Adverse Childhood Experiences (ACES)-Lowering Obesity Risk by Resilience through Safe Stable Nurturing Relationships

AMY R. STERNSTEIN MD, FAAP
ASSOCIATE CLINICAL PROFESSOR OF PEDIATRICS
THE OHIO STATE UNIVERSITY COLLEGE OF MEDICINE
CENTER FOR HEALTHY WEIGHT AND NUTRITION
NATIONWIDE CHILDREN’S HOSPITAL

THEOPIA JACKSON, PHD
CLINICAL PSYCHOLOGIST
UCSF BENIOFF CHILDREN’S OAKLAND
DEPARTMENT CHAIR
SAYBROOK UNIVERSITY
Session Objectives

Participants will:

1. Develop a baseline understanding of what adverse childhood events are and how they relate to subsequent health issues, including obesity.

2. Apply new research evidence to help build protective factors against ACES and mitigate risk of obesity and its co-morbidities.

3. Discuss how taking a community level approach to building social capital and cohesion can reduce adverse experiences.
Meet Matias
Matias’ Story

Matias a 7 year old boy, BMI> 95 th percentile who lives with his mother and mother’s “sometimes” boyfriend. He has a half sister (9 yrs) and they visit with MGM on weekends. No contact with his bio father.

Matias comes to clinic with his grandmother because of frequent stomachaches. He often ends up in the nurse’s office at school.

Matias states he eats frequent fast food, pizza and drinks chocolate milk, juice & sneaks his mother’s soda. They often run out of food at the end of the month while under mother’s care.

Not sure about mother’s use of drugs but Matias has witnessed his mother’s boyfriend “ on the floor with a needle in his arm.”

Screening questions reveal that Matias does not feel safe in his home or outside in his neighborhood. His grandmother has told him never to play outside with the neighborhood children. Safety plan established with grandmother.
While you were growing up, during your first 18 years of life:

1. Did a parent or other adult in the household often …
   - Swear at you, insult you, put you down, or humiliate you?
     - Yes  No  If yes enter 1  
   - Act in a way that made you afraid that you might be physically hurt?
     - Yes  No  If yes enter 1  

2. Did a parent or other adult in the household often …
   - Push, grab, slap, or throw something at you?
   - Ever hit you so hard that you had marks or were injured?
     - Yes  No  If yes enter 1  

3. Did an adult or person at least 5 years older than you ever…
   - Touch or fondle you or have you touch their body in a sexual way?
   - Try to or actually have oral, anal, or vaginal sex with you?
     - Yes  No  If yes enter 1  

4. Did you often feel that …
   - No one in your family loved you or thought you were important or special?
     - Yes  No  If yes enter 1  
   - Your family didn’t look out for each other, feel close to each other, or support each other?
     - Yes  No  If yes enter 1  

5. Did you often feel that …
   - You didn’t have enough to eat, had to wear dirty clothes, and had no one to protect you?
     - Yes  No  If yes enter 1  
   - Your parents were too drunk or high to take care of you or take you to the doctor if you needed it?
     - Yes  No  If yes enter 1  

6. Were your parents ever separated or divorced?
   - Yes  No  If yes enter 1  

7. Was your mother or stepmother:
   - Often pushed, grabbed, slapped, or had something thrown at her?
     - Yes  No  If yes enter 1  
   - Sometimes or often kicked, bitten, hit with a fist, or hit with something hard?
     - Yes  No  If yes enter 1  
   - Ever repeatedly hit over at least a few minutes or threatened with a gun or knife?
     - Yes  No  If yes enter 1  

8. Did you live with anyone who was a problem drinker or alcoholic or who used street drugs?
   - Yes  No  If yes enter 1  

9. Was a household member depressed or mentally ill or did a household member attempt suicide?
   - Yes  No  If yes enter 1  

10. Did a household member go to prison?
    - Yes  No  If yes enter 1  

Now add up your “Yes” answers: _______ This is your ACE Score
Finding Your ACE Score

What’s an ACE Score?

