

Childhood Stress and Urban Poverty: Insights from the Philadelphia ACE Study

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Roy Wade, Jr. MD, PhD, MPH
Instructor of Pediatrics
Children's Hospital of Philadelphia

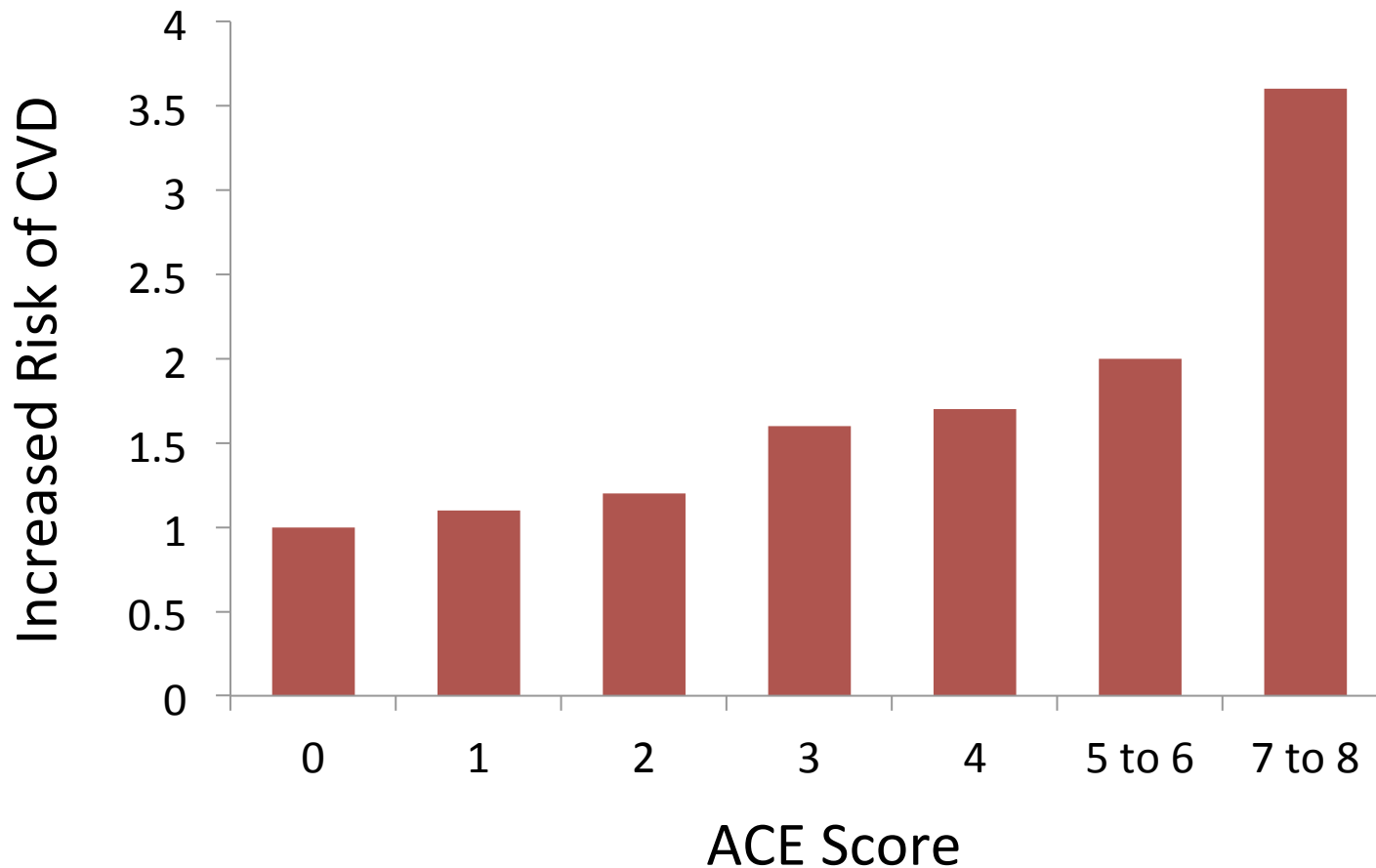
Adverse Childhood Experience Study

- Published by CDC/ Kaiser in 1998
- Surveyed 17,000 policy holders
- Understand relationship between childhood adversity & adult health outcomes

Childhood Exposure	Subcategory
Abuse	Psychological
	Physical
	Sexual
Household dysfunction	Substance abuse
	Mental illness
	Intimate partner violence
	Criminal behavior
	Divorce
Neglect	Emotional
	Physical

Graded Relationship Between ACE Score and Cardiovascular Disease

Association between ACE Score and Risk for Cardiovascular Disease



Graded Relationship Between ACE Score and Health Outcomes

Health Risk Behaviors	Mental Health Conditions	Physical Health Conditions
Smoking	Depression	Cardiovascular Disease
		Diabetes
Alcohol Abuse	Anxiety	Emphysema
	PTSD	Cancer
Drug Abuse/Illicit Drug Use	Hallucinations	Obesity
		Liver Disease
High Risk Sexual Behavior	Suicide	Headaches
		Autoimmune Disease
		Sexually Transmitted Infections
		Self-Reported Health
		Disability
		Fetal Death
		Mortality

Health outcomes highlighted in red are among the top ten leading causes of death in the US

ACE Study Population is not Representative of Urban Populations

Demographics	ACE Study	Philadelphia
Mean age	56	34
Race/ethnicity	79% White	41% White
	5% African American	43% African American
	5% Hispanic	12% Hispanic
High school graduates	94%	36%
College graduates	43%	13%
Percent below FPL	Not measured	25%

ACE Scale Can Be Improved by Adding Additional Adversities to the Measure

Original

- Emotional abuse
- Physical abuse
- Sexual abuse
- Physical neglect
- Emotional neglect
- Mother treated violently
- Household substance abuse
- Household mental illness
- **Incarcerated household member**
- **Parental separation or divorce**

Additional Adversities

- Property victimization
- Peer victimization
- Exposure to community violence
- Socioeconomic status
- Someone close had a bad accident or illness
- Below-average grades
- Parents always arguing
- No good friends

The Philadelphia ACE Study

A collaborative, led by the Institute for Safe Families (ISF), to develop and implement research, practice, and policies in urban pediatric settings based on the Adverse Childhood Experiences (ACE) study.



