
Social Determinants and their Impact on Childhood Mental Health

Paula Marie Powe, MD
Assistant Professor of Psychiatry
Medical Director, Matilda Theiss Early Child
Development and School-Based Behavioral
Health

STAR Conference
5/14/2021

1

OBJECTIVES

- Briefly review the definition and manifestations of trauma
- Discuss social determinants and their relationship to trauma
- Define Toxic Stress and its long-term impacts
- Discuss resilience factors, trauma-informed practices, and considerations for policy change

2

MENTAL HEALTH vs. MENTAL ILLNESS

- Mental Health
 - “A state of [cognitive, emotional, and behavioral] wellbeing in which an individual realizes his or her own abilities, can cope with the normal stresses of life, can work productively, and is able to make a contribution to his or her community.”
 - World Health Organization (WHO)
- Mental Illness
 - Diagnosable health conditions, according to DSM Criteria, that involve changes in cognition, emotion, or behavior and cause distress and/or functional impairment

3

WHAT IS TRAUMA?

- A frightening, dangerous, or violent event or circumstance
 - Threatens life or emotional or body integrity
- Can have long-lasting, adverse effects on
 - Learning
 - Relationships
 - Well-being
 - Mental
 - Physical
 - Social
 - Emotional
 - Spiritual

4

RESPONSES TO TRAUMATIC EVENTS

- Fear, terror, horror
- Anger, rage
- Aggression, violence
- Guilt, shame, self-blame
- Physical / physiologic symptoms
- Loss of control, powerlessness
- Shock, dissociation

5

WHAT IS TRAUMA TO YOU?

- Physical abuse
- Sexual abuse
- Emotional abuse
- Physical neglect
- Emotional neglect
- Household mental illness
- Household substance use
- Single-parenthood
- Household incarceration
- Domestic violence

6

WHAT ARE SOCIAL DETERMINANTS OF HEALTH / MENTAL HEALTH?



Childhood experiences



Housing



Education



Social support



Family income



Employment



Our communities



Access to health services

7

PITTSBURGH: A CITY OF TWO TALES



8

PITTSBURGH - A CITY OF TWO TALES

- [WalletHub](#)
 - Pittsburgh topped the list of best cities for football fans
- [Livability.com](#)
 - Pittsburgh named one of the Top 100 Best Places to Live
- [The Economist Intelligence Unit](#)
 - 3rd most livable city in the United States
- [The Economist of London](#)
 - 2nd Most Livable City in the Continental US
- [Lending Tree](#)
 - Pittsburgh is ranked among the top 3 best cities in the US for first-time homebuyers
- [Zillow](#)
 - #1 city for the most affordable rent
- [LinkedIn's Economic Graph team](#)
 - 7th best city in the US to launch a career

9

“Pittsburgh’s Inequality Across Gender and Race”

- **Black women in Pittsburgh**
 - Higher rates of maternal mortality
 - Higher poverty
 - Lower rates of employment
 - Lower rates of college readiness
- **Black men in Pittsburgh**
 - Higher rates of occupational segregation
 - Higher rates of homicides
 - Higher rates of cancer
 - Higher rates of cardiovascular disease

