

Integrating Care to Improve Health Outcomes: Trauma, Resilience and Mental Health

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Advocate Health Care



Stakeholder Health: Insights from New Systems of Health



Stakeholder Health
Insights from New Systems of Health

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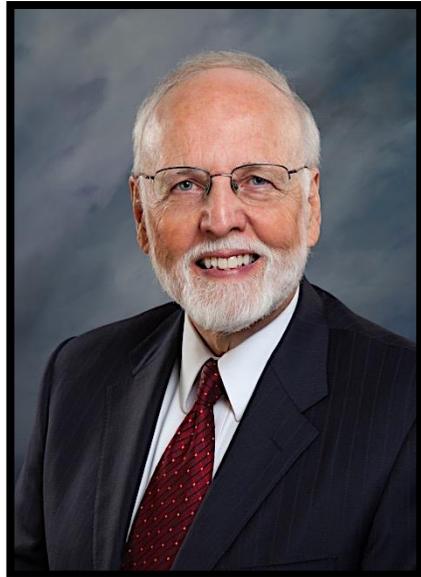
Developed with Support from the Robert Wood Johnson Foundation

Overview of Stakeholder Health Learning Collaborative

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Chapter 7: Integrating Care to Improve Health Outcomes: Trauma, Resilience and Mental Health



**Rev. Dr. Kirsten Peachey and
Dr. Teresa Cutts**



Margo DeMont, Dory Lawrence, Bryan Hatcher, Jane Berz and Lance Lawrence

Chapter 7: Integrating Care to Improve Health Outcomes: Trauma, Resilience and Mental Health*

- **Trauma is a prevalent experience across contexts—Historical, Community, Individual**
- **Traumatic experience shifts brain functioning; Hypothalamic–Pituitary–Adrenal (HPA) Axis; genetic structure**
- **The cost of untreated trauma to people’s health, to health care, to society is profound. E.g. Lifetime cost of \$210,012 for each victim of child maltreatment. Mental Health costs are particularly high.**
- **Brain science tells us that resilience trumps trauma. Brain plasticity means there is hope.**
- **Core Practices: Relational: Positive adult-child relationships, Trauma-Informed Care; Therapies: Focused Cognitive Behavioral Therapy (TF-CBT), Eye-Movement Desensitization and Reprocessing (EMDR); Tools: SBIRT, AUDIT, PHQ-9.**
- **Integrating care creates positive outcomes. Connect behavioral and physical medicine; clinical and community strategies.**
- **Health care, faith communities and other partners can work to create loving communities where children do not experience trauma.**
- **Specific case study from Advocate Health Care, Chicago, IL**

*Chapter Citation: Peachey, K., Cutts, T., DeMont, M., Lawrence, D., Hatcher, B., Berz, J., & Laurence, L. (2016). Integrating Care to Improve Health Outcomes: Trauma, Resilience and Mental Health. In Cutts, T. & Cochrane, J. R. (Eds.), *Stakeholder Health: Insights from New Systems of Health* (pp. 97-124). USA: Stakeholder Health.

Trauma and Resilience Contexts

- Individual
- Community
- Historical

Historical Trauma

- Historical trauma describes the condition in which an entire population is subjugated over an extended period of time.
 - Native Americans
 - Palestinians
 - Holocaust survivors
 - African Americans
- Historical trauma studies that cross historical periods have found an increased disease burden in those with immediate experience
- Trans-generational transmission of poorer health outcomes is a particularly important research finding

Community Trauma

- Philadelphia Urban ACE Study
 - Neighborhood safety and trust
 - Felt safe in your neighborhood
 - People in your neighborhood looked out for each other, stood up for each other, and could be trusted
 - Bullying
 - Bullied by a peer or classmate
 - Witness violence
 - Saw or heard someone being beaten up, stabbed, or shot in real life
 - Racism
 - Treated badly or unfairly because of your race or ethnicity
 - Foster care
 - Ever in foster care

ACES Plus Community Trauma: The Philadelphia Urban Ace Survey

- 14 Questions beyond core ACE, assessing community trauma (racism, witnessing violence, living in unsafe neighborhood, experiencing bullying, living in foster care)
- Adults experiencing at least one Expanded ACE rocketed to 83.2% (vs. original of 66%)
- During childhood, 40% of adults saw or heard violence in their community; over 33% reporting feeling discrimination (African Americans reported that at 50%)
- Just under a third didn't feel safe or that their neighbors looked out for them