The Philadelphia ACE Task Force

- Formed by ISF in April 2012
 - Partnership between practitioners, public health leaders, and funders
- Objectives
 - Build on original ACE findings to understand the potential impact of additional urban stressors
 - Develop policies, practices, and research within urban pediatric settings
 - Disseminate knowledge to the local community
 - Population-level study of ACEs in Philadelphia

Specific Aims

- Specific Aim 1: Examine the prevalence of ACEs in a socially and racially diverse population
- Specific Aim 2: Examine the impact of broader adverse childhood experiences on health outcomes

Survey Methods

- Survey was completed as a follow up to the Southeastern Pennsylvania Household Health Survey (SEPA HHS).
 - Survey of over 13,000 children and adults in Southeastern Pennsylvania
 - Comprehensive survey on a broad range of topics
- Philadelphia ACE Survey re-contacted original SEPA HHS Philadelphia respondents who were 18 years or older
- Telephone survey (landline and cell phones)
- Completed by trained male and female interviewers
- Interviews were conducted in English and Spanish
- Interviewed 1,784 Philadelphia adults age 18 and older
- Response rate 67.1%

Philadelphia ACE Study Questions

Conventional ACEs	Expanded ACEs
Physical Abuse	Witnessing Violence
Emotional Abuse	Living in Unsafe Neighborhoods
Sexual Abuse	Experiencing Racism
Emotional Neglect	Living in Foster Care
Physical Neglect	Experiencing Bullying
Domestic Violence	
Household Substance Abuse	
Incarcerated Care Provider	
Mental Illness in the Home	

Data Analysis

- Projection weights used to:
 - match proportion of adult age, poverty status, gender, race, and Hispanic ethnicity distributions within Philadelphia
 - project census population totals
- Survey weights used to ensure survey findings were applicable to Philadelphia population
- Total ACE Score calculated by adding Conventional ACEs (0-9) to Expanded ACEs (0-5)
- Chi-squared/Student's t-test as applicable
- Logistic regression analysis

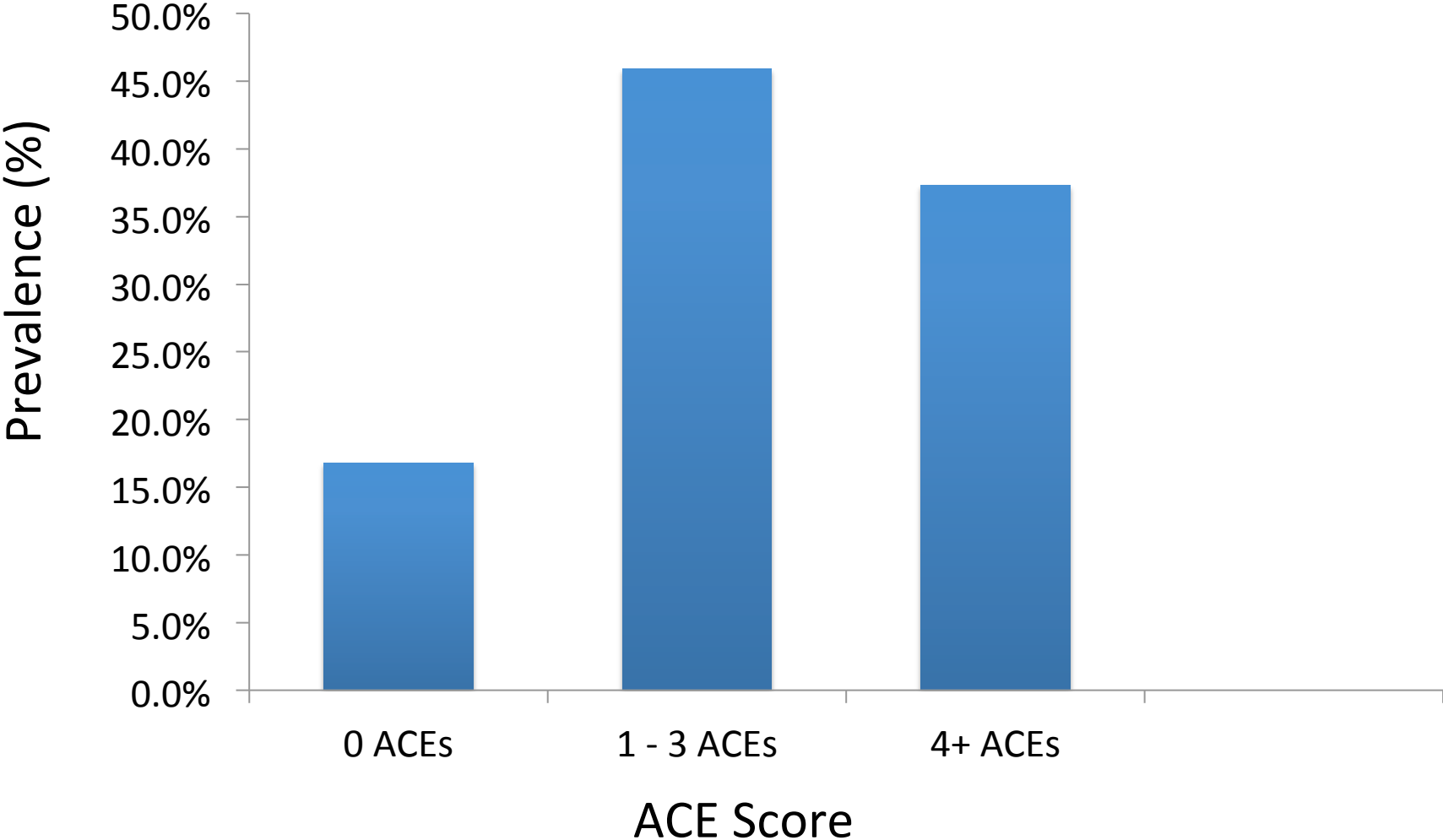
Traditional ACEs are More Prevalent in an Urban Setting

