Ordinary Magic: Resilience in Development

Ann S. Masten
Growing Resilient Communities
St. Cloud, MN May 4, 2018

Overview

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

WWII survivors who pioneered resilience science

A Landmark Study
The Children of Kauai

- Emmy Werner and Ruth Smith
- Followed nearly 700 children born in 1955
- A study of risk became a study of resilience
- Focused on children with multiple risk factors
- Observed variation in their lives over time
- Identified predictors of resilience
- Results would be corroborated many times

Sample of Kauai findings

- Close bonds with caregivers & others
- Appealing personalities
- Engaged and motivated
- Good learning skills
- Developed faith and optimism
- Varying pathways of resilience
  - Steady course
  - Turnaround cases

How do children overcome adversity to succeed?

What makes a difference?

How can we promote resilience?
Capacity of a system to adapt successfully to challenges that threaten its function, life, or development

**RESILIENCE**

Photo © Kendra Mack 2008

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**Human development** ...
emerges from interactions across levels

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**Systems in a child’s life**
- Embedded
- Interacting
- Interdependent

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

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**Pathways**
The course of development can be described as a pathway

How do patterns of adaptive function vary over time in relation to adversity or challenges?
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

3 defining questions in research on resilience of individuals

<table>
<thead>
<tr>
<th>Threats</th>
<th>Promoters/Protections</th>
<th>Adaptive success</th>
</tr>
</thead>
<tbody>
<tr>
<td>Trauma</td>
<td>Neurobiological</td>
<td>Developmental tasks</td>
</tr>
<tr>
<td>Neglect</td>
<td>Individual</td>
<td>Mental health</td>
</tr>
<tr>
<td>Poverty</td>
<td>Family &amp; relational</td>
<td>Physical health</td>
</tr>
<tr>
<td>War</td>
<td>Community</td>
<td>Happiness</td>
</tr>
<tr>
<td>Natural disaster</td>
<td>Cultural</td>
<td>School or job achievement</td>
</tr>
<tr>
<td>ACEs</td>
<td>Societal</td>
<td>Caregiving</td>
</tr>
</tbody>
</table>

ACE scores in homeless parents compared with national data

<table>
<thead>
<tr>
<th>Total</th>
<th>ACEs in Homeless</th>
<th>ACEs in National</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Sample</td>
<td>Sample</td>
</tr>
<tr>
<td>0</td>
<td>15.0%</td>
<td>36.1%</td>
</tr>
<tr>
<td>1</td>
<td>17.8%</td>
<td>26.0%</td>
</tr>
<tr>
<td>2</td>
<td>12.1%</td>
<td>15.9%</td>
</tr>
<tr>
<td>3</td>
<td>7.6%</td>
<td>9.5%</td>
</tr>
<tr>
<td>4 or more</td>
<td>45.0%</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>Risk Factor</th>
<th>Homeless Parents</th>
<th>MN Adults</th>
</tr>
</thead>
<tbody>
<tr>
<td>Abuse and Neglect</td>
<td>39%</td>
<td>16%</td>
</tr>
<tr>
<td>Physical Abuse/neglect</td>
<td>39%</td>
<td>16%</td>
</tr>
<tr>
<td>Sexual Abuse</td>
<td>31%</td>
<td>10%</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>
</tr>
</tbody>
</table>

MN data from Minnesota Department of Health (2011)

Risk gradient in a sample of homeless children

Risk Factors
- Low education
- Single parent
- Parent died
- Parents divorced
- Foster care
- Maltreatment
- Saw violence

Variation in function within risk level

Reading scores 2005 to 2009

- Low risk (25%)
- Reduced price (4%)
- Nat test norm
- Free meals (15%)
- Experienced Homelessness (14%)

Cutuli et al 2013
Child Development

What makes a difference?

