Resilience despite ACEs

Ann S. Masten
University of Minnesota

Overview

• Resilience in the context of ACEs
• Origins of resilience science
• ACEs and cumulative risk gradients
• Variation within levels of risk
• Protective factors
• Future directions
Pioneering insight 5 decades ago

Risk researchers – realizing what we could learn from the study of resilience in individuals threatened by adversity launched resilience science

RESILIENCE

Capacity of a system (child, family, community…) to adapt successfully to threats that could destroy or harm the life, function, or development of the system

Developmental systems perspective

Development emerges from interactions of many systems across levels

From this perspective…

• Resilience changes – it’s dynamic

• Capacity for adaptation to adversity is distributed across systems

• Individual resilience depends on resilience of other systems

• Resilience is not a trait

Gottlieb
What are challenges threatening the system? How is the system doing?

<table>
<thead>
<tr>
<th>Risk</th>
<th>Adaptation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Trauma</td>
<td>Achievement</td>
</tr>
<tr>
<td>Neglect</td>
<td>Mental health</td>
</tr>
<tr>
<td>Poverty</td>
<td>Physical health</td>
</tr>
<tr>
<td>War</td>
<td>Happiness</td>
</tr>
<tr>
<td>Natural disaster</td>
<td>Developmental task success</td>
</tr>
<tr>
<td>ACEs</td>
<td>Adjustment</td>
</tr>
</tbody>
</table>

**Cumulative Risk**

- Total effect of multiple risk factors combined
- Piling up of multiple risks in a concentrated window
- Dose gradients
Multiplicity of risk factors and child psychiatric disorder

Classic data

Tsunami + war + family violence
Catani et al. BMC Psychiatry 2008
Risk gradient in a homeless sample

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

Masten & Sesma 1999

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**Asset Gradients**

**Percent of Youth**

**Number of Assets**

Alcohol - School Success

[Graph showing the relationship between number of assets and percent of youth with alcohol and school success]
Variation within risk level

Reading scores 2005 to 2009
26,501 students

Low risk (25%)
...Reduced price (4%)
Nat test norm
Free meals (57%)
HHM (14%)

Cutuli et al 2013
Child Development
HHM student individual reading scores
N>3000

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>26.0%</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>43.0%</td>
<td>12.5%</td>
</tr>
</tbody>
</table>

http://www.cdc.gov/ace/prevalence.htm
Frequency of specific ACEs in homeless parents vs MN adults

<table>
<thead>
<tr>
<th>Abuse and Neglect</th>
<th>Homeless Parents</th>
<th>MN Adults</th>
</tr>
</thead>
<tbody>
<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>
</tbody>
</table>

**Household Dysfunction**

<table>
<thead>
<tr>
<th></th>
<th>Homeless Parents</th>
<th>MN Adults</th>
</tr>
</thead>
<tbody>
<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>

Variation in distress within levels of ACEs among homeless parents

![Graph showing variation in distress within levels of ACEs among homeless parents.](Image)
Variation in **hope** within levels of ACEs among homeless parents

**Pathways**
How do patterns of adaptive function vary over time in relation to challenges?
Acute trauma or disaster

Multiple influences $\rightarrow$ multiple pathways

Optimal zone $\rightarrow$ C
Okay zone $\rightarrow$ A, B
Maladaptive zone $\rightarrow$ E, D

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Symptoms

High
Moderate
Low

D $\rightarrow$ B $\rightarrow$ A

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Masten et al. 2016
Masten & Narayan 2012
Masten & Obradović 2008
After Hurricane Andrew 1992

La Greca et al. (2013) Child Youth Care Forum, 42, 351-369
Trajectories of Internalizing Symptoms in War-Affected Sierra Leonean Youth 2002-2008

Betancourt et al (2013) Child Development

- 5% stable high
- 48% improvers
- 6% deteriorating
- 41% stable low
After Katrina & Deepwater Horizon oil spill
Osofsky et al 2015

Stable high 9%
Steep decreasing 21%
Low increasing 18%
Stable low 52%

Accounting for resilience

• What counters or mitigates risk?
• What are protective processes?
Parenting protective for achievement

Herbers et al., 2011

“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
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

Relative risk for EMB - emotional, mental, or behavioral - conditions for more & less calm children
(Bethel et al 2016)
What makes a difference?

- Decades of research
- Diverse populations and situations
- Disagreement about concepts
- Inconsistent methods
- Yet…

Striking consistency in findings

Risk & resilience in young people 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
The short list

- Capable caregiving and parenting
- Other close relationships
- Problem-solving skills
- Self-regulation skills
- Motivation to succeed
- Self-efficacy
- Faith, hope, belief life has meaning
- Effective early childhood education, schools
- Effective communities
- Effective cultural practices

What does the short list mean?

- Basic adaptive systems are important for resilience under many different circumstances

- Adaptive capacity extends beyond the person into other social and cultural systems
Resilience science has transformed practice in many fields

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

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

Strategies for positive change

Risk-focused
- Prevent or reduce exposure to ACEs

Asset-focused
- Increase resources or access to resources

Process-focused
- Restore, mobilize, or harness the power of adaptive systems for resilience
Beyond ACES

• Variation – the missing story

• Assess assets, resources, & protections

These are the clues to mitigating risk and promoting resilience!

New Horizons

- Neurobiology of ACEs and resilience
- Intergenerational transmission
- Linking individual, family, and community resilience
- Prevention studies to test theory
- Empirical capture of pathways
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>• Public health</td>
</tr>
<tr>
<td>• Individual &amp; family</td>
<td>• Disaster response</td>
</tr>
<tr>
<td>• Family &amp; community</td>
<td>• Humanitarian aid</td>
</tr>
<tr>
<td>• Psychosocial &amp; ecological</td>
<td>• Prevention science</td>
</tr>
<tr>
<td>• Human &amp; electronic</td>
<td>• Climate change</td>
</tr>
<tr>
<td>• Social &amp; economic</td>
<td>• Peacebuilding</td>
</tr>
</tbody>
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Including integration of ACEs and other approaches to assessment of adversity

Enduring lessons

- Resilience is common despite ACEs
- There are many paths of resilience
- Ordinary adaptive systems are powerful
- ACEs can and should be prevented
- Resilience can be supported and promoted
RESILIENCE

Invitation to a MOOC on Coursera.org

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