	Philadelphia ACE Study (N = 1,784)	Kaiser ACE Study (N = 17,337)
Emotional abuse	33.2%	10.6%
Physical abuse	35.0%	28.3%
Sexual abuse	16.2%	20.7%
Physical neglect	19.1%	14.8%
Emotional neglect	7.7%	9.9%
Substance abusing household member	34.8%	26.9%
Mentally ill household member	24.1%	19.4%
Witnessed domestic violence	17.9%	12.7%
Household member in prison	12.9%	4.7%

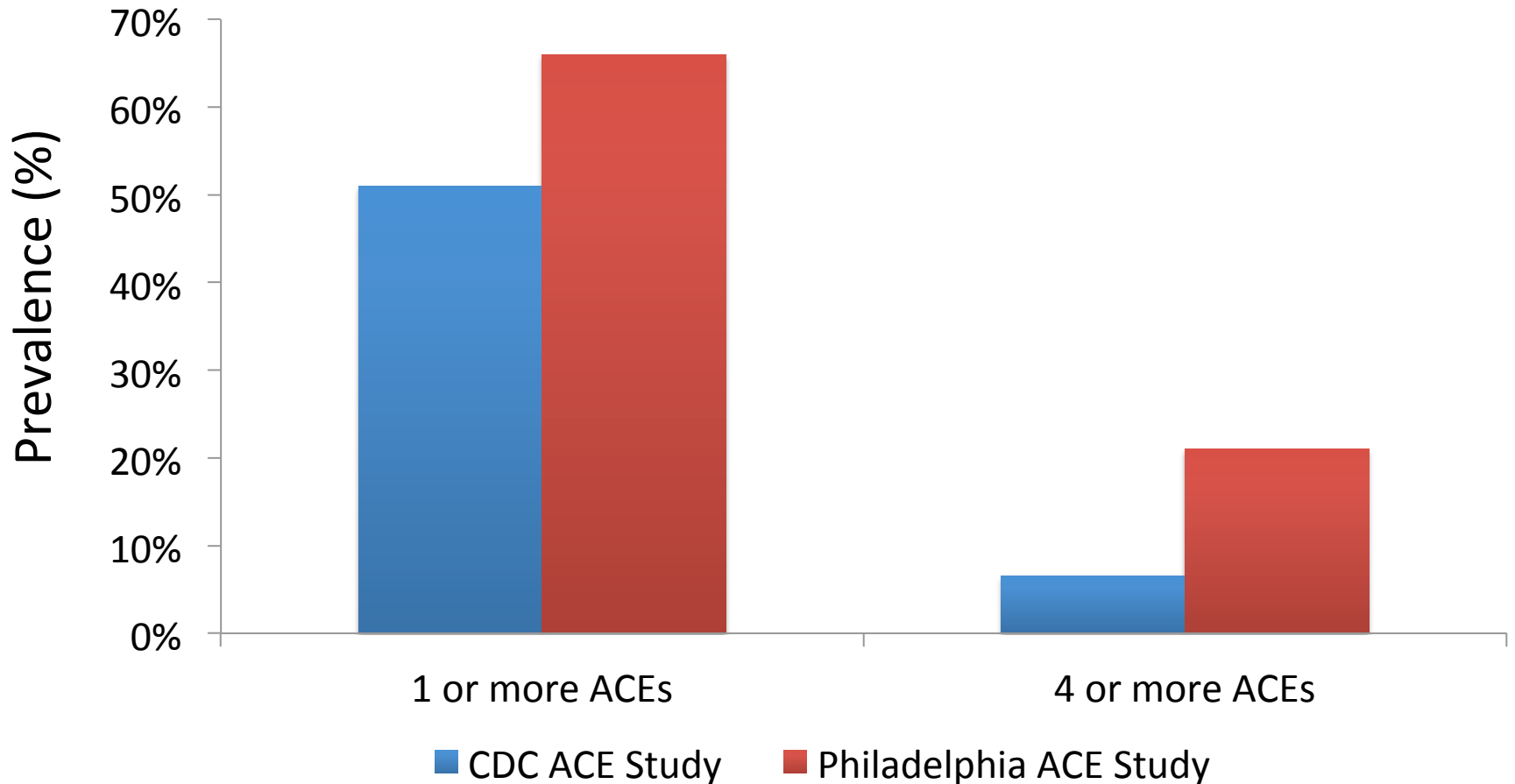
Prevalence of Expanded ACEs

Expanded ACE Indicators	Respondents (N = 1,784)
Witnessed violence	40.5%
Felt discrimination	34.5%
Adverse neighborhood experience	27.3%
Bullied	7.9%
Lived in foster care	2.5%