Community Trauma



Community Health Assets Mapping Partnership (CHAMP)

- Initial way of making Assets Visible and engaging community members
- Creating a platform for dialogue around past historical trauma impacting the community
- Signal to community that the health system or other group is interested in a different type of relationship and partnering
- Those who receive services and provide services make visible tangible and intangible assets, then come back to interpret results and plan for the community to move forward
- Chapter 6 in Book



Individual Trauma

ABUSE



Physical



Emotional



Sexual

NEGLECT



Physical



Emotional

HOUSEHOLD DYSFUNCTION



Mental Illness



Incarcerated Relative



Mother treated violently



Substance Abuse



Divorce

Trauma is Prevalent

- About two-thirds of the adults in the study had experienced one or more types of adverse childhood experiences.
- Of those, 87 percent had experienced 2 or more types.
- Women are twice as likely as men to have more than five ACEs.
- Philadelphia Urban ACE Survey
 - 40.5% of Philadelphia adults witnessed violence while growing up, which includes seeing or hearing someone being beaten, stabbed or shot.
 - Over one-third (34.5%) of adults reported experiencing discrimination based on their race or ethnicity
 - Almost three in ten adults (27.3%) reported having felt unsafe in their neighborhoods or not trusting their neighbors during childhood.
 - Over 37% of Philadelphia respondents reported four or more ACEs.
 - Percentage of adults who experienced at least one ACE increased to 83.2% when the urban ACE survey indicators were added, compared to about 66% in the original study.
 - 63% of adults had a higher ACE score when including the urban ACE items.

Trauma Gets Under Our Skin

- Traumatic experience shifts brain functioning
 - Any action or thought that is repeated often, whether positive or negative, becomes “hard-wired”
 - Survivors of trauma have shown smaller brain volumes and alterations in the functioning of the neocortex and the visual and auditory cortex.
 - Childhood trauma may have profound negative effects on executive function, attention, memory, and visuospatial function.
- Hypothalamic–Pituitary–Adrenal (HPA) Axis
 - Toxic stress (unregulated and ongoing release of stress hormones such as cortisol and adrenaline) can activate the Hypothalamic–Pituitary–Adrenal (HPA) Axis that regulates
 - Digestion
 - Immune system
 - Mood and emotions
 - How we store and expend energy.
 - An activated HPA Axis can weaken body defenses and compromise the immune system’s ability to protect from infection, cancer or autoimmune diseases and can also raise blood pressure, promote plaque formation in arteries and lead to neurological changes that create depressive and post-traumatic stress illnesses.
- Genetic structure
 - Epigenetics –changes in the expression of our genetic structure.
 - DNA remains the same, but our life experiences and the physical environment in which we live can turn certain features of our genes on and off or change the way they function.
 - Generational effects

Adverse Childhood Experience* Categories (Birth to 18)	ACE	Impact of Trauma and Health Risk Behaviors to Ease the Pain	Long-Term Consequences of Unaddressed Trauma (ACEs)
<p><i>Abuse of Child</i></p> <ul style="list-style-type: none"> ■ Emotional abuse ■ Physical abuse ■ Contact Sexual abuse <p><i>Trauma in Child’s Household Environment</i></p> <ul style="list-style-type: none"> ■ Alcohol and/or Drug User ■ Chronically depressed, emotionally disturbed or suicidal household member ■ Mother treated violently ■ Imprisoned household member ■ Not raised by both biological parents (Loss of parent – best by death unless suicide, - Worst by abandonment) <p><i>Neglect of Child</i></p> <ul style="list-style-type: none"> ■ Physical neglect ■ Emotional neglect <p>* Above types of ACEs are the “heavy end” of abuse. *1 type = ACE score of 1</p>		<p><i>Neurobiologic Effects of Trauma</i></p> <ul style="list-style-type: none"> ■ Disrupted neuro-development ■ Difficulty controlling anger-rage ■ Hallucinations ■ Depression - other MH Disorders ■ Panic reactions ■ Anxiety ■ Multiple (6+) somatic problems ■ Sleep problems ■ Impaired memory ■ Flashbacks ■ Dissociation <p><i>Health Risk Behaviors</i></p> <ul style="list-style-type: none"> ■ Smoking ■ Severe obesity ■ Physical inactivity ■ Suicide attempts ■ Alcoholism ■ Drug abuse ■ 50+ sex partners ■ Repetition of original trauma ■ Self Injury ■ Eating disorders ■ Perpetrate interpersonal violence 	<p><i>Disease and Disability</i></p> <ul style="list-style-type: none"> ■ Ischemic heart disease ■ Cancer ■ Chronic lung disease ■ Chronic emphysema ■ Asthma ■ Liver disease ■ Skeletal fractures ■ Poor self rated health ■ Sexually transmitted disease ■ HIV/AIDS <p><i>Serious Social Problems</i></p> <ul style="list-style-type: none"> ■ Homelessness ■ Prostitution ■ Delinquency, violence, criminal ■ Inability to sustain employment ■ Re-victimization: rape, DV, bullying ■ Compromised ability to parent ■ Negative alterations in self perceptions and relationships with others ■ Altered systems of meaning ■ Intergenerational trauma ■ Long-term use of multiple human service systems

