



Early Childhood Stress

Positive Stress Response

- A normal and essential part of healthy development Brief increases in heart rate, mild elevations in stress hormone levels; important to development in the context of stable and supportive relationships--*Immunizations*

Tolerable Stress Response

- More serious but temporary, and if buffered by supportive relationships and safe environments do not result in long term damaging effects to the child—*Loss of a parent, natural disaster*

Toxic Stress Response

- More severe with prolonged activation of stress response systems in the absence of protective relationships that can disrupt brain development and other organ systems and has lifelong effects on learning behavior and health - *Chronic neglect and abuse, exposure to violence*



Toxic Stress

● Pathophysiology

- Elevated cortisol disrupts development of brain circuits in early childhood
 - Brain shuts down and can become smaller in extreme cases
 - Disrupts growth of connections and can reduce connections present
 - Amygdala and hippocampus are affected the most
 - Memory and learning and processing stress and emotions
 - Hypersensitive to stress
 - Hyper vigilant and overactive
- Elevated cortisol affects the immune system
 - Decreases the immune system's capacity to fight off infections
- **Children from low socioeconomic status (SES) families are at higher risk of being exposed to toxic stress.**



EMORY
UNIVERSITY
SCHOOL OF
MEDICINE

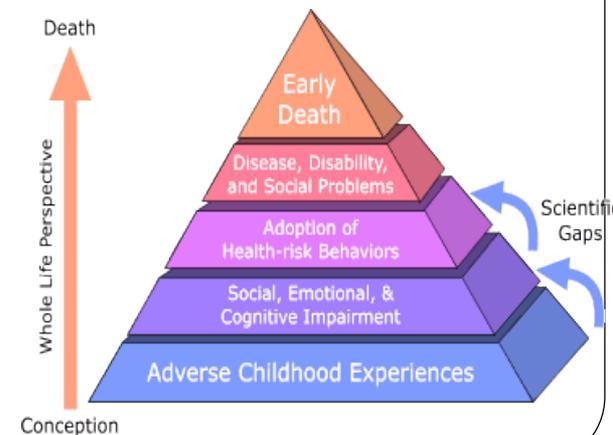
Social Determinants...

- Brief Video

Adverse Childhood Experiences (ACEs)

- Defined as:
 - ‘potentially traumatic events that can have a negative, lasting effects on health and well-being’
- Original study conducted by Kaiser Permanente from 1995-1997
 - Patients completed confidential surveys regarding early childhood experiences and current health status and behaviors.
 - Patient with multiple adverse experiences were likely to have multiple health risks

- ACE Pyramid is the conceptual framework for the ACE study:
- Depicts how ACE are strongly related to risk factors and disease