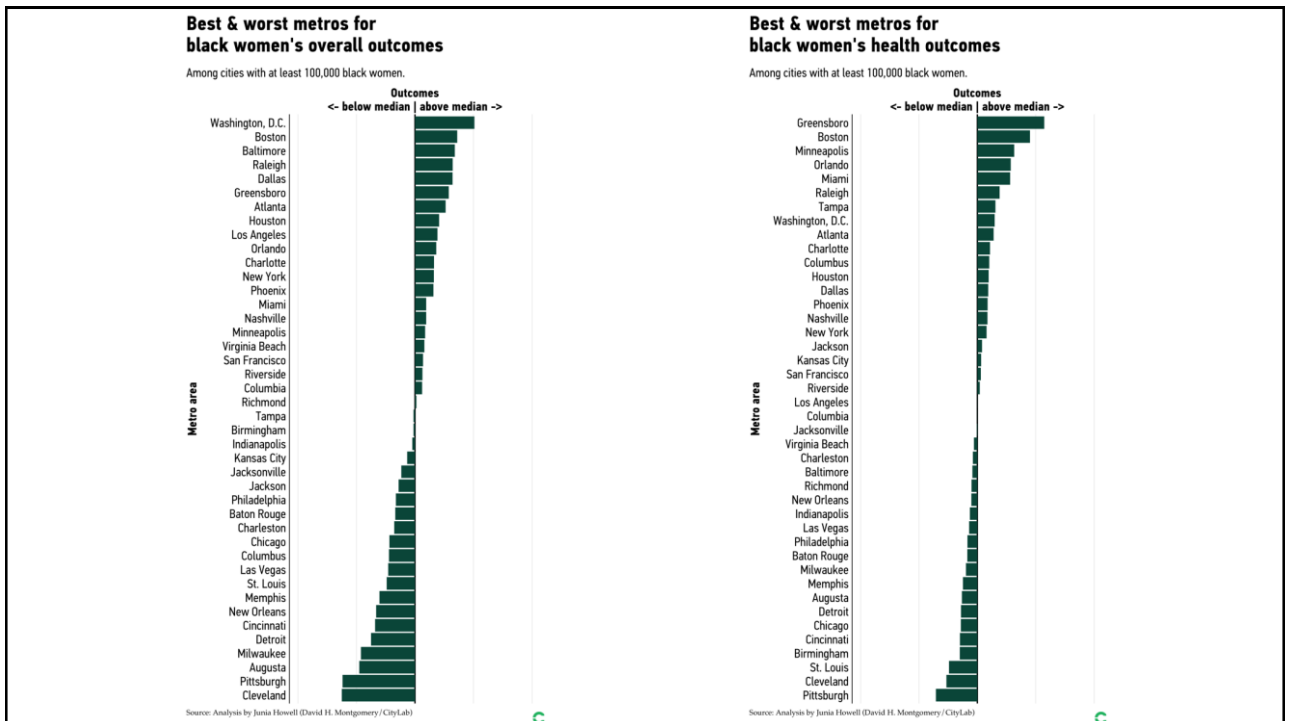
10

FROM THE AUTHOR

“What this means is that if Black residents got up today and left [Pittsburgh] and moved to the majority of any other cities in the U.S., automatically by just moving their life expectancy would go up, their income would go up, their educational opportunities for their children would go up, as well as their employment.”

- Junia Howell, Assistant Professor of Sociology, University of Pittsburgh

11



12

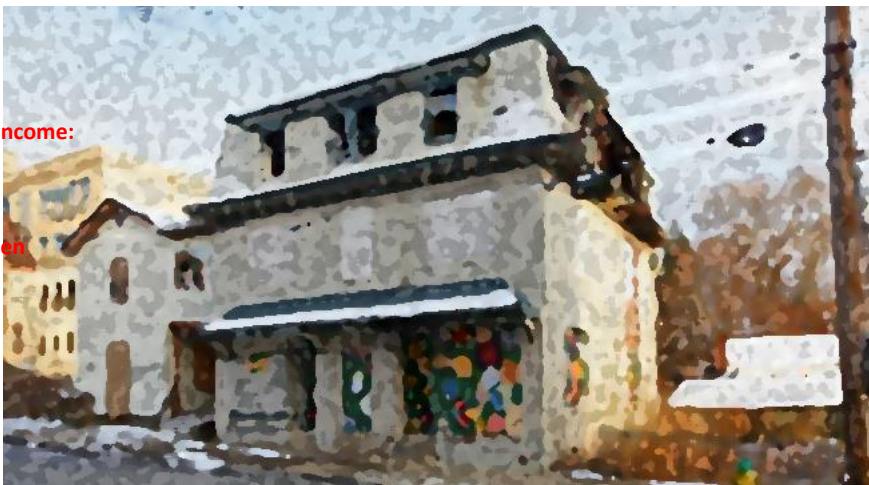
SOCIAL DETERMINANTS: POVERTY



13

SOCIAL DETERMINANTS: POVERTY

Population:
~300K
Demographics:
~23% AA
Median household income:
Whites: \$59K
Blacks: \$30K
Poverty:
~40% of AA women



14

SOCIAL DETERMINANTS: POVERTY

- Poverty increases stress
- Bidirectional relationship between mental illness and poverty
- Social, emotional, and behavioral issues inversely related to SES
- Unsafe housing / housing insecurity
- Poor access to healthy food
- Limited resources in public schools
- Fear of violence, crime, drug use
- Stressful home environments not conducive to learning