Prevalence of ACES

<table>
<thead>
<tr>
<th>Number of Adverse Childhood Experiences (ACE Score)</th>
<th>Women</th>
<th>Men</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>34.5</td>
<td>38.0</td>
<td>36.1</td>
</tr>
<tr>
<td>1</td>
<td>24.5</td>
<td>27.9</td>
<td>26.0</td>
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<tr>
<td>2</td>
<td>15.5</td>
<td>16.4</td>
<td>15.9</td>
</tr>
<tr>
<td>3</td>
<td>10.3</td>
<td>8.6</td>
<td>9.5</td>
</tr>
<tr>
<td>4 or more</td>
<td>15.2</td>
<td>9.2</td>
<td>12.5</td>
</tr>
</tbody>
</table>
Brief Resilience Scale (BRS)

<table>
<thead>
<tr>
<th>Please respond to each item by marking one box per row</th>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Neutral</th>
<th>Agree</th>
<th>Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>BRS 1 I tend to bounce back quickly after hard times</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>BRS 2 I have a hard time making it through stressful events.</td>
<td></td>
<td></td>
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<td></td>
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<tr>
<td></td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>BRS 3 It does not take me long to recover from a stressful event.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>BRS 4 It is hard for me to snap back when something bad happens.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>BRS 5 I usually come through difficult times with little trouble.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>BRS 6 I tend to take a long time to get over set-backs in my life.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
</tbody>
</table>

**Scoring:** Add the responses varying from 1-5 for all six items giving a range from 6-30. Divide the total sum by the total number of questions answered.

**My score:** _______ item average / 6

RESILIENCY

The capacity of a child to deal effectively with...

- stress and pressure
- cope with everyday challenges
- rebound from disappointments, mistakes trauma, and adversity
- develop clear and realistic goals
- solve problems
- interact comfortably with others
- hear oneself and others with respect and dignity

(Brooks, 2005)
Conceptual Model

- Early Death
- Disease, Disability, and Social Problems
- Adoption of Health-risk Behaviors
- Social, Emotional, & Cognitive Impairment
- Adverse Childhood Experiences

http://www.cdc.gov/ace/pyramid.html
Philadelphia Urban ACE Study

Expanded the assessment of toxic childhood experiences from the traditional ACEs to
  ◦ examine the stressors or toxicity that are related to the community settings in which residents grew up, such as
    ◦ witnessing violence
    ◦ feeling unsafe in their neighborhood
    ◦ feeling that people in their neighborhood did not look out for each other, stand up for each other, or could be trusted
    ◦ experiencing discrimination based on their race or ethnicity

The Research & Evaluation Group, 2013
Philadelphia Urban ACE Study

The prevalence of ACEs in Philadelphia suggests urban communities with disadvantaged populations are at high risk for ACEs.

- Suggests these populations warrant targeted interventions to reduce the impact of ACEs and to prevent ACEs.

Additional research is needed to confirm the findings from this study in other urban communities.

The Research & Evaluation Group, 2013
## ACE Scale Does Not Include All the Relevant Adversities

<table>
<thead>
<tr>
<th>ORIGINAL</th>
<th>ADDITIONAL ADVERSITIES</th>
</tr>
</thead>
<tbody>
<tr>
<td>Emotional abuse</td>
<td>Property victimization</td>
</tr>
<tr>
<td>Physical abuse</td>
<td>Peer victimization</td>
</tr>
<tr>
<td>Sexual abuse</td>
<td>Exposure to community violence</td>
</tr>
<tr>
<td>Physical neglect</td>
<td>Socioeconomic status</td>
</tr>
<tr>
<td>Emotional neglect</td>
<td>Someone close had a bad accident or illness</td>
</tr>
<tr>
<td>Mother treated violently</td>
<td>Below-average grades</td>
</tr>
<tr>
<td>Household substance abuse</td>
<td>Parents always arguing</td>
</tr>
<tr>
<td>Household mental illness</td>
<td>No good friends</td>
</tr>
<tr>
<td>Incarcerated household member</td>
<td></td>
</tr>
<tr>
<td>Parental separation or divorce</td>
<td></td>
</tr>
</tbody>
</table>

The ACE Scale does not include all the relevant adversities, including additional adversities such as property victimization, peer victimization, exposure to community violence, and socioeconomic status, among others.
Alter Brain Structure
Especially in The Developing Brain

