Overview

- What is resilience?
- What have we learned?
- How can we promote resilience?

Advances in resilience science since the 1970s

- Methods
- Models
- Levels of analysis
- Cultural studies
- Inclusion of research/researchers from the Global South
- Collaboration of humanitarian agencies with researchers
- Bridging divides to prepare for disaster
- Realization that we need a common language

Human development

...emerges from interactions across levels

- Individual Development

Gottlieb

Resilience

Capacity of a system to adapt successfully to challenges that threaten system function, viability, or development

Ann S. Masten

Minnesota Council on Family Relations

New Brighton, MN November 16, 2018

Sara – a case illustrating the power of caregiving

Masten & O'Connor 1989
**Systems of development**
- Embedded
- Interacting
- Interdependent

**From a developmental perspective...**
- Resilience is always changing
- Capacity for adaptation is spread across systems
- Individual & family resilience depends on other systems
- Diverse pathways of adaptation are expected


**Pathways**

The course of development can be described as a pathway

Patterns of adaptive function vary over time in relation to adversity or challenges

![Acute trauma or disaster](chart)

![Severe Chronic Adversity](chart)
Resilience after chronic adversity

Examples

- Recovery of
  - Abused children moved to better homes
  - Children adopted from orphanages
  - Child soldiers who are rescued
  - Refugees who find a safe new homeland

What happens when adverse conditions endure?

ACEs

Boynton Health
2015
College Student Health Survey

17 colleges including U of M; St. Cloud State; St. Cloud Technical & Community College

12,000 surveys

ACE scores in homeless parents compared with national data

<table>
<thead>
<tr>
<th>Total ACEs</th>
<th>ACEs in Homeless Sample</th>
<th>ACEs in National Sample</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>15.0%</td>
<td>36.1%</td>
</tr>
<tr>
<td>1</td>
<td>17.8%</td>
<td>26.9%</td>
</tr>
<tr>
<td>2</td>
<td>12.1%</td>
<td>15.9%</td>
</tr>
<tr>
<td>3</td>
<td>7.5%</td>
<td>9.5%</td>
</tr>
<tr>
<td>4 or more</td>
<td>43.8%</td>
<td>12.5%</td>
</tr>
</tbody>
</table>

National data retrieved from http://www.cdc.gov/ace/prevalence.htm

Frequency of specific ACEs in homeless parents vs MN adults

<table>
<thead>
<tr>
<th>ACE Type</th>
<th>Homeless Parents</th>
<th>MN Adults</th>
</tr>
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<tbody>
<tr>
<td>Abuse and Neglect</td>
<td>39%</td>
<td>16%</td>
</tr>
<tr>
<td>Physical Abuse/Neglect</td>
<td>31%</td>
<td>10%</td>
</tr>
<tr>
<td>Sexual Abuse</td>
<td>3%</td>
<td>5%</td>
</tr>
<tr>
<td>Emotional Neglect/Verbal Abuse</td>
<td>58%</td>
<td>28%</td>
</tr>
<tr>
<td>Household Dysfunction</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mental Illness</td>
<td>22%</td>
<td>17%</td>
</tr>
<tr>
<td>Divorce/Separation</td>
<td>50%</td>
<td>21%</td>
</tr>
<tr>
<td>Domestic Violence</td>
<td>29%</td>
<td>14%</td>
</tr>
<tr>
<td>Parental Incarceration</td>
<td>17%</td>
<td>7%</td>
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MN data from Minnesota Department of Health (2011)

Risk gradient in a sample of homeless children

Masten & Sesma 1999

Risk Factors
- Low education
- Single parent
- Parent died
- Parents divorced
- Foster care
- Maltreatment
- Saw violence
**Variation in function within risk level**

- **Risk Level**: 0, 1, 2, 3, 4, 5, 6
- **Behavior problems**: 30, 40, 50, 60, 70, 80

**Reading scores 2005 to 2009**

- 26,501 students
- Low risk (25%)
- Reduced price (4%)
- Nat test norm
- Experienced Homelessness (14%)
- Free meals (57%)
- Experienced Homelessness (14%)

**HHM student individual reading scores**

- >3000 students
- Reading score vs. Grade

**The short list**

- Capable caregiving
- Other close relationships
- Problem-solving skills
- Self-regulation skills
- Self-efficacy
- Motivation to succeed
- Faith, hope, optimism
- Purpose/belief life has meaning
- Effective schools
- Well-functioning communities

**Child skills matter**

- **EXAMPLE**: Executive function skills (EF)
  - Neurocognitive processes that we use to direct attention, thoughts, or actions to achieve goals
  - Self-control