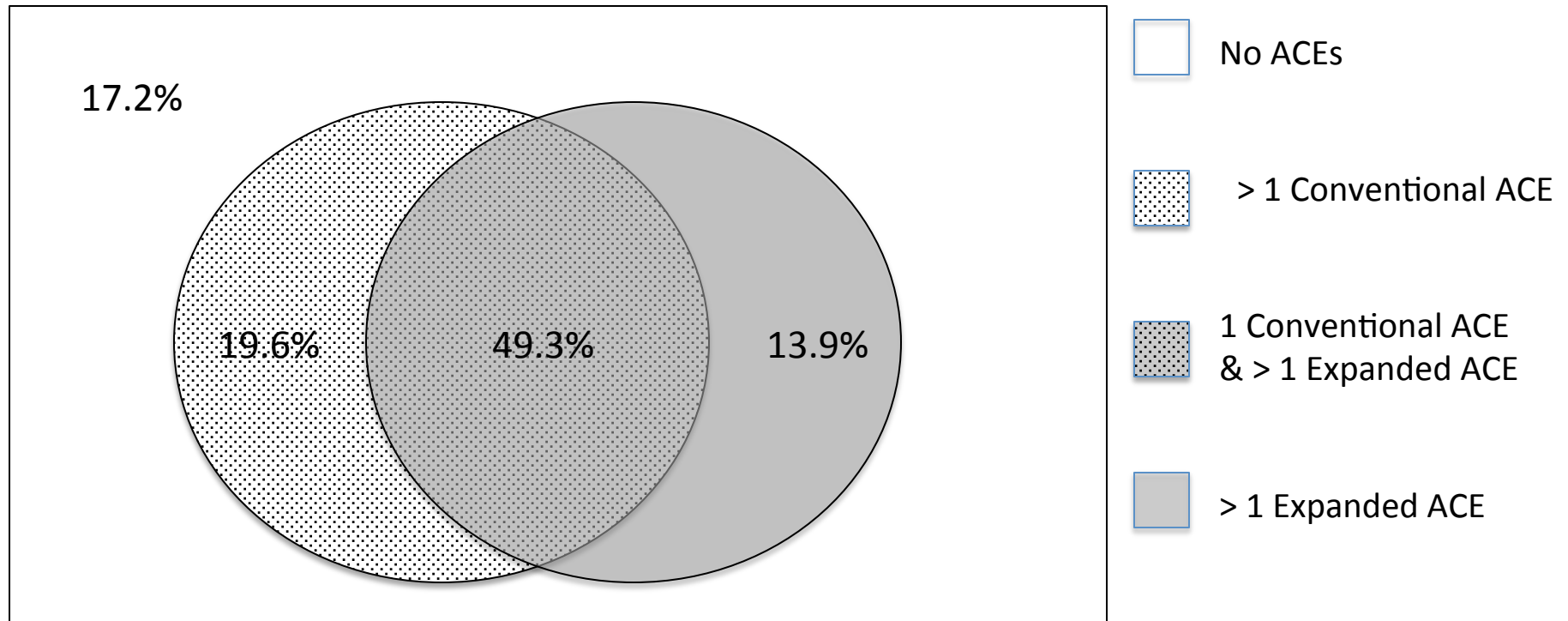
Distribution of Total ACE Scores



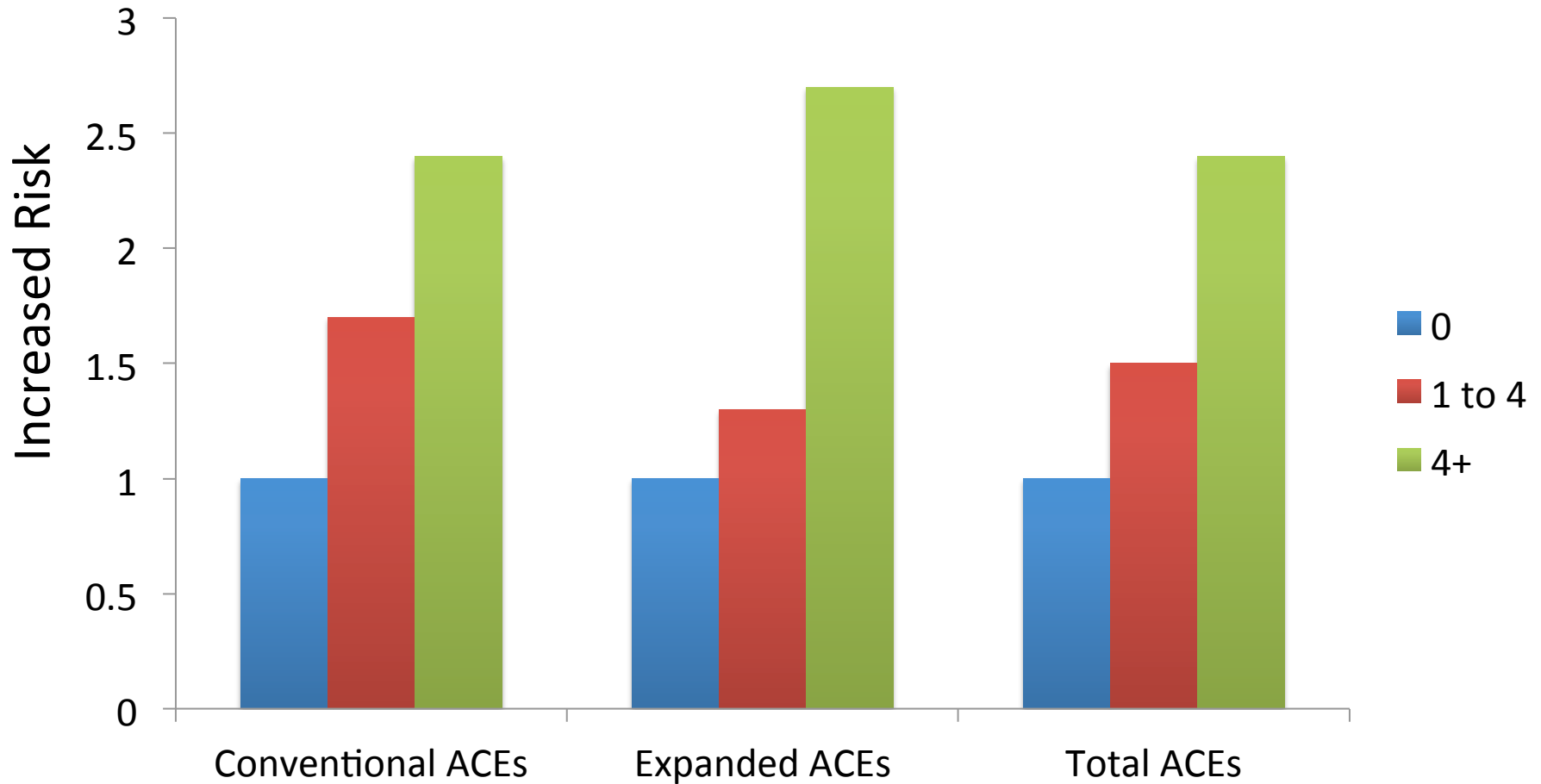
Prevalence of Conventional ACEs Kaiser vs. Philadelphia ACE Study