Experiences (Good and Bad)
• The brain doubles in size in just one year
• By year 3 it is almost adult-size
• *Stimulation and relationships* strengthens connections
• Challenges and Adversity can be handled with Safe Stable Nurturing Relationships
Stress Shapes the Brain

POSITIVE STRESS IS

Is brief, infrequent, mild or moderate

Is normal in everyday life

Motivates, builds exploration and curiosity, and teaches the child to adjust

The child’s social and emotional supports help manage stress and allow a return to normal
Toxic Stress is Harmful

TOXIC STRESS

Long lasting, frequent, or intense
Adverse childhood events (ACEs)
Perceived by the child as overwhelming

Results in
Anxiety
Anger
Emotional outbursts
Fear

Harmful if the child does not have enough social and emotional buffers
There’s Much More At Stake Than Obesity
Interplay Between Trauma & Obesity

- Adverse Childhood Experiences Study (ACES)
  - 1980s adult obesity program with high attrition
  - Dropouts were losing weight
  - Many dropouts reported childhood sexual abuse that predated their onset of obesity
    - Many of them articulated a belief that their sexual abuse history was associated with their obesity

- Prevalence and risk increased as number of ACEs increased for:
  - Smoking
  - Severe obesity (BMI $\geq 35$)
  - Physical inactivity
  - Depressed mood
  - Suicide attempts

- Adjusted odds ratio for severe obesity as an outcome of $\geq 4$ ACEs = 1.6

Beck, 2015
Emerging Research in Pediatrics

ACEs in youth in a low-income urban community

Retrospective chart review

- Medical documentation of ACEs & BMI (>85%ile)
- 701 subjects from the Bayview Child Health Center (San Francisco)
  - Average age of 8 (median: 7; range: 0-21)
  - 54% female
  - 58% African-American, 14% Hispanic, 12% Pacific Islander, 8% Multiracial, 2% Caucasian, 2% Asian, 0.1% Native American, 1.8% Unknown/other

Burke et al, 2011
Emerging Research in Pediatrics

- 67% ≥1 ACEs
- 12% ≥4 ACEs
  - 62% = one or no parents, parental separation, or divorce
  - 25% = substance use in the household
  - 11% = emotional/physical neglect
  - 6% = physical abuse
  - 4% = sexual abuse
  - 5% = emotional abuse
  - 12% = parental incarceration
  - 11% = mental illness
  - 11% = mother treated violently

- Prevalence of overweight/obesity for no ACEs = 31%
- Prevalence of overweight/obesity for ≥4 ACEs = 45%
- Adjusted odds ratio for ACEs ≥4 compared to no ACEs = 2.0 (p=0.02)

Burke et al, 2011

- Death of a parent and hardship due to family income are strongly predictive of obesity.

Heerman and Lynch
BMI Trajectories Related to Mobility

Morris et al

Figure 1 BMI trajectories of residential mobility groups.
Childhood Experience

Safe, Stable and Nurturing Relationships

Social-Emotional Learning
Healthy Adaptations

Childhood Experience

ACEs
Poverty
Violence

Parent Engagement
Quality Childcare
Play

Healthy Lifestyles
Academic Success
Economic Stability

Adult Outcomes

Toxic Stress

Epigenetic Modifications
Disruptions in Brain Architecture
Behavior Changes

Healthy Lifestyles
Academic Failure
Economic Hardship

Poor Health
We Can Build
SOCIAL-EMOTIONAL BUFFERS

Teach Self-Regulation
Build Coping Skills
Organization, Planning
Relief of anxiety and stress
Curiosity, Exploration

• Learned, practiced
• Modeled by others
• Turns off emotional over-reactions
• Increases academic performance
Shifting Paradigms
Because origins of lifelong health are in early childhood.....

For obesity prevention, focus on quality of relationships instead of food and activity behaviors

Consider Strength-Based Assessment
  ◦ Risk and Protective Factors

Population Health
  ◦ Health determinants
  ◦ Policies that affect determinants

Community Engagement
Resilience in Healthcare

The ability to avoid physiologic and behavioral damage from exposure to toxic stress

The process of adapting well in the face of adversity

The result of using protective factors to manage multiple stressful circumstances

Transforms toxic stress to tolerable stress

Safe, Stable and Nurturing Relationships (SSNRs) allow for a prompt return to baseline called “Relational Health”
Resilience and Relational Health

The most important and frequent commonality of children who succeed is that they have had at least one stable and committed relationship with a supportive parent, caregiver, or other adult.