HHM student individual reading scores
>3000 students

National avg
Risk & resilience in children linked to

Dose of exposure
  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

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

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

Parenting quality moderates risk in homeless families

See Herbers et al. 2011, 2014
Parallel Protective Factors

<table>
<thead>
<tr>
<th>Individual Resilience</th>
<th>Family Resilience</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nurturing, sensitive caregiving</td>
<td>Nurturing care of vulnerable members</td>
</tr>
<tr>
<td>Attachment, security, belonging</td>
<td>Family cohesion, sense of belonging</td>
</tr>
<tr>
<td>Skilled parent management, discipline</td>
<td>Maintaining family boundaries, rules</td>
</tr>
<tr>
<td>Agency, motivation to adapt</td>
<td>Active coping, mastery</td>
</tr>
<tr>
<td>Problem-solving, planning</td>
<td>Collaborative problem-solving</td>
</tr>
<tr>
<td>Self-regulation, emotion regulation</td>
<td>Co-regulation, family balance</td>
</tr>
<tr>
<td>Hope, faith, optimism</td>
<td>Hope, faith, optimism</td>
</tr>
<tr>
<td>Meaning making, life has meaning</td>
<td>Coherence, family meaning making</td>
</tr>
<tr>
<td>Positive views of the self or identity</td>
<td>Positive views of family/family identity</td>
</tr>
<tr>
<td>Routines and rituals</td>
<td>Family routines and rituals</td>
</tr>
</tbody>
</table>

Masten 2018

Schools matter

Nurture resilience

- Build human capital
  - Cognitive and social skills
- 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

Important protective systems at other levels

- Within the individual (neurobiological)
  - Immune system
  - Arousal regulation systems
  - Stress 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

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**

- **Mission**: Frame positive goals
- **Models**: Include positive influences
- **Measures**: Assess assets & positive goals
- **Methods**: Prevent - promote - protect
- **Multiple**: Multiple levels & disciplines

**3 basic strategies to promote resilience**

- Reduce or mitigate risk
- Boost resources and opportunities
- Mobilize power of “ordinary magic” resilience factors

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**Risk-focused strategies**

- 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

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**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 that provide children with adaptive tools and opportunities to connect with prosocial adults

**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?

Example

How can we promote school success in children from very high-risk homeless or highly mobile families?

Interventions to consider

★ 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

Executive Function

School readiness

Risk

Grand Challenge: End Student Homelessness

Homework Starts with Home Research Partnership

New Horizons
**4th wave of resilience science**

- Emerging neurobiology of resilience
  - Interplay of genes, biological systems, and experience
  - Programming and reprogramming of adaptive systems
  - Biological embedding of stress, good parenting, culture

- 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 as well as trauma be transmitted across generations?
- When and 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**

<table>
<thead>
<tr>
<th>In theory</th>
<th>In action</th>
</tr>
</thead>
<tbody>
<tr>
<td>Molecular &amp; global</td>
<td>Disaster response</td>
</tr>
<tr>
<td>Individual &amp; family</td>
<td>Humanitarian</td>
</tr>
<tr>
<td>Family &amp; community</td>
<td>Prevention science</td>
</tr>
<tr>
<td>Psychosocial &amp; ecological</td>
<td>Public health</td>
</tr>
<tr>
<td>Human &amp; electronic</td>
<td>Climate change</td>
</tr>
<tr>
<td>Social &amp; economic</td>
<td>Peacebuilding</td>
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</tbody>
</table>

**Enduring Take-home Messages**

- Resilience is common
- There are many paths of resilience
- Ordinary human adaptive systems are powerful
- Resilience can be supported and promoted
- Resilience of children/ families depends on other systems
  - Resilience of individuals, families, communities, cultures, religions, health care systems, government agencies, and NGOs

**Resilience in Minnesota and societies around the world depends on the resilience of children**

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

**Book**

**PopTech talk on resilience (18 minutes)**
[https://www.youtube.com/watch?v=GBMet8oIvXQ](https://www.youtube.com/watch?v=GBMet8oIvXQ)

**MOOC (Massive Open Online Course) on resilience by Ann Masten (free or paid certificate).** New sessions start every 8 weeks. Can join anytime. Thousands of participants have taken this MOOC from over 170 countries. Active discussion forums. Six modules on topics such as resilience in disaster, in homeless families, or in war. Guides to intervention. Interviews with other resilience scholars and links to many resources. [https://www.coursera.org/learn/resilience-in-children](https://www.coursera.org/learn/resilience-in-children)

**EDtalk on resilience in students experiencing homelessness given in Minneapolis Sep 25, 2017**
[https://www.achievempls.org/edtalks](https://www.achievempls.org/edtalks)

**Encyclopedia on Early Childhood Development section on resilience**
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)

**A nice summary of the case for investing in young children globally**

**User friendly succinct article on resilience for educators**

**Risk and resilience in homeless families**

**Children in war and disaster**