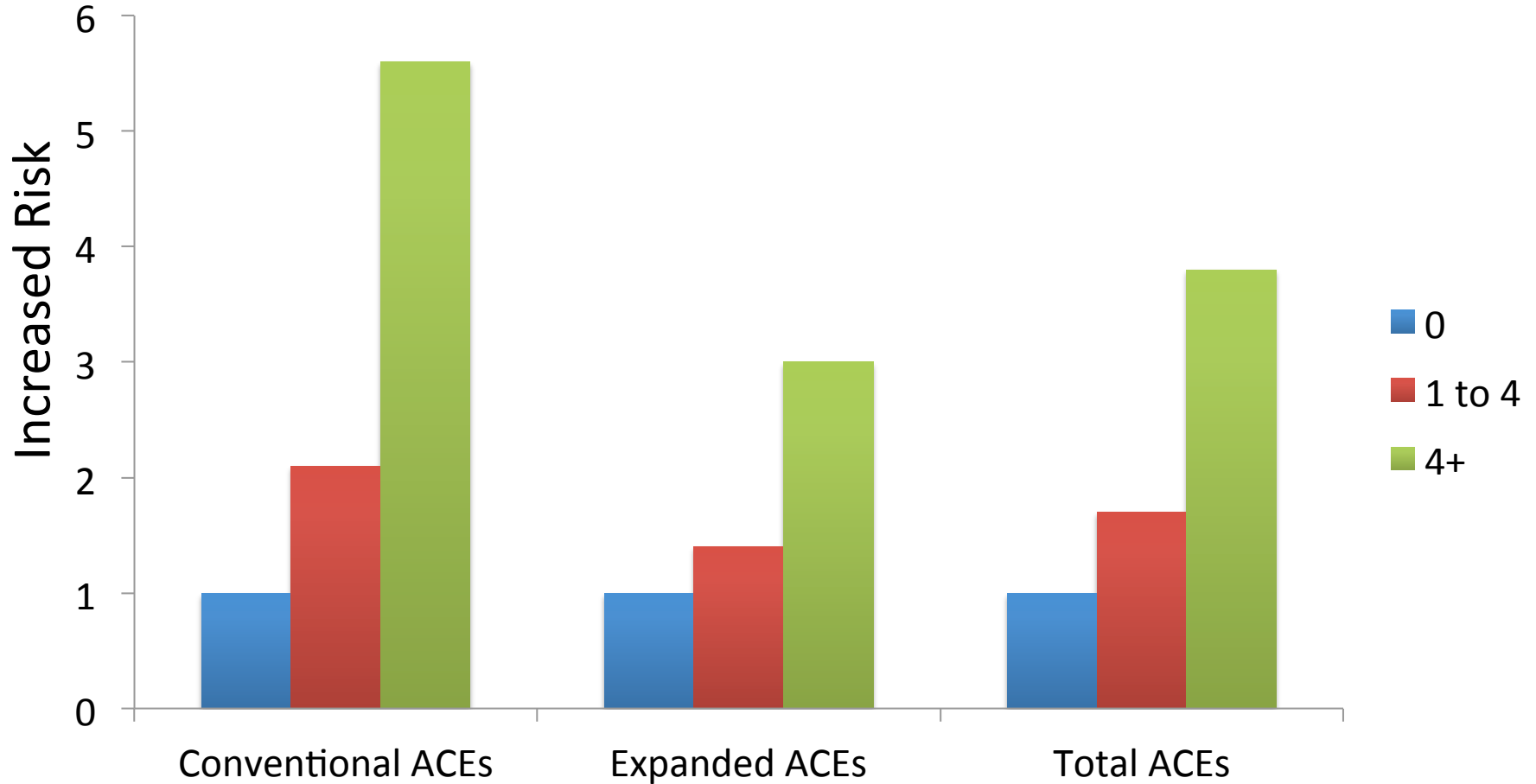
Overlap Between Exposure to Conventional and Expanded ACEs



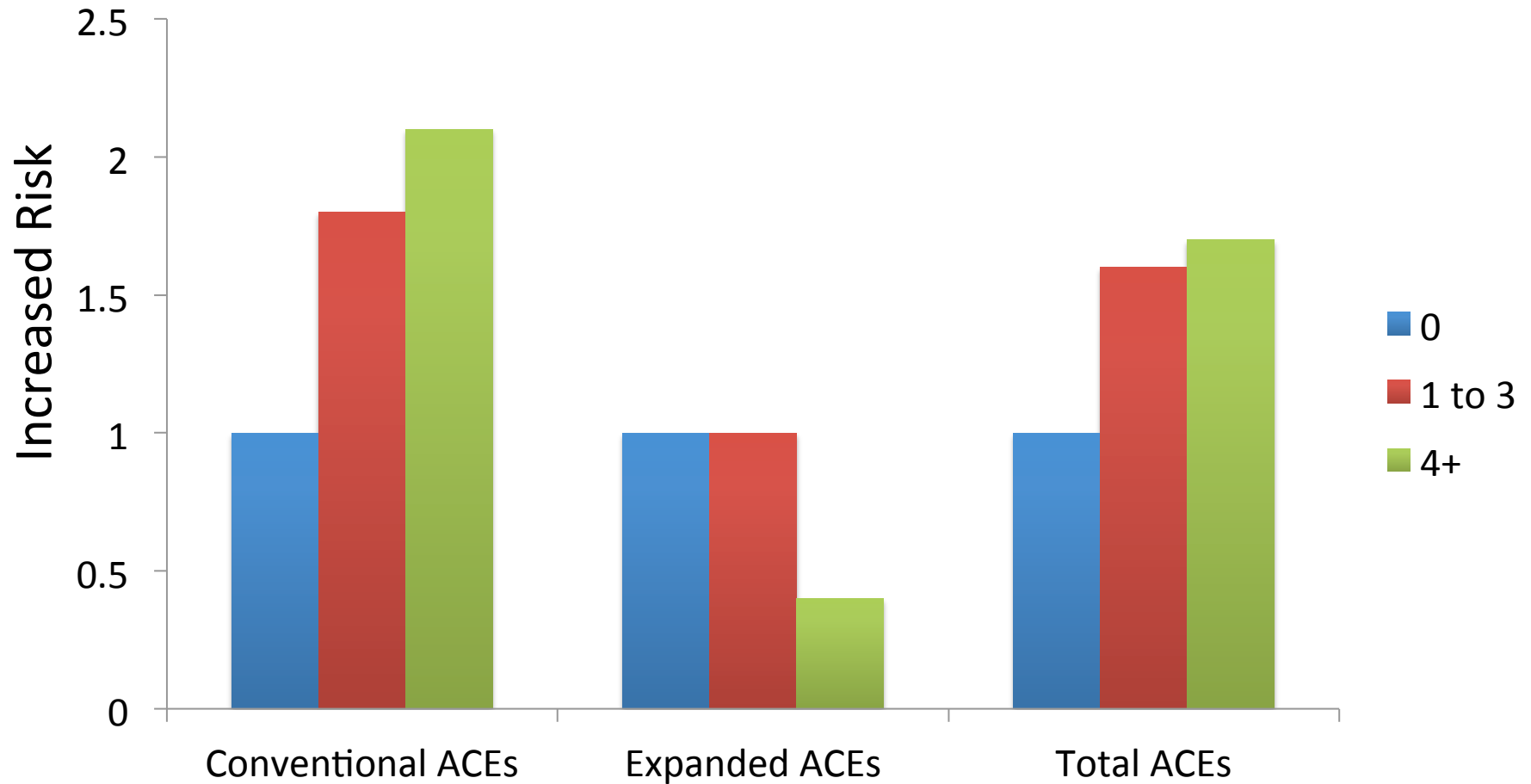
Relationship Between Philadelphia ACE Score and Smoking History