15

SOCIAL DETERMINANTS: EDUCATION

Rank 2020	School district	County	Rank 2019	Budget 2019 - 20	Enrollment, 2018 - 2019
1	Upper St. Clair School District	Allegheny	1	\$85,642,128	4,055
2	Fox Chapel Area School District	Allegheny	2	\$103,803,074	4,016
3	Mt. Lebanon School District	Allegheny	4	\$102,625,872	5,521
4	Peters Township School District	Washington	5	\$68,161,653	4,070
5	Hampton Township School District	Allegheny	6	\$54,074,418	2,798
6	South Fayette Township School District	Allegheny	3	\$62,350,941	3,368
7	North Allegheny School District	Allegheny	7	\$175,885,519	8,493

88	Pittsburgh Public Schools	Allegheny	88	\$665,600,000	22,934
89	Highlands School District	Allegheny	90	\$45,370,165	2,520
90	Big Beaver Falls Area School District	Beaver	87	\$30,240,371	1,710

16

SOCIAL DETERMINANTS: EDUCATION



Overall Niche Grade

How are grades calculated?
Data Sources

A+ Academics

A+ Teachers

A+ Clubs & Activities

A+ Administration

A+ Food

C+ Diversity

A+ College Prep

A+ Health & Safety

B+ Sports

A+ Resources & Facilities

Fox Chapel; Source: <https://www.niche.com/k12/d/fox-chapel-area-school-district-pa/>

17

SOCIAL DETERMINANTS: EDUCATION



Overall Niche Grade

How are grades calculated?
Data Sources

A+ Academics

A+ Teachers

A+ Clubs & Activities

A+ Administration

A+ Food

C Diversity

A+ College Prep

A+ Health & Safety

A Sports

A+ Resources & Facilities

Mount Lebanon; Source: <https://www.niche.com/k12/d/mt-lebanon-school-district-pa/>

18

SOCIAL DETERMINANTS: EDUCATION

B-

Overall Niche Grade

How are grades calculated?
Data Sources

C+

Academics

A-

Diversity

B+

Teachers

B-

College Prep

B

Clubs & Activities

B-

Health & Safety

B-

Administration

C+

Sports

C-

Food

B+

Resources & Facilities

Pittsburgh Public; Source: <https://www.niche.com/k12/d/pittsburgh-public-schools-pa/>

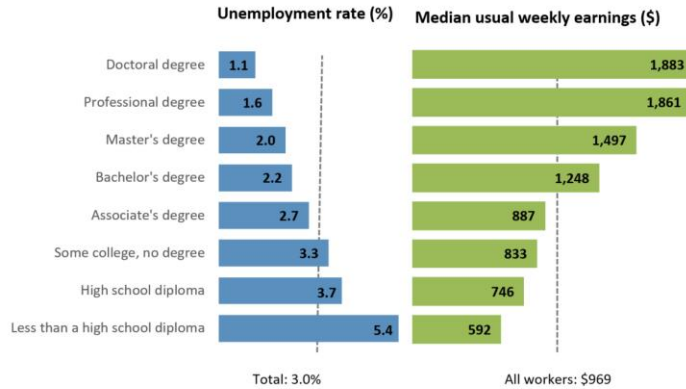
19

SOCIAL DETERMINANTS: EDUCATION

- Preschool expulsion rates are 89% higher when there's no regular access to psychiatrist or psychologist
- Being at risk for mental health problems in 1st grade leads to a 5% drop in academic performance in just two years
- Special education students are suspended/expelled at higher rates
- Fewer years of education → poor health → shorter lives
- Low education → increased crime
 - 68% of state prison inmates did not complete high school

20

Unemployment rates and earnings by educational attainment, 2019



Note: Data are for persons age 25 and over. Earnings are for full-time wage and salary workers.
Source: U.S. Bureau of Labor Statistics, Current Population Survey.