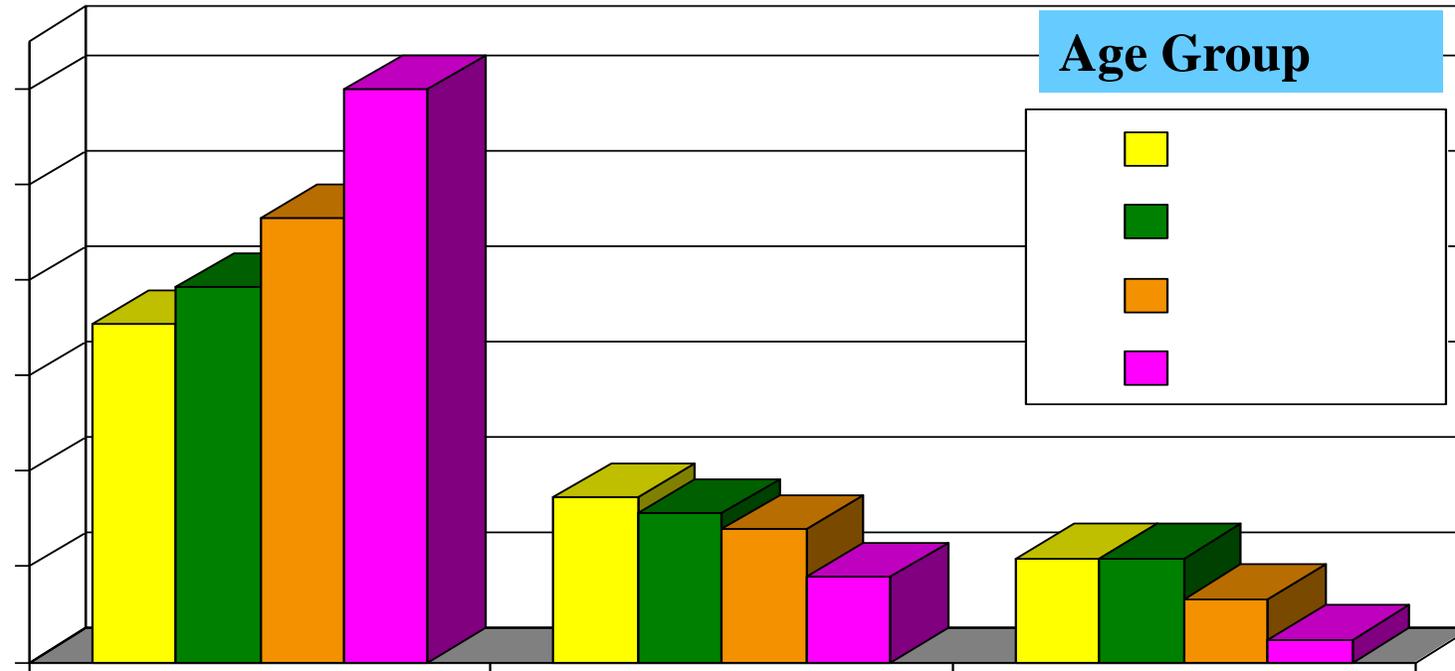


Mechanisms by Which Adverse Childhood Experiences Influence Health and Well-being Throughout the Lifespan

Health Consequences of Trauma

- 4 or more ACEs
 - 4 to 12 times more likely to have increased health risks for alcoholism, drug abuse, depression, and suicide attempt
 - Twice as likely to be smokers
 - 12 times more likely to have attempted suicide
 - 10 times more likely to have injected street drugs
 - 2 times greater risk of hepatitis
 - 4 times more likely to have chronic obstructive pulmonary disease (emphysema or chronic bronchitis)
 - 2.5 times higher risk for sexually-transmitted disease.
- Even 2 or more ACEs associated with
 - 70% increased risk for hospitalization for autoimmune disease
 - 100% increased risk for rheumatic diseases
 - Higher incidence of social problems—absences from work, injuries, marriages
- People with six or more adverse experiences die on average 20 years sooner than those with no ACEs.