Relationship Between Philadelphia ACE Score and Mental Health



Relationship Between Philadelphia ACE Score and Cardiovascular Disease



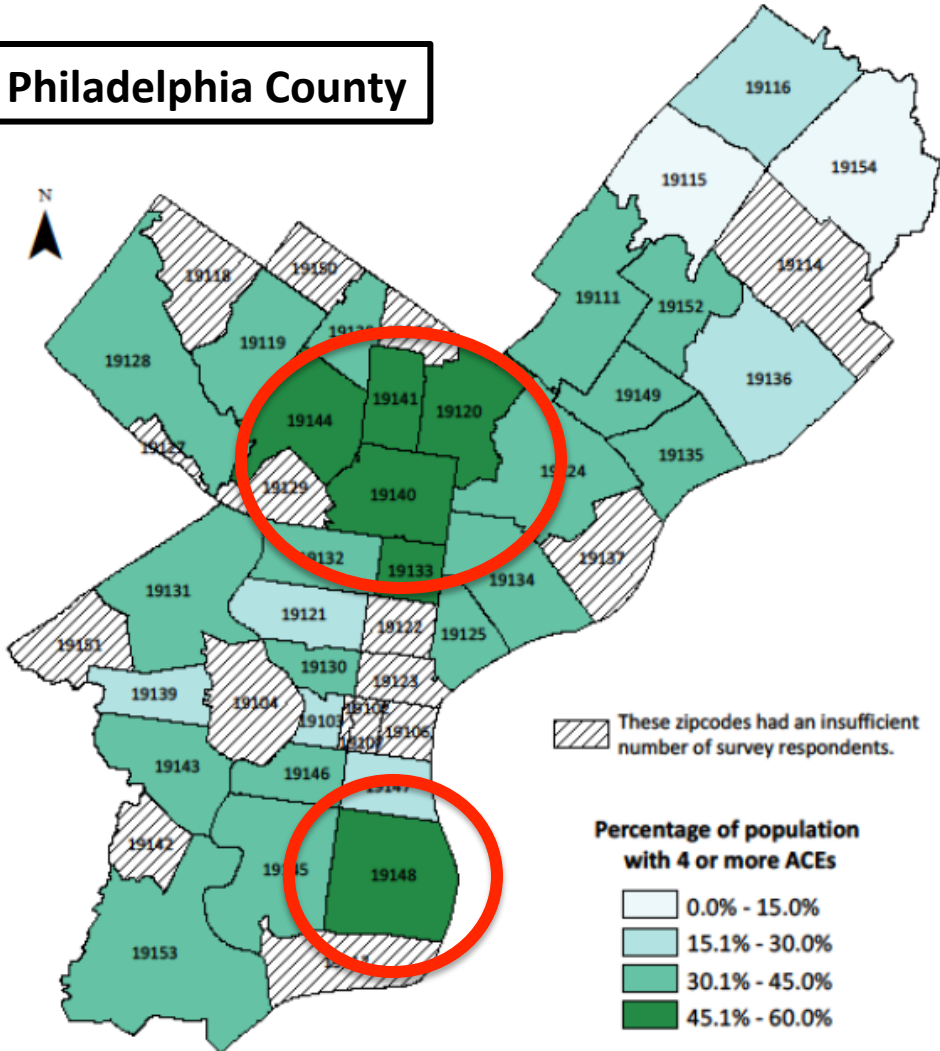
Demographic Characteristics for Philadelphia Adults with Four or More ACEs

Demographics		Respondents (N = 1,784)
Sex**	Male	58.2%
	Female	41.8%
Race***	Black	48.6%
	White	34.0%
Poverty Level***	Below 150% of poverty guidelines	68.2%
	Above 150% of poverty guidelines	31.8%

*p<0.05; **p<0.01; ***p<0.001

Total ACE Score ≥ 4 by Zip Code

Philadelphia County



Health Statistics from these 5 Zip Codes

- 22% of adults unemployed
- 46% of residents live in poverty
- Life expectancy for males age 68
- 22% of children obese
- Homicide rate 30 to 40 deaths per 100,000

Current Childhood Adversity Screening Tools are Insufficient

Adversity Measures	Constructs Assessed
Childhood Trauma Questionnaire Anatomical Doll Questionnaire Checklist of Sexual Abuse and Related Stressors Abusive Sexual Exposure Scale Checklist for Child Abuse Evaluation Child Abuse & Neglect Interview Schedule	Physical Abuse Emotional Abuse Sexual Abuse Neglect
Children's Exposure to Community Violence Adolescent Self Report Trauma Questionnaire My Worst Experience Scale	Exposure to Violence Routine Stressors
Urban Hassles Index Adolescent Perceived Events Scale*	Routine Stressors
Traumatic Events Screening Inventory Childhood Trust Events Survey Life Events & Coping Inventory* Lifetime Incidence of Traumatic Events	Abuse/Neglect Exposure to Violence Routine Stressors

