
2. Did you lose a parent through divorce, abandonment, death, or other reason?	<input type="checkbox"/>
3. Did you live with anyone who was depressed, mentally ill, or attempted suicide?	<input type="checkbox"/>
4. Did you live with anyone who had a problem with drinking or using drugs, including prescription drugs?	<input type="checkbox"/>
5. Did your parents or adults in your home ever hit, punch, beat, or threaten to harm each other?	<input type="checkbox"/>
6. Did you live with anyone who went to jail or prison?	<input type="checkbox"/>
7. Did a parent or adult in your home ever swear at you, insult you, or put you down?	<input type="checkbox"/>
8. Did a parent or adult in your home ever hit, beat, kick, or physically hurt you in any way?	<input type="checkbox"/>
9. Did you feel that no one in your family loved you or thought you were special?	<input type="checkbox"/>
10. Did you experience unwanted sexual contact (such as fondling or oral/anal/vaginal intercourse/penetration)?	<input type="checkbox"/>
Your ACE score is the total number of checked responses	<input type="checkbox"/>

Do you believe that these experiences have affected your health?



Not Much



Some



A Lot

Experiences in childhood are just one part of a person's life story.
There are many ways to heal throughout one's life.

ACE Screening Tools for Adults

- ACEs Screening Tools for Adults · ACEs Family Health History Questionnaire (Kaiser-CDC)
https://www.cdc.gov/violenceprevention/aces/about.html?CDC_AA_refVal=http%3A%2F%2Fwww.cdc.gov%2Fviolenceprevention%2Facestudy%2Fabout.html
- ACE Questionnaire for Adults <https://www.acesaware.org/screen/screening-tools/>
- BRFSS ACE Module <https://loinc.org/82152-0/>
- The Children's Clinic ACEs Parental Questionnaire https://www.aap.org/en-us/Documents/resilience_ace_screening_parents.pdf
- The Maltreatment and Abuse Chronology of Expose (MACE) Scale for the Retrospective Assessment of Abuse and Neglect During Development
<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4340880/#pone.0117423.s011>
- WHO ACE International Questionnaire (ACE)
https://www.who.int/violence_injury_prevention/violence/activities/adverse_childhood_experiences/en/

Resilience Screening Tools for Adults

- Adult Resilience Measure (ARM-R) <https://cymr.resilienceresearch.org/>
- Brief Resilience Scale (BRS) <https://ogg.osu.edu/media/documents/MB%20Stream/Brief%20Resilience%20Scale.pdf>
- Connor-Davidson Resilience Scale (CD-RISC) <http://www.cd-risc.com/about.php>
- Health Resiliency Stress Questionnaire (HRSQ): [150.0-Rampe 5-31-HRSQ OpenSourceOpenAge WITH Instructions 1-2019.pdf \(acha.org\)](#)
- Resilience Scale for Adults (RSA) <https://www.hsph.harvard.edu/health-happiness/resilience-scale-for-adults-rsa/>
- The Resilience Scale (True Resilience Scale) <https://www.resiliencecenter.com/products/resilience-scales-and-tools-for-research/the-original-resiliencescale/#:~:text=The%20Resilience%20Scale%20measures%20what,It%20be%20to%20handle%20stress>

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