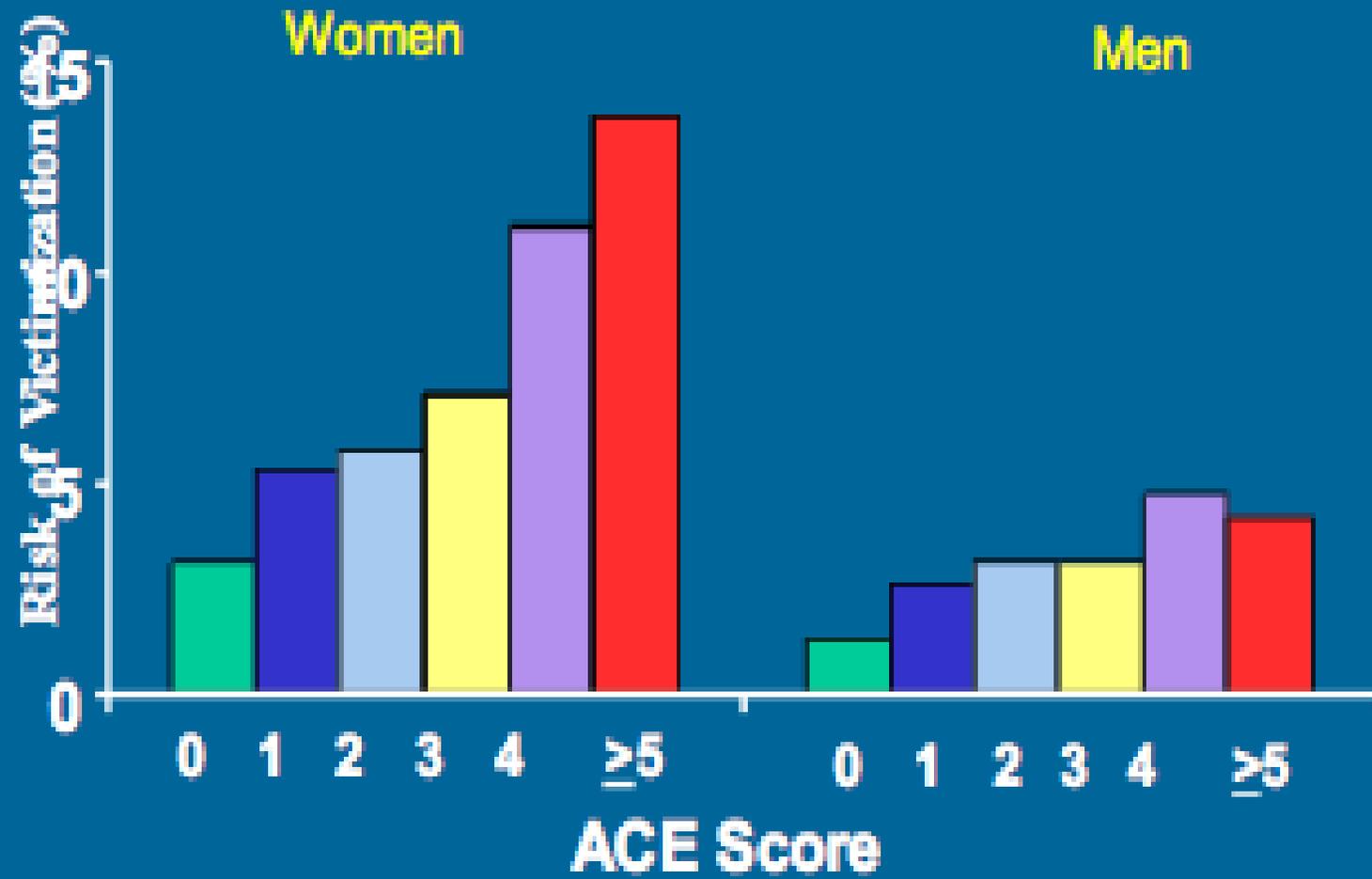
Effect of ACEs on Mortality



0 ACE 60% live to 65

4 ACE less than 3% live to 65

ACE Score and the Risk of Being a Victim of Domestic Violence

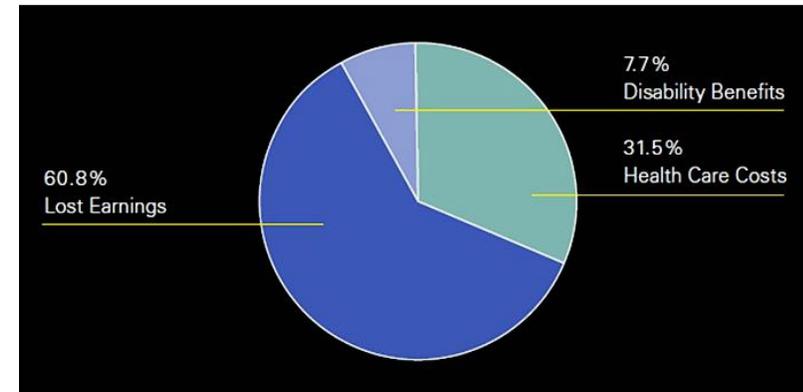


Costs of Untreated Trauma

- CDC study--total lifetime estimated financial costs associated with just one year of confirmed cases of child maltreatment (physical abuse, sexual abuse, psychological abuse and neglect) is approximately \$124 billion.
 - Confirmed child maltreatment cases—1,740 fatal and 579,000 non-fatal—for a 12-month period.
 - Each death due to child maltreatment had a lifetime cost of about \$1.3 million, almost all of it in money that the child would have earned over a lifetime if he or she had lived.
 - Lifetime cost for each victim of child maltreatment who lived was \$210,012. Comparable to other costly health conditions such as stroke with a lifetime cost per person estimated at \$159,846 or type 2 diabetes, estimated between \$181,000 and \$253,000.
- Mental Health costs are particularly high.

Mental Health Costs

- Costs of Mental Health Care : AHRQ (2010) study estimates a cost of **\$57.5B in 2006 and rising.....**
- Claims for depression, anxiety and stress cost US employers an estimated **\$344B each year** (Insel, 2008) due to lost productivity and costs of “presenteeism”
- Estimates in 2007-08 were that severe mental illness costs in the US were ~\$308B due to 60.8% lost earnings, 31.5% direct health care costs and 7.7% disability benefits (Insel, 20078; Mark et al., 2007); slide reproduced courtesy of Dr. Thom Bornemman



- **NOT TO MENTION IMPAIRED QUALITY OF LIFE FOR INDIVIDUALS!!!!**
- **BUT, why should hospitals care (besides the fact that it’s the “right thing to do”)?**

Emergency Department Use, Mental Health and Substance Abuse

Dealing with mental illness/substance abuse and those who have experienced significant trauma is critically important, especially in front-line health system settings, like emergency rooms