* Youth Informed Measures

Specific Aims

- Specific Aim 1: Use focus groups to identify and characterize the range of adverse events experienced by low-income urban youth
- Specific Aim 2: Describe the relative significance of adverse events experienced by low-income urban youth

Overall Study Design

- Series of focus groups with young adults
- Nominal Group Technique
 - Generate list of adverse childhood experiences
 - Prioritize items on list based on relative significance
- Analyze ranked lists for common themes
- Develop final ranked list of adverse experiences
- Member checking process & discussion of context surrounding each theme

Study Participant Demographics

Demographics		Percent of Individuals (N = 119)
Sex	Male	55%
	Female	45%
Race/Ethnicity	Caucasian	5%
	Hispanic	18%
	Non-Hispanic Black	71%
	Other	6%
	Other	0%
Neighborhood Poverty Level (100% FPL)	Less than 10%	5%
	10 to 20%	11%
	20 to 40%	51%
	Greater than 40%	33%

Domains of Most Stressful Experiences

Domain	Number of Responses
Family Relationships	195
Community Stressors	119
Personal Victimization	72
Economic Hardship	67
Peer Relationships	35
Discrimination	23
School	22
Health	17
Child Welfare/Juvenile Justice	8
Media/Technology	5

Family Relationships

Family Relationship Subdomains	Number of Responses
Family Members Abusing Alcohol & Drugs	37
Lack of Love & Support in the Family	33
Single Parent Homes	30
Death & Illness of Family Members	21
Violence in the Home	20
Poor Parenting & Lack of Guidance	20
Criminal Activity by Family Members	15
Having to Take on Adult Responsibilities	14
Violent Victimization of Family Members by Individuals Outside of the Home	4

Family Relationships

Representative Quote

“My mom said, ‘I ain’t teach you nothing because I want you to go through the same thing I went through...’ It’s just like heartless, like you just don’t care. My parents couldn’t show me [love]. They made me feel like I was just there for a check.”

Community Stressors

Community Stressor Subdomains	Number of Responses
Neighborhood Crime, Violence, and Death	57
Negative/Adult Behavior in the Neighborhood	50
Neighborhood Nonviolent Crime	12

Community Stressors

Representative Quote

“There were shootings every night, so much so that the kids couldn’t play outside. You wake up in the morning and find that someone from your friend’s family passed away.”

Personal Victimization

Personal Victimization Subdomains	Number of Responses
Child Abuse	33
Bullying	16
Child Neglect	9
Violent Crime (Nonsexual)	7
Nonviolent Crime	3
Rape	3
Being chased by cops	1

Personal Victimization Representative Quote

“I seen my cousins getting raped by my uncles because they were addicted to drugs,... literally if you woke up in the middle of the night, you would be scared to walk down the steps because your uncles were doing whatever to your cousins.”

Economic Hardship

Economic Hardship Subdomains	Number of Responses
Not Enough Money	35
Lack of Nonmonetary Resources (hunger, homelessness, lack of adequate housing, lack of utilities, housing instability)	31
Watching Parents Struggle to Make Ends Meet	1

Economic Hardship

Representative Quote

“The hardest thing for me was watching my mom struggle [financially to pay for] food, utilities, bills.”

Peer Relationships

Peer Relationships Subdomains	Number of Responses
Peer Pressure	13
Death of Friends	11
Problems with Friends & Peers	9
Victimization of Friends (Violence)	2

Peer Relationships

Representative Quote

“Gossip, it always carries stress because it results into things... And the people that get brought into it that don’t have nothing to do with it. Once in my school gossip got around to one of my friends getting killed because it traveled down to a family member. Things got heated and he got shot.”

Discrimination

Discrimination Subdomain	Number of Responses
Stereotypes, Racism, Discrimination	23

Discrimination

Representative Quote

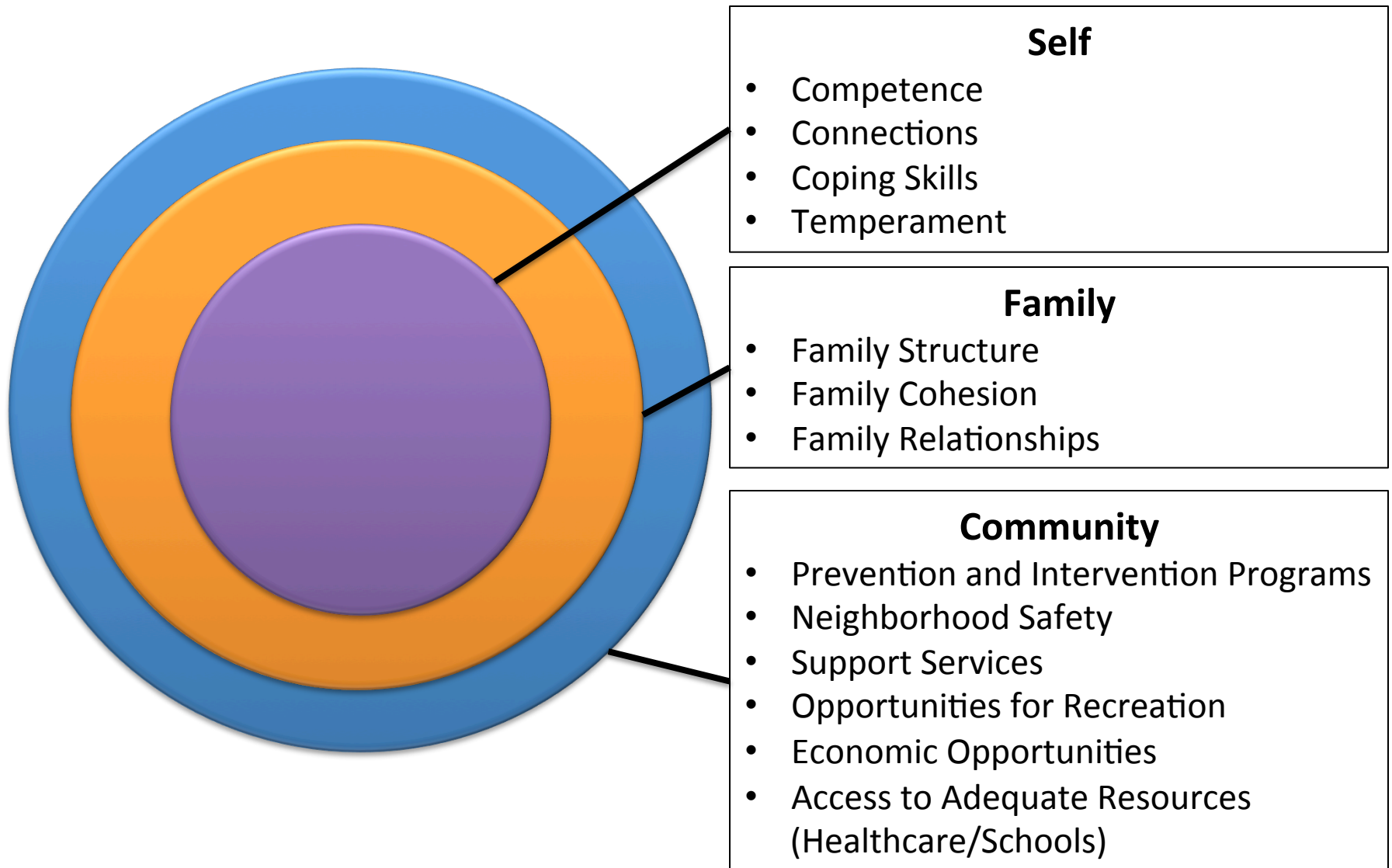
“Stereotyping... it’s mostly white people, the way they look at you when you are out walking in the street, they try to downgrade [you]... I’ve seen people follow [black people] around the store. They already got a mindset about us before they even know who we are.”