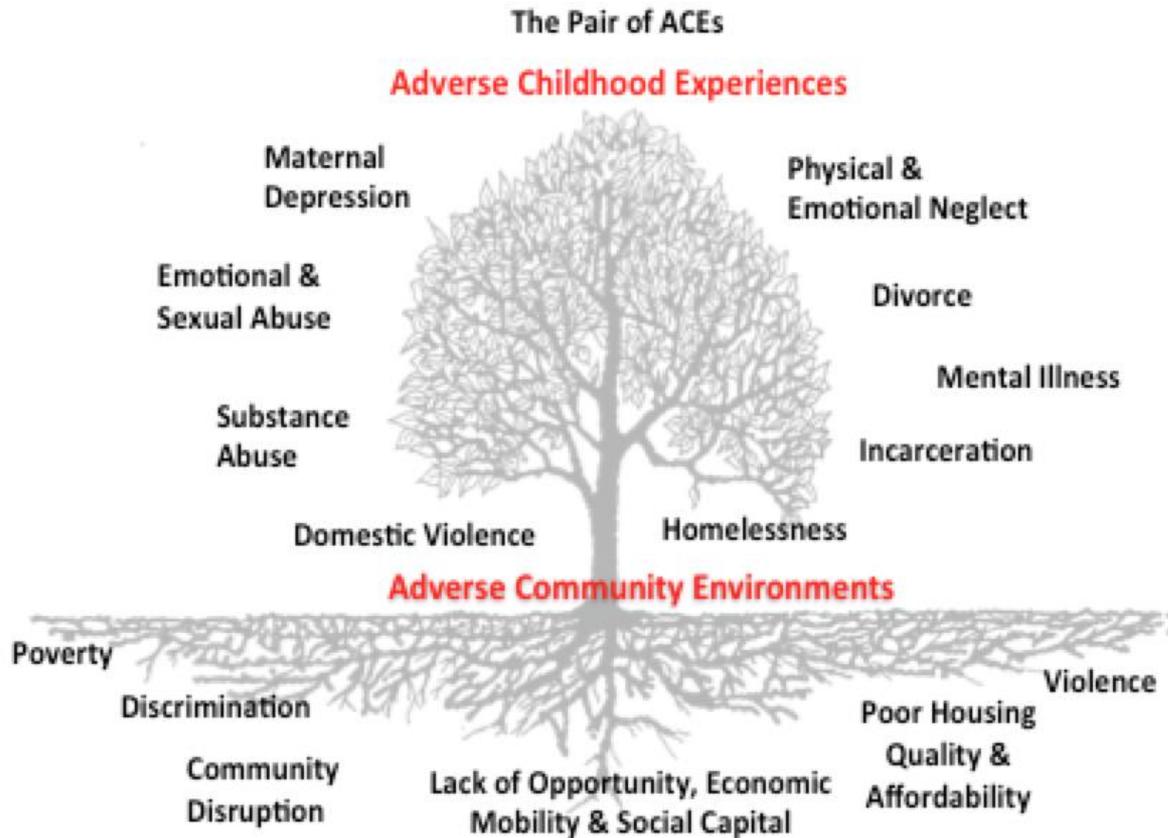


ACES Survey

- Standard survey consists of questions regarding:
 - Physical abuse.
 - Sexual abuse.
 - Emotional abuse.
 - Physical neglect.
 - Emotional neglect.
 - Exposure to domestic violence.
 - Household substance abuse.
 - Household mental illness
 - Parental separation or divorce
 - Incarceration household member

Since your child was born:	
1.	Have your child's parents separated or divorced?
2.	Has your child lived with anyone who was depressed or mentally ill, or who attempted suicide?
3.	Has your child lived with anyone who was a problem drinker, alcoholic or used street drugs?
4.	Has your child lived with anyone who ever went to prison?
5.	Has your child ever witnessed anyone in the home (parents or adults) push, grab, slap, or throw things at each other and/or witnessed anyone kick, bite, hit with a fist, or hit each other with something hard, or ever witness persons threatening each other with a weapon such as a knife or a gun?
6.	Which of the following were sometimes, often or very often true: My child did not have enough to eat..... My child's parents were too drunk or high to take care of him/her..... My child wore dirty clothes My child had no one to take him/her to the doctor.....
7.	Did a parent or adult in your home often or very often swear at, insult, or put your child down or sometimes, often or very often act in a way that made your child afraid that he/she might be physically hurt?
8.	Did a parent or other adult in your home sometimes, often or very often push, grab, slap, or throw something at your child, or ever hit him/her so hard that she /he had marks or was injured?
9.	Did a parent, adult, or someone at least 5 years older than your child <u>ever</u> touch your child sexually or try to make your child touch them sexually?
10.	Which of the following are sometimes, often or very often true: There is someone in my family who makes my child feel special or loved.....

ACES complete picture...



ACES...

• ACE Study Findings

- Adverse childhood experiences are common
 - 45% of children have at least 1 ACE;
10% have at score of 3
 - Increased in black and Hispanic children
- Most often unrecognized and concealed
- Transforms psychosocial experience into organic disease, social malfunction, and mental illness
- Linked to heart disease, obesity, COPD, diabetes, depression, anxiety, substance addiction



ACES...