21

SOCIAL DETERMINANTS: EMPLOYMENT

- Having the opportunity to work is critical for staying out of poverty
- Employment provides sense of self-efficacy and control
- In Pittsburgh, Black women make \$0.54 for every White man's \$1.00
- Black men in Pittsburgh are more likely to be unemployed and actively looking for work

22

SOCIAL DETERMINANTS: EMPLOYMENT

- Anti-Drug Abuse Act of 1986
 - 5-year mandatory minimum sentence
 - 5 grams of crack cocaine
 - 500 grams of powder cocaine
- Many companies disqualify convicted felons from job opportunities
- In many states, felons don't qualify for government assistance
- Unemployment has a direct relationship with recidivism

23

SOCIAL DETERMINANTS: CHILDHOOD EXPERIENCES – Stress

- Positive
 - Brief, mild hormonal elevations
- Tolerable
 - Serious but temporary hormonal elevations
 - Buffered by supportive relationships
- Toxic
 - Prolonged activation of stress response
 - No buffer or protective relationships

24

SOCIAL DETERMINANTS: CHILDHOOD EXPERIENCES – Toxic Stress

- Response to “strong, frequent, and/or prolonged adversity” **in the absence of adequate support**
- Related to attachment
- Overstimulation of the body’s natural stress response
 - Altered DNA expression
 - Altered brain development

25

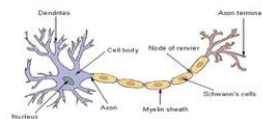
SOCIAL DETERMINANTS: CHILDHOOD EXPERIENCES

- Brains are built over time
 - Prenatal to adult
- Majority in earliest years
 - 90% adult volume by age 3 years
- Genes + Environment

The Developing Brain

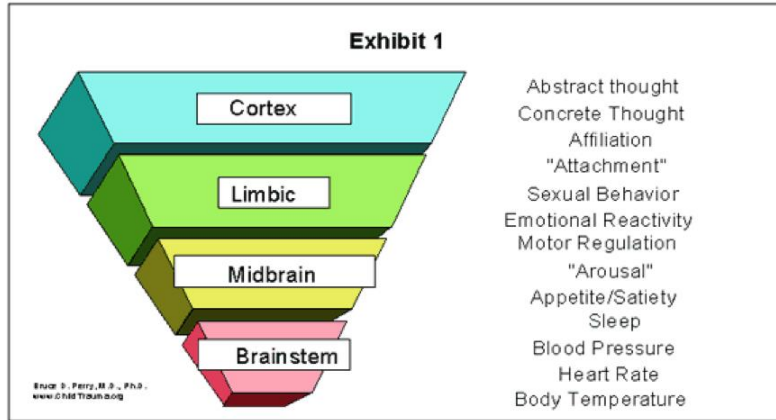


- Brains are made of nerve cells or **neurons**.



26

SOCIAL DETERMINANTS: CHILDHOOD EXPERIENCES

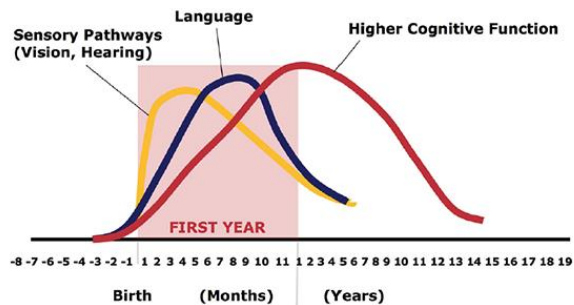


27

SOCIAL DETERMINANTS: CHILDHOOD EXPERIENCES

Timed and Sensitive Periods

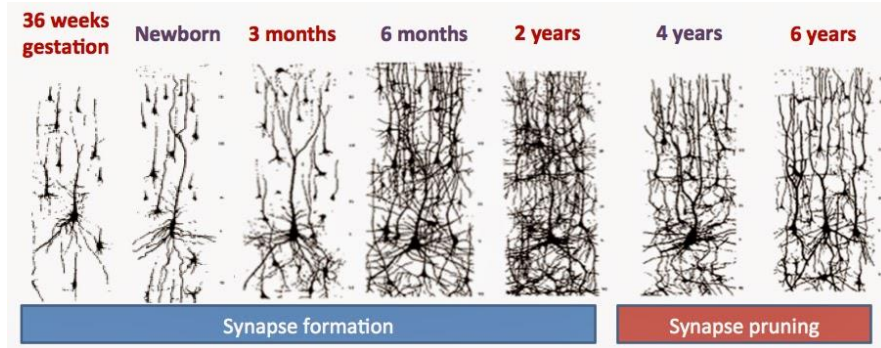
Human Brain Development
Neural Connections for Different Functions Develop Sequentially