- Total annual visits to ERs increased 23% from 1997-2007 (Tang et al, 2010) , while from 1992-2003 mental health-related ER visits 75% (Salinsky & Loftis, 2007)
- Almost 12M ER visits in the US in 2007 were due to mental health or substance use problems in adults.
 - Of these 12M visits, 63.7% were related to mental health issues, 24.4% involved substance use disorders and 11.9% involved co-occurring psychiatric and substance use disorders (AHRQ, 2010)
- As part of the North Carolina Disease Event Tracking an Epidemiologic Collection Tool (NC DETECT) study from 2008-2010, nearly 10% of all ED visits had one or more mental health diagnoses assigned and rate of mental health related ED visits increased 7 time more than the overall rate of ED visits in the two year study period (CDC , 2013)

Hopeful News

We can prevent some of mental illness and substance abuse through evidence-based practices implemented at community level.

- For example, Munoz et al. (2012) suggest that 22-38% of initial major depressive episodes could be prevented using these methods.
- Medical cost offsets from behavioral health treatment can be obtained for both high and lower level users of services
- Building community capacity through training can build a better safety net
- Not to mention **NEUROPLASTICITY.....our biggest asset.**

Neuroplasticity

Resilience Overcomes Trauma

- Our brains change throughout our lifetime in response to our experiences, choices and repeated thoughts.
 - E. g. If a person is exposed to ongoing trauma, the brain will respond with a heightened stress response as a survival mechanism.
- If traumatic experiences shift the way that our genome functions, restorative experiences can correct or redirect genetic functioning.
- Ongoing exposure to supportive and caring environments will trigger resilience and healing.