● Dose-Response

- Children with 3 or more ACE's
 - 3X academic failure
 - 6X behavior problems
 - 5X attendance problems
- Adults with 4 or more ACE's
 - 7X alcoholism
 - 2X cancer
 - 4X emphysema
- 6 or more ACE's
 - 30X suicide



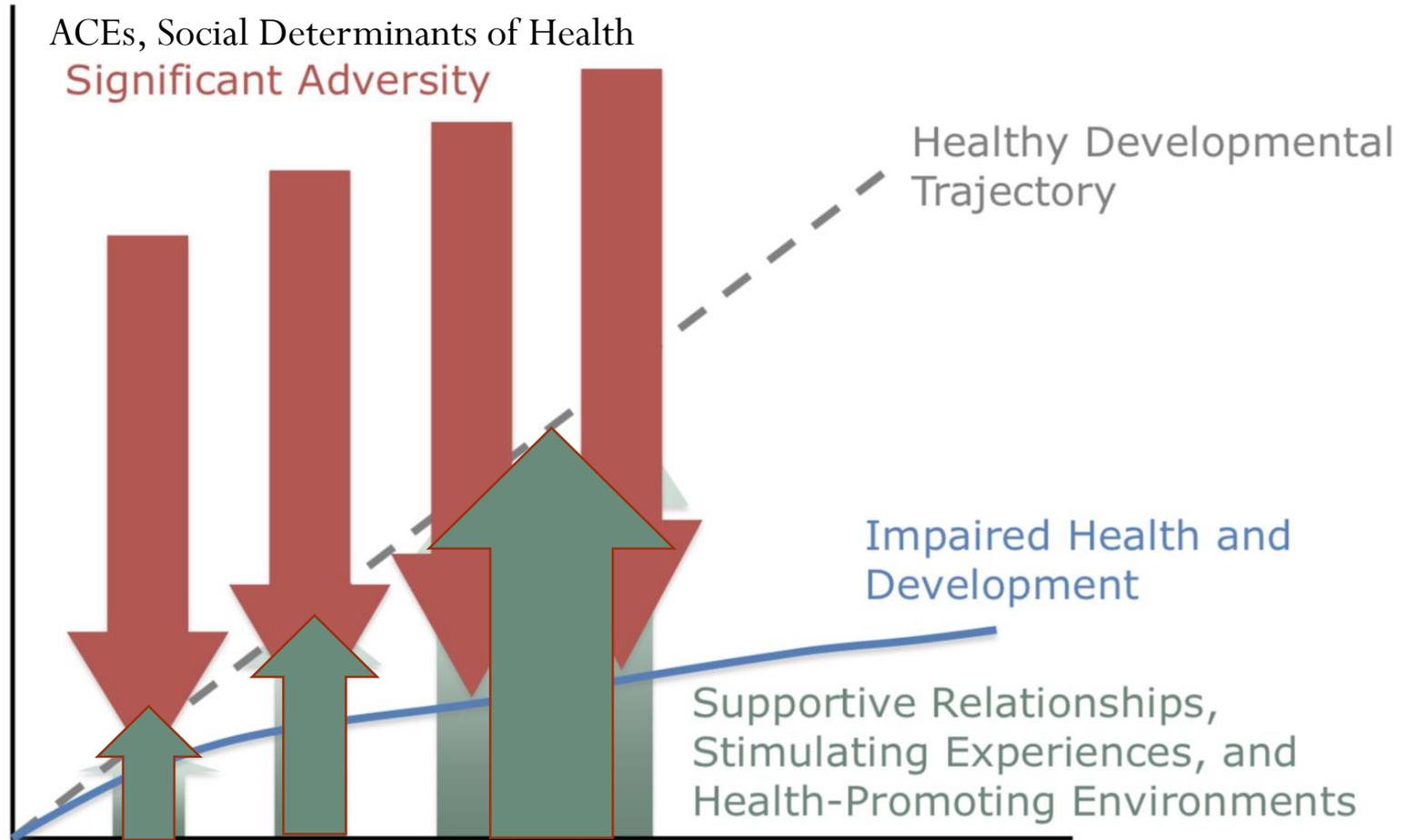