C.A. Nelson (2000). Credit: Center on the Developing Child

28

SOCIAL DETERMINANTS: CHILDHOOD EXPERIENCES

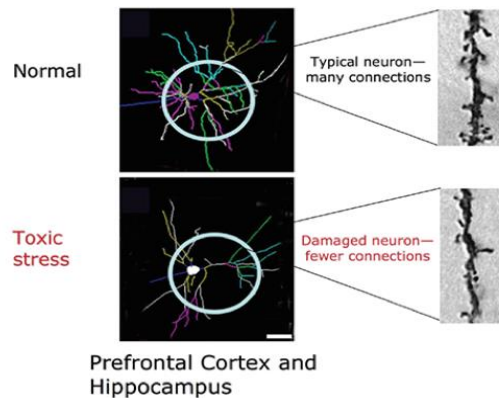


Bransford. Credit: https://ebrary.net/31354/sociology/what_know

29

SOCIAL DETERMINANTS: CHILDHOOD EXPERIENCES – Toxic Stress

Persistent Stress Changes Brain Architecture



Radley et al (2004); Bock et al (2005). Credit: Center on the Developing Child

30

SOCIAL DETERMINANTS: CHILDHOOD EXPERIENCES – Toxic Stress

- Executive function deficits
 - Attention Deficit Hyperactivity Disorder
 - Impulse-Control Disorders
 - Disruptive Behavior Disorders
 - Emotional Dysregulation
 - Substance Use Disorders
 - Cognitive Delays

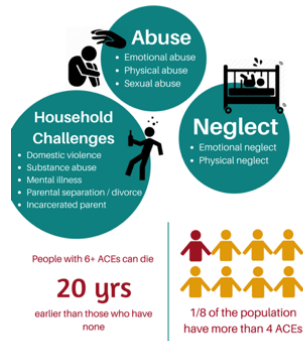
31

SOCIAL DETERMINANTS: CHILDHOOD EXPERIENCES - ACEs

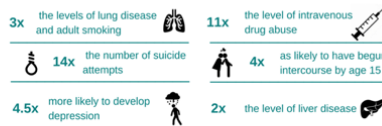
Adverse Childhood Experiences

Experiences

Traumatic events that can have negative, lasting effects on health and wellbeing



4 or more ACEs



“Adverse childhood experiences are the single greatest unaddressed public health threat facing our nation today”

Dr. Robert Block, the former President of the American Academy of Pediatrics

67% of the population have at least 1 ACE



www.1030.org.uk @1030Campaign

32

WHAT IS TRAUMA TO YOU?