Resilience

- Resilience is “the process of adapting well in the face of adversity, trauma, tragedy, threats or significant sources of stress — such as family and relationship problems, serious health problems or workplace and financial stressors. It means "bouncing back" from difficult experiences.”

(American Psychological Association. The road to resilience. [apa.org/helpcenter/road-resilience.aspx](https://www.apa.org/helpcenter/road-resilience.aspx).)

- Strongest influencers of resilience—
 - psychological factors – the way we think
 - relational factors—the connections we have with others
- Protective factors are positive qualities located within the cognitive, emotional, environmental, social, and spiritual experience of the child that are associated with resilience and, when combined, facilitate resilience.

Community is Key to Resilience

- Studies support the function of social support in buffering or protecting against the effects of stress.
 - Quality more important than quantity
 - Benefits observed across diverse populations—children, veterans, unemployed workers, mothers of children with serious illnesses
 - Improves functioning and increases recovery for people with depression
 - Vietnam veterans with high levels of social support were 180% less likely to develop PTSD than counterparts who did not have strong social connections
- A positive relationship with a caring adult is one of the most effective strategies for mediating the impact of ACEs
 - Compassionate response to students' trauma histories reduced out of school suspensions by 80%.

Community is Key to Resilience

- How we live together matters
 - Social and economic opportunity
 - Safety from violence
 - Access to nature and green spaces
 - Availability of affordable fresh and healthy foods
 - Trusting relationships among neighbors
 - Stimulating and high-quality education
- The findings of the Philadelphia ACE study suggest the need for services that address the unique environmental stressors experienced in urban neighborhoods to mitigate their impact on individuals and prevent ACEs.
- Historical trauma studies indicate transgenerational effects of trauma that need to be addressed at a structural level.

Advocate Health Care Case Study

- Becoming a Trauma Informed Children's Hospital and Community
- Childhood Trauma and Treatment Program
 - Child & Adolescent Trauma and Foster Care Counseling
 - Psychological Trauma Services
 - Abuse Treatment - 20 Sessions
 - Counseling for Children with Sexual Behavior Problems
 - Prevention: You Can Do It! A look into the "7 Steps to Prevention" from Family Time Magazine
 - Stewards of Children Workshop



THANK YOU for Imagining a Beloved Community for Integrated Health!

How might YOU take parts of these models to your work?

- Q&A? Words of Wisdom?

Teresa Cutts

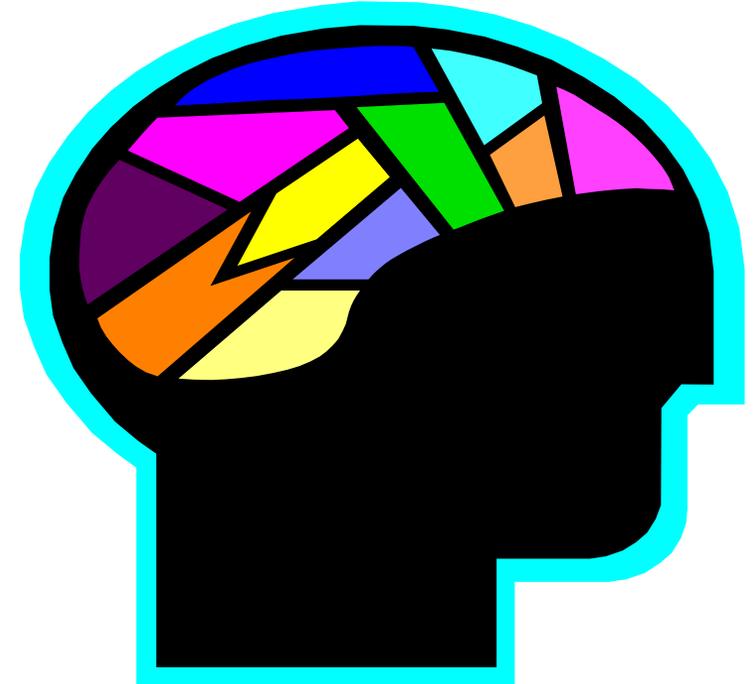
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References