- **Important for school success**
  - Pay attention, listen to teacher
  - Control emotions and impulses
  - Wait turn, sit on the circle
  - Follow instructions
  - Switch activities

**EF skills predict school success**

- **EF skills predict school success**
  - 0.46
  - -0.33

**Ordinary Magic**

- Masten et al 2012
- Kalstabakken 2016

**Resilient Maladaptive**

- Obradović 2010
Families matter
- Nurture body, mind and spirit
- Secure base (emotional security)
- Economic security
- Regulate stress
- Influence gene expression
- Monitor environment for safety
- Foster learning and self-regulation skills
- Facilitate achievement of developmental tasks
- Broker resources (social capital)
- Transmit cultural capital

Roles of families in exposure
- Gatekeeping and shielding
  - Preventing or reducing exposure
  - Monitoring exposure
- Preventing family stress spillover
  - Cascading effects of stress on family function
  - Terrified parents are terrifying to children

Parenting quality moderates risk in homeless families

Moderators of ACEs
2011/12 National Survey of Children’s Health
- Good family functioning mitigated risk of ACEs on adolescent health and well-being
  - Balistreri & Alvira-Hammond 2016
- Able to stay calm in face of challenge associated with lower risk for emotional, mental, or behavioral conditions
  - Bethell et al 2016

Parallel Protective Factors

Parenting Resilience
"the capacity of parents to deliver competent, quality parenting to children despite adverse circumstances"
- Gavidia-Payne, Denny, Davis, Francis, & Jackson, 2015

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Parenting quality moderates risk in homeless families

See Herbers et al 2011, 2014

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Schools matter

**Nurture resilience**
- Build human capital
  - Cognitive and social skills
  - Knowledge and talents
- Promote positive relationships
  - Prosocial peer activities
  - Relationships with competent adults
- Opportunities for self-efficacy
- Normal routines

**Effective schools**
- Strong leadership
- Effective teaching
- Positive school climate
- Asset rich environments
- High expectations, support, & structure

Communities matter

- Supports for families
- Supports for education
- Parks, libraries, recreation
- Health care
- Emergency services and disaster preparedness
- NGO + government services
- Policies and laws that support children & their families
- Traditions and rituals for overcoming stress
- Support for cultural practices and celebrations

"Sense of community" moderates link of ACEs to adult well-being
Nurius et al 2015

2010 Behavioral Risk Factor Surveillance System BRFSS for Washington State (random dialing) N over 13,000

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Important protective systems at other levels

- **Within the individual (neurobiological)**
  - Immune system
  - Arousal regulation systems
- **In religion and cultural systems**
  - Meaning-making systems of belief, rules and rituals for living
  - Attachments to spiritual figures
  - Arousal regulation through meditation, prayer, mindfulness
  - Cultural practices that provide support

Risk & resilience of individuals is linked to

- Dose of exposure (ACEs and other indicators of adversity)
  - Current and cumulative
- Recovery environment
  - Physical, psychological, social, spiritual
- Resilience in other systems
  - Family and other relationships
  - Schools and other community systems
- Individual differences
  - Biological health and stress systems
  - Age, sex, personality, sensitivity to experience
Beyond ACES

- Variation – the missing story
- Assess assets, resources, & protections

Clues to mitigating risk and promoting resilience!

Resilience science has transformed practice in many fields

- Clinical psychology
- Pediatrics, Psychiatry
- School psychology
- Counseling
- Social work
- Family social science

Shifting the focus

- Positive outcomes
- Strength-based
- Promotive & protective processes
- Building capacity at multiple levels

Resilience Framework for Action

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<tr>
<th>Mission</th>
<th>Frame positive goals</th>
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<td>Models</td>
<td>Include positive influences</td>
</tr>
<tr>
<td>Measures</td>
<td>Assess assets &amp; positive goals</td>
</tr>
<tr>
<td>Methods</td>
<td>Prevent - promote - protect</td>
</tr>
<tr>
<td>Multiple</td>
<td>Multiple levels &amp; disciplines</td>
</tr>
</tbody>
</table>

Strategies

**Risk**
- Prevent or mitigate damaging adversity exposures

**Assets and Opportunities**
- Increase resources or access to resources

**Adaptive systems**
- Support, restore, or engage human adaptive systems

Risk-focused strategies for child development

- Prenatal care to prevent premature birth
- Reduce stress of pregnant women
- Screen and treat depression in mothers
- Reduce child maltreatment
- Avoid multiple foster care placements
- Reduce family violence
- Reduce school and neighborhood violence
- Clean up toxins
- Dig up landmines
- Prevent homelessness