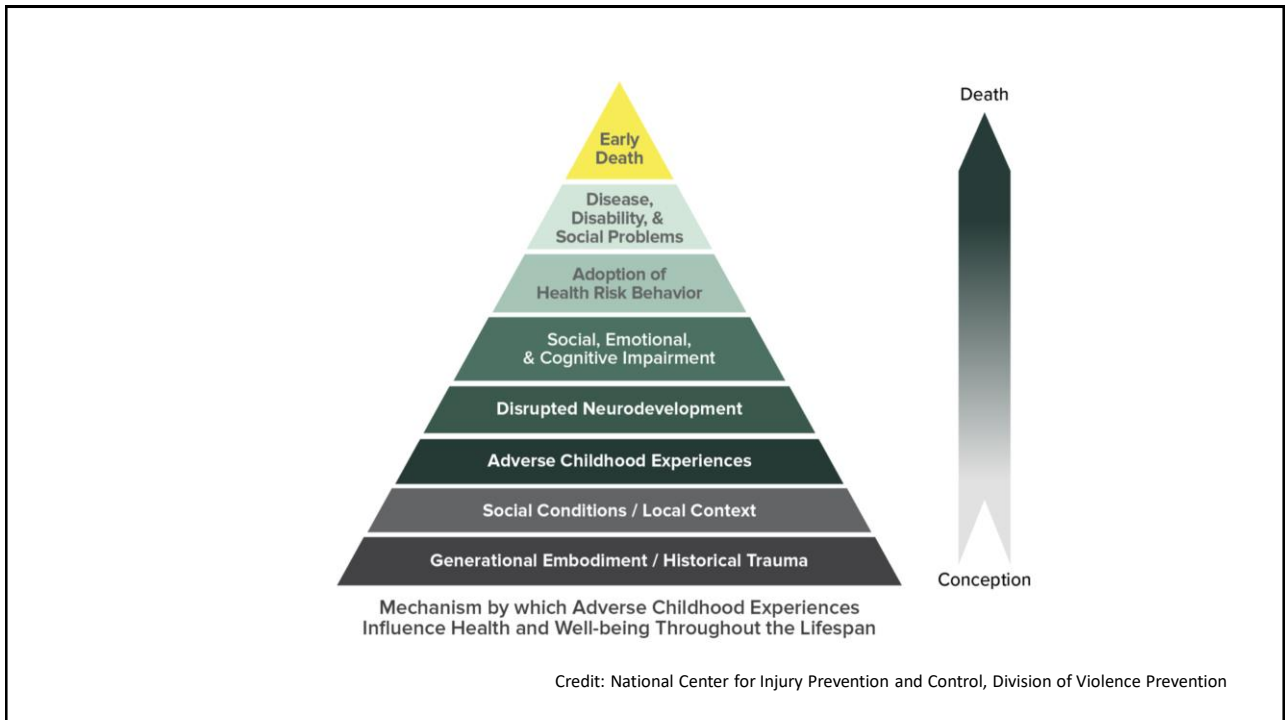
- Physical abuse
- Sexual abuse
- Emotional abuse
- Physical neglect
- Emotional neglect
- Household mental illness
- Household substance use
- Single-parenthood
- Household incarceration
- Domestic violence

33

WHAT IS TRAUMA TO YOU?

- Physical abuse
- Sexual abuse
- Emotional abuse
- Physical neglect
- Emotional neglect
- Household mental illness
- Household substance use
- Single-parenthood
- Household incarceration
- Domestic violence
- Community violence
- Living in unsafe neighborhood
- Discrimination/marginalization
- Peer rejection/social isolation/bullying
- Foster care placement
- Loss of a loved one
- Chronic illness/physical disability
- Housing insecurity/homelessness
- Harsh punishments
- School performance
- Natural disaster

34



35

RESILIENCE

- Adapting well to adversity, trauma, tragedy or stress
- Mentally and/or emotionally coping well with crisis and returning to pre-crisis state
- The capacity to use personal assets to protect oneself from the potential negative effects of stressors

36

RESILIENCE

- Fostered through:
 - **Supportive adult-child relationships**
 - Positive peer relationships
 - Building a sense of self-efficacy and perceived control
 - Strengthening adaptive/coping skills and emotional regulation
 - Mobilizing faith, hope, and cultural traditions

37

Trauma-Informed Care (SAMHSA)

- Realizes that trauma has a widespread impact on individuals, families, groups, organizations, and communities and demonstrates an understanding of paths to recovery
- Ability to recognize the signs and symptoms of trauma in clients, staff, and others in the system
 - “What happened to you?” instead of “What’s wrong with you?”
- Seeks to avoid re-traumatization
- Integration of trauma knowledge into policies, programs, and practices

38

TRAUMA-INFORMED PRACTICES

- Including knowledge about trauma in care
- Promoting healing, recovery, and resilience
- Focusing on strengths, not perceived deficit
 - Communication
 - Empathic
 - Validating
 - Compassionate
- Respect

39

POLICY CHANGES?

- Childhood
 - Early intervention
 - Home visiting programs
 - High-quality childcare
 - Paid parental leave
- Poverty
 - Safe affordable housing
 - Desegregation of impoverished neighborhoods
 - Financial literacy education
- Education
 - Equitable pay for public school teachers
 - Universal trauma-informed school practices
 - High-quality childcare and after-school programs
 - Affordable vocational training