Harvard University Center on the Developing Child
http://developingchild.harvard.edu
Lickers & Groomers

Handling rat pups caused anxiety = stress

Maternal behavior
- High L&G
- Low L&G

High = greater exploration, curiosity, socialization, healthier, less anxious, less aggressive

Biochemical changes in brain

M Meany et al, McGill University
Resilient Children Have in Common

At least one stable, caring and supportive relationship

A sense of self-efficacy or mastery over life circumstances

Strong executive function and self-regulation

Solid grounding in faith or cultural traditions
Modifications of Health Care Delivery

Emphasize relationships during health promotion visits
◦ Strengthening Families Framework
◦ Promote relational health
  ◦ Circle of Security
  ◦ Promoting First Relationships

Screen
◦ History of trauma, current exposure
◦ Risk and protective factors
◦ Trauma related symptoms
◦ Recent addition to AAP Bright Futures –Fourth Edition

Social Determinates of Health
Family-Centered Care

1. Respects each child and family, and honoring racial, ethnic, cultural, and socioeconomic background and experiences
2. Ensures flexibility in policies, procedures, and practices in order to adapt services to the needs, beliefs, and cultural values
3. Shares complete, unbiased information
4. Provides formal and informal support
5. Collaborates with patients and families at all levels
6. Builds on family strengths, empowering decisions

American Academy of Pediatrics (AAP) Committee on Hospital Care and Institute for Patient-and Family-Centered Care (2012)
Trauma-Informed Primary Care (TIPC)

Foundations

Environment

Screening
  ◦ History of Trauma
  ◦ Risk and Protective Factor

Primary prevention
  ◦ Strengthening Families
  ◦ Promoting relational health

Response
  ◦ Integrated primary care
  ◦ Coordination with community programs

Machtinger et. al. From Treatment to Healing: The Promise of Trauma-Informed Primary Care. *Women’s Health Issues*. 2015;25(3) 193-197
Psychological First Aid

Acute intervention to help children, youth and families in immediate aftermath of disaster

Evidence-based

*Listen, Protect, and Connect*

Five principles

- Safety
- Calming
- Connectedness
- Self and Community Efficacy
- Hope

Book: “Mama, Did You Hear the News?” by Sanya Gragg
Screening for Trauma

What happen to you vs What’s wrong with you?

Sample Questions

◦ Since the last time I saw you (your child), has anything really scary or upsetting happened to you (your child) or anyone in your family?

◦ You have told me that your child is having difficulty with aggression, attention and sleep. Just as fever is an indication the body is dealing with an infection, when these behavioral symptoms are present, they indicate that the brain and body are responding to a stress or threat.

  ◦ Do you have any concerns that your child is being exposed to threat?”

Forkey, 2013
Screening Tools

SEEK Safe Environment for Every Kid
http://theinstitute.umaryland.edu/frames/seek.cfm

SCARED

Trauma Symptom Checklist for Children and Trauma Symptom Checklist for Young Children (TSCC and TSCYC)
http://www4.parinc.com

Child PTSD Symptom Scale (CPSS)
foa@mail.med.upenn.edu

Univ. of California at Los Angeles Posttraumatic Stress Disorder Reaction Index (UCLA-PTSDRI)
http://www.istss.org/UCLAPosttraumaticStressDisorderReactionIndex.htm
Strengths-Based Approaches
Shifting the Framework

Policies, practice methods, and strategies that identify and draw upon the strengths of children, families, and communities

Shift in Paradigm
◦ Problem-saturated to Positive Partnership
◦ Health Home Model

*It has taken you and your child some time to develop this dance; it will take time to change. Change your steps and he or she will change.*
Strengths-based Approaches
Guiding Principles

1. All children have strengths.

2. Focusing on children’s strengths instead of weaknesses may result in enhanced motivation and improved performance.

3. Failure to demonstrate a skill should first be viewed as an opportunity to learn the skill as opposed to a problem.

4. Service plans that begin with a focus on strengths are more likely to involve families and children in treatment.

Epstein et al., 2003
Screening Instruments

Child and Youth Resilience Measure:  