Asset-focused strategies

- Food, water, shelter, medical care, dental care
- Educate parents, teachers, and traditional “first responders”
- Add financial resources
- Provide books or a tutor
- Quality childcare & early education programs
- Build schools, playgrounds, libraries
- Build or restore community services
- Stabilize housing, schooling, case managers
- Scholarships from early childhood to adulthood
Adaptive system focused strategies

**Engage powerful engines of change**

- Foster secure attachment relationships
- Promote bonds with competent/caring adults
- Support healthy family life and function
- Protect and nurture brain development
- Facilitate school bonding and engagement
- Foster friendships with prosocial peers
- Integrate systems of care
- Provide opportunities to succeed, develop talents...
- Support cultural traditions

---

**Strengthen relationships**

- Brain power
- Self control
- Purpose

---

**Keeping in mind**

...interventions that work typically are

- Developmentally informed
- Culturally appropriate
- Ecologically and developmentally strategic
- Focus on the positive and existing strengths
- Promote the positive & reduce risk or problems
- Mobilize & support powerful adaptive systems
- Well timed and targeted

---

**Windows of opportunity**

- When plasticity is surging
- When conditions converge for change
- When systems are in flux or unstable
- Some are developmental
- Some arise from chance
- Some arise in the context of adversity
- Some arise when people seek help

- Ask when and where is there leverage for change?

---

**Examples of interventions to promote school success in children from very high-risk homeless or highly mobile families**

- **Reduce risk & stress**
  - Reduce family stress; screen & treat depression in parents
  - Prevent homeless episodes & school changes
  - Reduce hunger and food insecurity
  - Prevent family and community violence
- **Increase resources & access**
  - Financial supports, housing
  - Health care and mental health services
  - Quality childcare, early education, schools
  - Tutors, summer programs, computers, high speed internet
  - Family advocates
- **Promote protective processes**
  - Effective parenting, teaching, mentoring
  - Self-regulation skills
  - Opportunities to succeed and develop talents
  - Support families & cultural traditions that promote resilience

---

**Ready? Set. Go!**

*Intervention*

**Grand Challenge: End Student Homelessness**

Homework Starts with Home Research Partnership
Emerging neurobiology of resilience
- Interplay of genes, biological systems, and experience
- Programming and reprogramming of adaptive systems
- Biological embedding of stress, good parenting, culture
- Protecting brain development

Aligning systems to foster resilience
- Linking families, healthcare, schools, peers, community
- Aligning state and national policies with child resilience

Cultural traditions/practices that promote resilience

Intriguing questions
- Can resilience be transmitted across generations?
- When & how does experience with adversity foster resilience?
  — Is overprotection a problem?
- Are some children more sensitive to adversity?
  — Are they also sensitive to positive experiences and intervention?
- Are there hidden skills?
  — Stress-adapted youth with skills that can be redirected?

How do we leverage the power of integrated systems?
- Given that resilience depends on multiple systems
  - Individual
  - Family, school, peer systems
  - Cultures and religions
  - Communities
  - National identities
  - Informational and social media
- Will aligning sectors and disciplines yield synergy?

Integrating resilience across systems, disciplines, applications

In theory
- Molecular & global
- Individual & family
- Family & community
- Psychosocial & ecological
- Human & electronic
- Social & economic

In action
- Disaster response
- Humanitarian
- Prevention science
- Public health
- Climate change
- Peacebuilding

Take home messages
- Resilience is common despite ACEs
- Resilience is dynamic & many systems influencing adaptive capacity
- Recovery depends on multiple interacting systems
- ACEs can and should be prevented
- Resilience can and should be promoted
- Resilience of children & families depend on other systems

Resilience in Minnesota & societies around the world depends on the resilience of children & families

Invitation to a MOOC on Coursera.org
Resources by Ann Masten

**Book on resilience**

**PopTech talk on resilience**: [https://www.youtube.com/watch?v=GBMet8oIvXQ](https://www.youtube.com/watch?v=GBMet8oIvXQ)

**MOOC: Resilience in Children Exposed to Trauma, Disaster and War: Global Perspectives**

**Resilience overviews and commentaries [open access; google the doi to locate a free copy]**

**Encyclopedia on Early Childhood Development ~ section on resilience**
Resilience section (edited by Masten). There is a summary and also articles by leading researchers. [http://www.child-encyclopedia.com/resilience/introduction](http://www.child-encyclopedia.com/resilience/introduction) (free to download complete topic)

**Risk and resilience in homeless families – overviews of 25 years of research**
EDTalk on resilience in students experiencing homelessness given in Minneapolis Sep 25, 2017 [https://www.achievempls.org/edtalks](https://www.achievempls.org/edtalks)

**Concise articles on resilience for educators**

**Children in war and disaster**