Resilience

Early Relational
Health

David O'Banion

Developmental and Behavioral Pediatrician

Current Conceptual Framework Guiding Early Childhood Policy and Practice



Perry Preschool Project

INTERVENTION

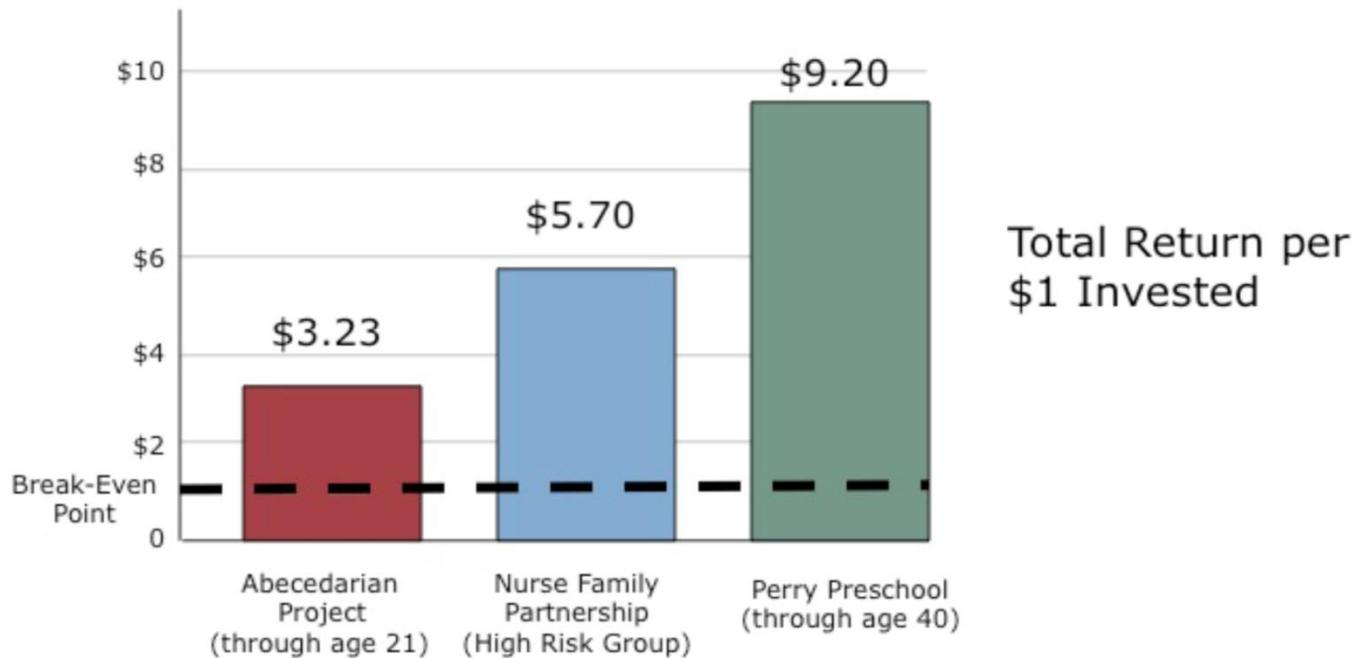


CONTROL