Breaking the Cycle of Trauma

Nurturing Supportive Relationships



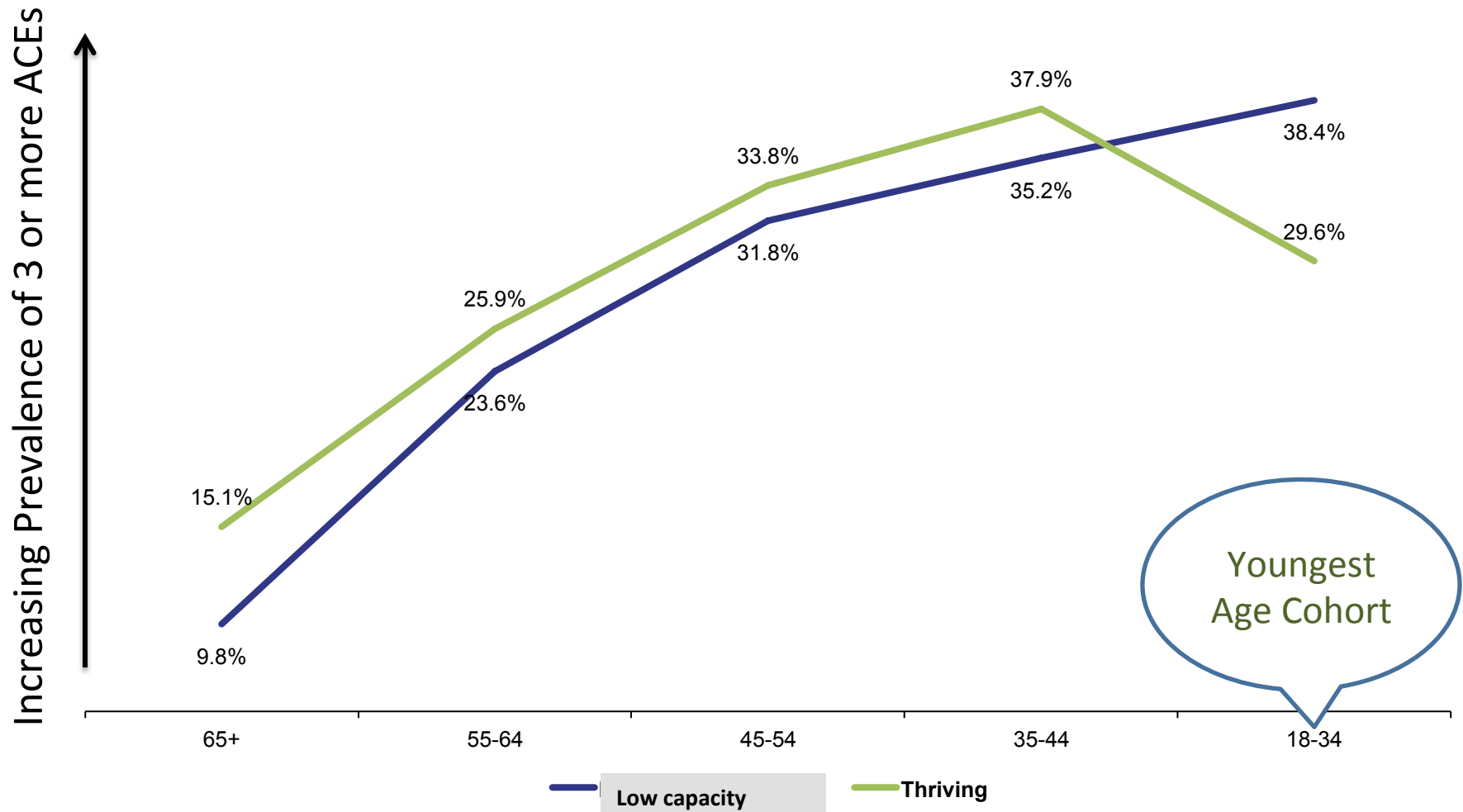
A Multilevel Resilience Framework



What is Community Capacity?

- Empowerment of communities to come together, share responsibility for alleviating crises, improve services, and build healthy environments for families and communities
- Key components
 - Focus on inter-related child and family problems
 - Collaborative leadership with whole community
 - Innovative learning from changing conditions and experiences
 - Careful attention to measured outcomes and results-based decision making

Reducing the Transgenerational Transmission of ACEs by Building Community Capacity



Adapted from Hall et. al., 2012

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