- Agency for Healthcare Research and Quality (AHRQ). (2010). Mental Disorders and/or Substance Abuse Related to One of Every Eight Emergency Department Cases. *AHRQ News and Numbers*, July 8. Rockville, MD. Retrieved from <http://www.ahrq.gov/news/nn/nn070810.htm>.
- Chiles, J. A., Lambert, M. J. & Hatch, A. L. (1999), The Impact of Psychological Interventions on Medical Cost Offset: A Meta-analytic Review. *Clinical Psychology: Science and Practice*, 6: 204–220.
- Centers for Disease Control and Prevention. Morbidity and Mortality Weekly. (2013). Emergency Department Visits by Patients with Mental Health Disorders—North Carolina, 2008–2010, 62 (23): 469-472.
- Davidson, R. J. & McEwen, B. S. (2012). Social influences on neuroplasticity: Stress and interventions to promote well-being. *Nature Neuroscience*, 15(5): 689-95.
- Dias, B.G. & Ressler, K.J. (2014). Parental olfactory experience influences behavior and neural structure in subsequent generations, *Nature Neuroscience*. 17: 89–96.
- Federal Roundtable on Women and Trauma, April 29, 2010.
- Felitti, V., Anda, R., Nordenberg, D., Williamson, D., Spitz, A., Edwards, V., Koss, M., & Marks, J. (1998). Relationship of Childhood Abuse and Household Dysfunction to Many of the Leading Causes of Death in Adults The Adverse Childhood Experiences (ACE) Study. *American Journal of Preventive Medicine*. 14(4): 245-258.
- Felitti, V. (2002). The Relationship of Adverse Childhood Experiences to Adult Health: Turning gold into lead. *Z Psychsom Med Psychother*.48(4): 359-369.
- Felitti, V. & Anda, R. (2009). The Relationship of Adverse Childhood Experiences to Adult Medical Disease, Psychiatric Disorders, and Sexual Behavior: Implications for Healthcare in *The Hidden Epidemic: The Impact of Early Life Trauma on Health and Disease*. Lanius R & Vermetten E, editors. Cambridge University Press.
- <http://www.npr.org/sections/health-shots/2015/03/10/377566905/a-sheriff-and-a-doctor-team-up-to-map-childhood-trauma>
- Insel, T.R. (2008). Assessing the economic costs of serious mental illness. *American Journal of Psychiatry*. 165(6):703-711. PMID: 18519528.
- Institute of Medicine (IOM) (2009). *Preventing Mental, Emotional, Behavioral Disorders Among Young People: Progress and Possibilities*. Rockville, MD.
- Laurence, L. (2013). Improving Patient Outcomes: The Medical Cost-Onset Effect & Value of Psychological Services. Keynote presentation at the Tennessee Psychological Association annual conference, November, Nashville, TN.
- Mark, T., Levit, K., Coffey, R., McKusick, D., Harwood, H., King, E., Bouchery, E., Genuardi, J., Vandivort-Warren, R., Buck, J., & Ryan, K. (2007). National Expenditures for Mental Health Services and Substance Abuse Treatment, 1993–2003, *SAMHSA publication number SMA 07-4227*. Rockville, MD: Substance Abuse and Mental Health Services Administration.
- Muñoz, R. F., Beardslee, W. R., & Leykin, Y. (2012). Major Depression Can Be Prevented. *The American Psychologist*, 67(4): 285–295.
- Salinsky, E., & Loftis, C. (2007). Shrinking Inpatient Psychiatric Capacity: Cause for Celebration or Concern? *National Health Policy Forum, Issues Brief 823: 1-21*, George Washington University, Washington, DC.
- Soni, Anita. (2009). *The Five Most Costly Conditions, 1996 and 2006: Estimates for the U.S. Civilian Noninstitutionalized Population*. Statistical Brief #248. Agency for Healthcare Research and Quality, Rockville, MD. http://www.meps.ahrq.gov/mepsweb/data_files/publications/st248/stat248.pdf .
- Sotero, M. (2006). A Conceptual Model of Historical Trauma: Implications for Public Health Practice and Research. *Journal of Health Disparities Research and Practice*, Fall 1 (1): 93–108.
- Tang, N., Stein, J., Hsia, R.Y., Maselli, J.H., & Gonzales, R. (2010). Trends and characteristics of US emergency department visits, 1997-2007. *JAMA*, 304(6): 664-70.
- The Philadelphia Urban ACE Study. (2013). Retrieved from <http://www.instituteforsafefamilies.org/philadelphia-urban-ace-study> .