Cost/Benefit Analyses Show Positive Returns

Early Childhood Programs Demonstrating Range of Benefits to Society

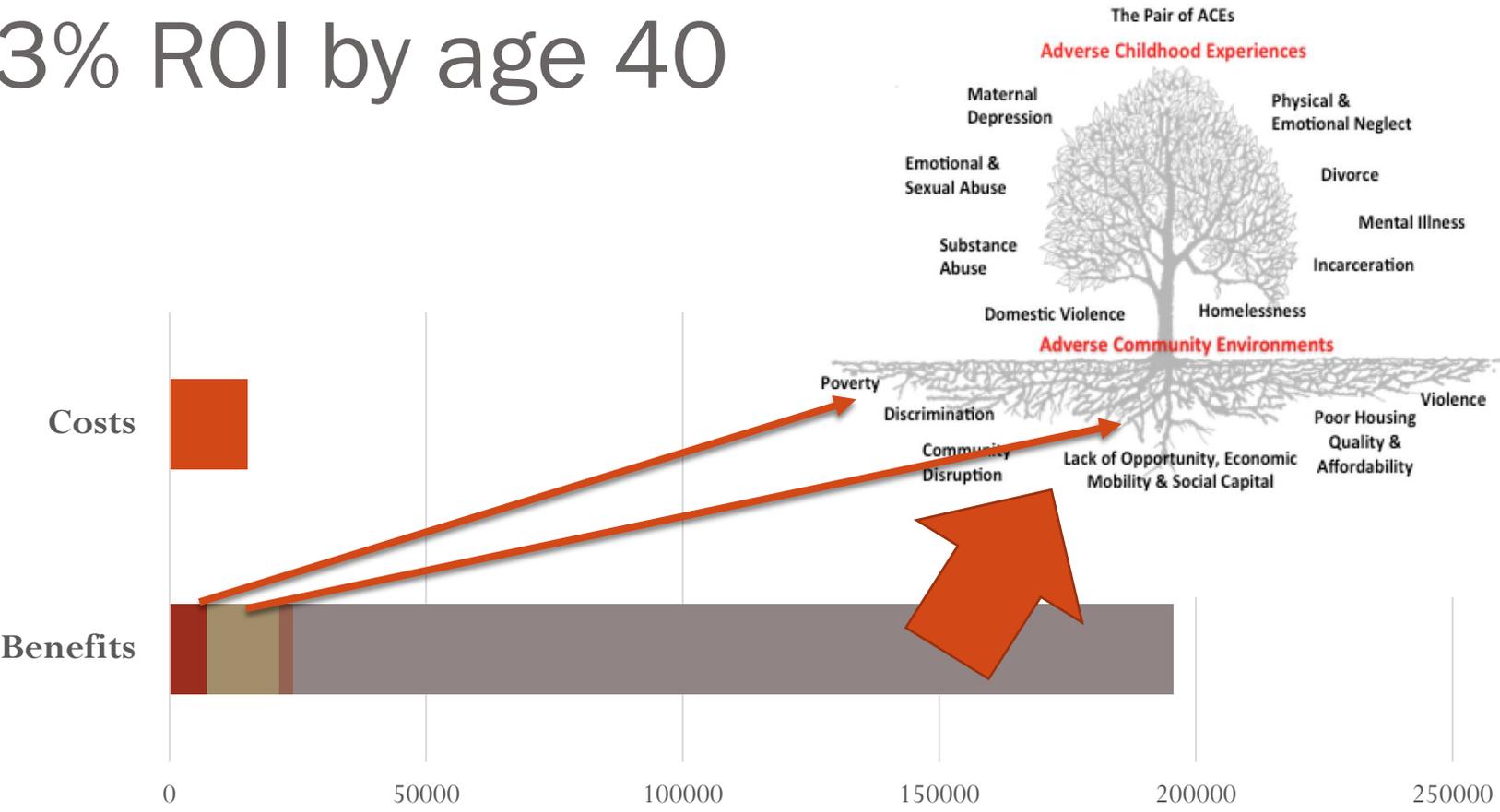


Sources:

Karoly et al. (2005)

Heckman et al. (2009)

13% ROI by age 40



Where does all this benefit come from?