40

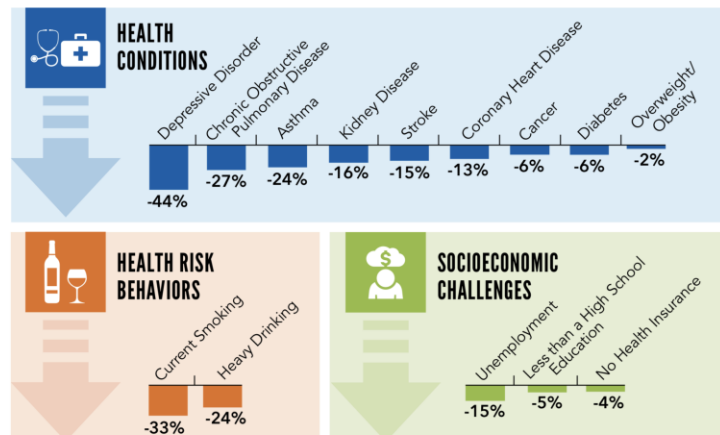
POLICY CHANGES?

- Employment
 - Increased job opportunities
 - Increased minimum wage
 - Reasonable extension of unemployment benefits
 - Skill and relationship building opportunities for ex-offenders
- Healthcare
 - Right - not privilege
 - Having doctors and dentists in schools
 - Mental health parity

41

WHAT IF...?

Potential reduction of negative outcomes in adulthood



SOURCE: BRFSS 2015-2017, 25 states, CDC Vital Signs, November 2019.

42

IN SUMMARY...

“It is easier to build strong children than to repair broken men.”

-Frederick Douglass

43

REFERENCES

American Psychiatric Association. (2013). *Diagnostic and statistical manual of mental disorders* (5th ed.). Arlington, VA: American Psychiatric Publishing

Cronholm, Peter F. et al. (2015). Adverse Childhood Experiences: Expanding the Concept of Adversity. *American Journal of Preventive Medicine*, Volume 49, Issue 3, 354 - 361

Felitti, V. J., Anda, R. F., Nordenberg, D., Williamson, D. F., Spitz, A. M., Edwards, V., ... Marks, J. S. (1998). Relationship of Childhood Abuse and Household Dysfunction to Many of the Leading Causes of Death in Adults. *American Journal of Preventive Medicine*, 14(4), 245–258. doi: 10.1016/s0749-3797(98)00017-8

Leitch (2017). Action steps using ACEs and trauma-informed care: a resilience model. *Health and Justice*, 5:5

Narayan, A. J., Rivera, L. M., Bernstein, R. E., et al. (2018). Positive childhood experiences predict less psychopathology and stress in pregnant women with childhood adversity: A pilot study of the benevolent childhood experiences (BCEs) scale. *Child Abuse & Neglect*, 78, 19–30. doi: 10.1016/j.chiabu.2017.09.022

Racine N, Killam T, Madigan S. Trauma-Informed Care as a Universal Precaution: Beyond the Adverse Childhood Experiences Questionnaire. *JAMA Pediatr*. Published online November 04, 2019. doi:[https://doi-org.pitt.idm.oclc.org/10.1001/jamapediatrics.2019.3866](https://doi.org/pitt.idm.oclc.org/10.1001/jamapediatrics.2019.3866)

Shonkoff, J.P., Garner, A.S., Siegel, B.S., et al., (2012). The lifelong effects of early childhood adversity and toxic stress. *Pediatrics*, 129(1), e232-e246.

44

REFERENCES

Sroufe, L. A. (2005). Attachment and development: A prospective, longitudinal study from birth to adulthood. *Attachment & human development*, 7(4), 349-367.

World Health Organization and Calouste Gulbenkian Foundation. *Social determinants of mental health*. Geneva, World Health Organization, 2014.

<https://childmind.org/report/2016-childrens-mental-health-report/mental-health-impacts-schools/>

<https://developingchild.harvard.edu/science/key-concepts/brain-architecture/>

<https://developingchild.harvard.edu/science/key-concepts/resilience/>

<https://developingchild.harvard.edu/science/key-concepts/toxic-stress/>

<https://verysmartbrothas.theroot.com/pittsburgh-is-the-worst-city-in-america-for-black-peopl-1838218551>

<https://www.cdc.gov/violenceprevention/childabuseandneglect/acestudy/about.html>

https://www.socialwork.pitt.edu/sites/default/files/pittsburghs_inequality_across_gender_and_race_07_19_20_compressed.pdf

https://www.nctsn.org/sites/default/files/resources//child_trauma_toolkit_educators.pdf