Eliciting Parents Strengths and Needs:  
https://brightfutures.aap.org/Bright%20Futures%20Documents/AAP_BF_ElicitingParentalStrength_Tipsheet_FINAL.pdf

Strengths and Difficulties Questionnaire (Parent, Child, Teacher):  
https://depts.washington.edu/dbpeds/Screening%20Tools/Strengths_and_Difficulties_Questionnaire.pdf
Faith in Shifting Paradigms

These aren't Weight Watchers diet pills. You've been reading them upside down.
It is unreasonable to expect that people will change their behavior easily when so many forces in the social, cultural and physical environment conspire against such change.

— Institute of Medicine
There is growing understanding about trauma, particularly its prevalence and impact. The predominant approach to dealing with trauma is screening and treatment, consistent with a medical model.

Trauma manifests at the community-level.

There are emerging practices to address trauma at the community-level.

Figure 1: The Community Environment
Closing Reflections

Acknowledgments
Ruben Cantu (Moderator)
Lori Friedman, MPH
Sandra Hoyt Stenmark M.D.
Appendix

References

Resources and Tools

Additional Resources
References


Resources and Tools

Psychological First Aid app

Health Care Toolbox - www.healthcaretoolbox.org

Circle of Security Network - www.circleofsecuritynetwork.org/the_circle_of_security.htm

Promoting First Relationships - http://pfrprogram.org

Futures Without Violence - https://www.futureswithoutviolence.org/

Institute for Safe Families - http://www.instituteforsafefamilies.org/
Elements of family-centered and trauma-informed pediatric care

**FAMILY-CENTERED CARE**
- Focus on dignity & respect for patient / family
- Maximize family involvement in care
- Respect patient / family wishes for interdependence & privacy

**TRAUMA-INFORMED CARE**
- Integrated in every patient interaction
- Share information with patient and family
- Encourage family presence
- Recognize family strengths & needs
- Cultural competence
- Minimize potential for trauma during medical care
- Address distress
- Promote emotional support
- Encourage return to daily activities when possible

www.healthcaretoolbox.org
The Circle of Security

CIRCLE OF SECURITY®
PARENT ATTENDING TO THE CHILD’S NEEDS

Secure Base

- Protect me
- Comfort me
- Delight in me
- Organize my feelings

Safe Haven

Support My Exploration

Welcome My Coming To You

- Watch over me
- Delight in me
- Help me
- Enjoy with me

I need you to...

Always: be BIGGER, STRONGER, WISER, and KIND.
Whenever possible: follow my child’s need.
Whenever necessary: take charge.

© 2000, Cooper, Hoffman, Marvin & Powell

www.circleofsecuritynetwork.org/the_circle_of_security.htm
Promoting First Relationships

http://pfrprogram.org
Wallet Card for Parents

Connected Parents, Connected Kids

You Are a Good Parent

As a caregiver of children, you want the best for your kids. For kids to get the best from you it helps:
✓ To be in a good place yourself
✓ To have tools and ideas that support your wellbeing
✓ To have a backup plan for bad days

Health care providers are discovering strategies and tools that support caregivers and kids, too. Scan the code above to see a cool video with more information.

Strong Families

Relationships, both past and present, affect all of us. But even when we’ve had bad experiences there is hope. There are strategies to help us become stronger.
What does it mean to be strong, resilient, or come back from bad experiences?
✓ Knowing how to navigate stress and use tools to help you cope
✓ Being able to step back from your emotions when things get hard
✓ Coming back after bad experiences and helping your kids do the same

Studies show that caring relationships and positive parenting build resilience and strength in us and our kids.