Family Protective Factors

CENTER FOR THE STUDY
OF SOCIAL POLICY'S

strengthening families™
A PROTECTIVE FACTORS FRAMEWORK

Parental
resilience

Social
connections

Knowledge of
parenting and
child
development

Concrete
support in
times of need

Social and
emotional
competence
of children

ACEs are not *Predictive* because of Protective Factors

Relational Health: quality and strength of connection between people

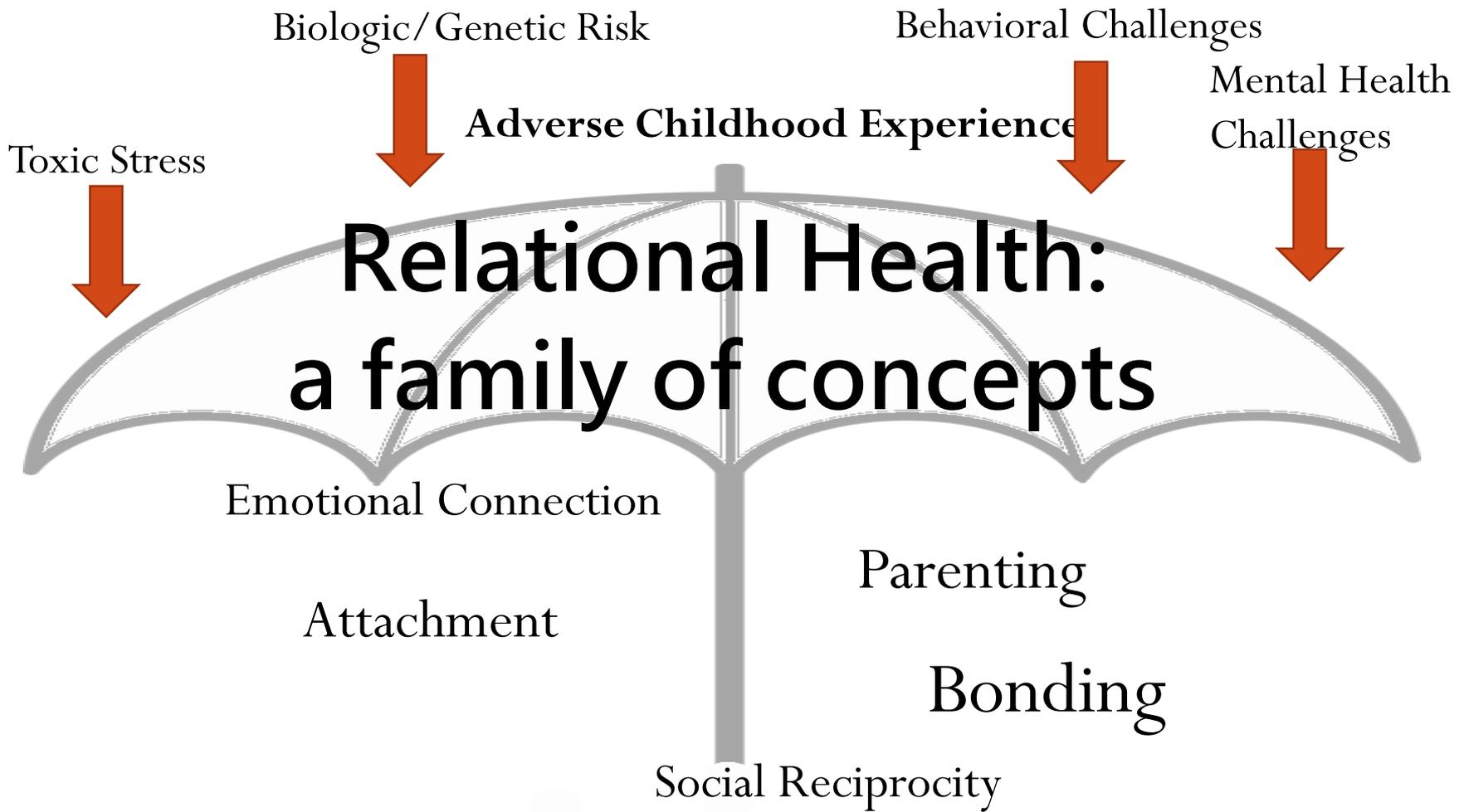
Parental
resilience

Social
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Knowledge of
parenting and
child
development

Concrete
support in
times of need

Social and
emotional
competence
of children



Relational Health: measurable

WELCH EMOTIONAL CONNECTION SCREEN (WECS)

Patient: _____ Date: / /

ATTRACTION

1.0	1.25	1.5	1.75	2.0	2.25	2.5	2.75	3.0
Avoid proximity Little mutual gaze Aversion Distant			Variable behaviors Brief, not consistent			Cozy proximity Mutual gaze Warm touch Drawn to each other		

VOCAL COMMUNICATION

1.0	1.25	1.5	1.75	2.0	2.25	2.5	2.75	3.0
Negative, infrequent Not reciprocal Not responsive			Variable behaviors Brief, not consistent			Warm, positive Genuine Responsive behaviorally / vocally to other		

FACIAL EXPRESSIVENESS

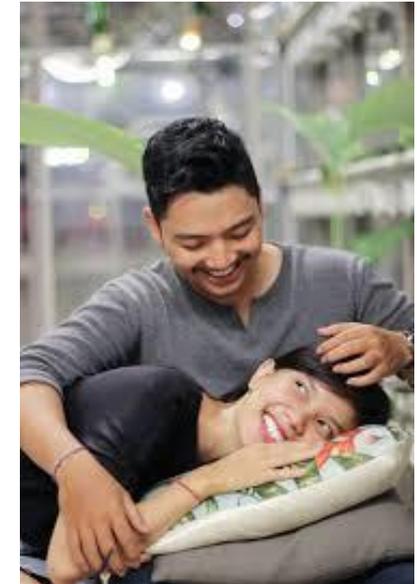
1.0	1.25	1.5	1.75	2.0	2.25	2.5	2.75	3.0
Negative, infrequent Mechanical Flat, Cold			Variable behaviors Brief, not consistent			Mutually Positive Genuine Mutual engagement Reflects care and warmth		

SENSITIVITY / RECIPROcity

1.0	1.25	1.5	1.75	2.0	2.25	2.5	2.75	3.0
Asynchronous Misreading each other Inappropriate actions Little to no repair			Mixed responses Aware or not, but not always appropriate			Well-timed, in sync Attuned to each other Seamlessly repair breaks		

EMOTIONALLY CONNECTED?

NO YES



Relational Health: measurable important predictive

Predictive validity: 4-Mos WECS Predicts 18 Mos Referral

WELCH EMOTIONAL CONNECTION SCREEN (WECS)

Patient: _____ Date: / /

ATTRACTION

1.0 1.25 1.5 1.75 2.0 2.25 2.5 2.75 3.0

Avoid proximity
Little mutual gaze
Aversion
Distant

Variable behaviors
Brief, not consistent

Cozy proximity
Mutual gaze
Warm touch
Drawn to each other

VOCAL COMMUNICATION

1.0 1.25 1.5 1.75 2.0 2.25 2.5 2.75 3.0

Negative, infrequent
Not reciprocal
Not responsive

Variable behaviors
Brief, not consistent

Warm, positive
Genuine
Responsive behaviorally /
vocally to other

FACIAL EXPRESSIVENESS

1.0 1.25 1.5 1.75 2.0 2.25 2.5 2.75 3.0

Negative, infrequent
Mechanical
Flat, Cold

Variable behaviors
Brief, not consistent

Mutually Positive
Genuine
Mutual engagement
Reflects care and warmth

SENSITIVITY / RECIPROCITY

1.0 1.25 1.5 1.75 2.0 2.25 2.5 2.75 3.0

Asynchronous
Misreading each other
Inappropriate actions
Little to no repair

Mixed responses
Aware or not, but
not always appropriate

Well-timed, in sync
Attuned to each other
Seamlessly repair
breaks

EMOTIONALLY CONNECTED?

NO YES

Clinical Referral Measure	WECS Sensitivity	WECS Specificity
MCHAT =>3 Total Item Failed, =>2Critical Item Failed	75%	76%
CBCL T>50 Total Problems	88%	94%
Bayley Cognitive DQ<85	78%	76%
Met any of the above referral criteria	65%	78%

All X² p<.005

Relational Health: measurable important predictive treatable

Rx PRESCRIPTION FOR CONNECTION

C Come together, get close,
start up the CUDDLES



A Apologize 'til you cry,
and even make puddles



L Look with your eyes,
your cell phone must wait



M Make up, do it now,
it's never too late



Rx PRESCRIPTION FOR CONNECTION

C Cuddle at bedtime
and all through the day

U Unwind together,
put smart phones away

D Decrease upsets
by holding each other

D Detail the ways
that you love one another

L Look eye-to-eye,
hold each other in sight

E Express your emotions,
find words that are right

S Share t-shirts (your old ones)
for closeness all night



SIGNATURE _____

DATE _____

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Hope for Georgia's young children

- Workforce support
- Change in treatment paradigms
- Opportunities for early identification, simple treatments, and savings