Difficult Childhood

Many adults (about one in four) grow up in homes where there was abuse or other problems.
✓ Maybe someone was hurting them
✓ Maybe they saw a parent or caregiver being hurt
✓ Maybe someone at home was abusing drugs or alcohol
✓ Maybe things like this happened to you or your child

These experiences can affect your health, relationships and how you parent. No one deserves to have things like this happen to them.
Wallet Card for Parents

Health Effects

**Difficult childhood experiences can put you and your children at higher risk for:**

- Repeating the cycle even if you’re not aware of it
- Asthma, chronic pain, obesity
- Smoking, drinking, prescription and street drug abuse
- Anxiety, depression, suicide
- Adult relationships where you’re being hurt or hurting your partner

But that’s not the end of the story—the good news is that you can find your strength, work on your health and turn things around. For more information go to: www.acetoolhigh.com

Simple Steps Reduce Stress

**What can you do right now, today, to help yourself and your kids?**

- Smiley face what you’re doing for a few minutes and take some deep breaths until you feel calmer. Check out “Tactical Breather Trainer,” a free cell phone app.

- Identify parenting issues that are especially stressful (like potty training, homework, or bedtime) and if someone can help or do those things for you.

- Talk with a trusted friend, family member, or find a support group for mothers or fathers to connect with other parents. Join an online parenting community (www.healthypace.com/parenting).

Positive Parenting

**Sometimes you forget there are simple things you can do to connect with your child and help them feel loved. These activities also help build their brains and social skills and help them do better in school.**

- Read, play imaginary games, and laugh with your child.
- Help your child talk about how they are feeling and find the words to describe their emotions.
- Help your child find something they are really good at.

Write down 3 positive things you did today with your child. You’ll be able to see how your choices help you be a better parent and help your child thrive.

Every parent needs support at some point. There are great confidential, helpful, and nonjudgmental numbers to call 24/7. In addition, there is an app that can help too. Scan the code to the right for more information.

**Childhelp: 1 800-4-A-CHILD (422-4453)**
If you are feeling frustrated or angry with your child or just need to talk

**Treatment referral:**
1 800-662-HELP (4357)
Referral service for substance abuse and mental health issues

**National Fatherhood Institute:**
www.fatherhood.org
Connected Parents: Connected Kids

https://youtu.be/JOmj5VVYyF0
RESILIENCE Questionnaire

Please circle the most accurate answer under each statement:

1. I believe that my mother loved me when I was little.
   - Definitely true
   - Probably true
   - Not sure
   - Probably Not True
   - Definitely Not True

2. I believe that my father loved me when I was little.
   - Definitely true
   - Probably true
   - Not sure
   - Probably Not True
   - Definitely Not True

3. When I was little, other people helped my mother and father take care of me and they seemed to love me.
   - Definitely true
   - Probably true
   - Not sure
   - Probably Not True
   - Definitely Not True

4. I’ve heard that when I was an infant someone in my family enjoyed playing with me, and I enjoyed it, too.
   - Definitely true
   - Probably true
   - Not sure
   - Probably Not True
   - Definitely Not True

5. When I was a child, there were relatives in my family who made me feel better if I was sad or worried.
   - Definitely true
   - Probably true
   - Not sure
   - Probably Not True
   - Definitely Not True

6. When I was a child, neighbors or my friends’ parents seemed to like me.
   - Definitely true
   - Probably true
   - Not sure
   - Probably Not True
   - Definitely Not True

7. When I was a child, teachers, coaches, youth leaders or ministers were there to help me.
   - Definitely true
   - Probably true
   - Not sure
   - Probably Not True
   - Definitely Not True

8. Someone in my family cared about how I was doing in school.
   - Definitely true
   - Probably true
   - Not sure
   - Probably Not True
   - Definitely Not True

9. My family, neighbors and friends talked often about making our lives better.
   - Definitely true
   - Probably true
   - Not sure
   - Probably Not True
   - Definitely Not True

10. We had rules in our house and were expected to keep them.
   - Definitely true
   - Probably true
   - Not sure
   - Probably Not True
   - Definitely Not True
How Does Resilience Develop?

Combination of intrinsic and extrinsic factors

Enhanced by supportive relationships (SSNR), skill-building and positive experiences

Resilience is the result of multiple interactions between environmental protective factors and highly responsive biologic systems.
Resilience Can Be Learned

Important relationships vary over the life course
- Parents, grandparents, siblings, peers, intimate partners
- Grounded in early experiences

Non-cognitive skills (empathy) can be taught as late as adolescence

Contemporary emphasis on two-generational interventions