

Ordinary Magic: Resilience in Development



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

CEHD
Center for Experimental and Holistic Development



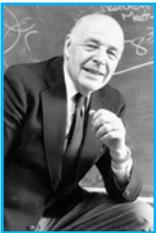
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Overview

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

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WWII survivors who pioneered resilience science



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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

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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



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How do children overcome adversity to succeed?

What makes a difference?

How can we promote resilience?

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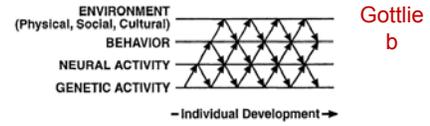
Capacity of a system to adapt successfully to challenges that threaten its function, life, or development

RESILIENCE

Photo© Kendra Mack 2008

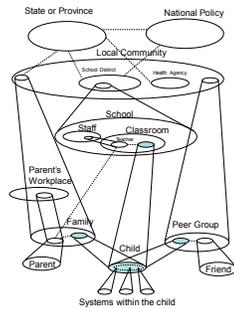
Human development

...emerges from interactions across levels



Systems in a child's life

- Embedded
- Interacting
- Interdependent



From a developmental perspective...

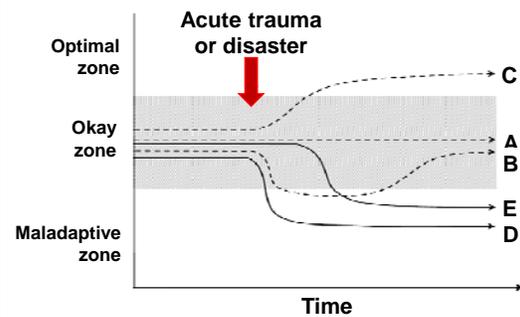
- Resilience is always changing
- Capacity for adaptation is spread across systems
- Individual resilience depends on resilience of other systems
- Diverse pathways of adaptation are expected

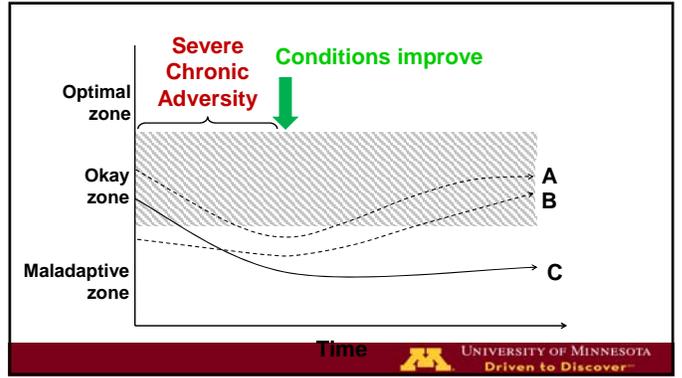
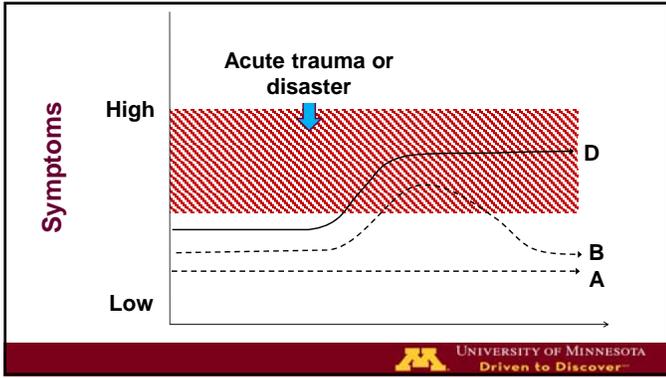
Pathways

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

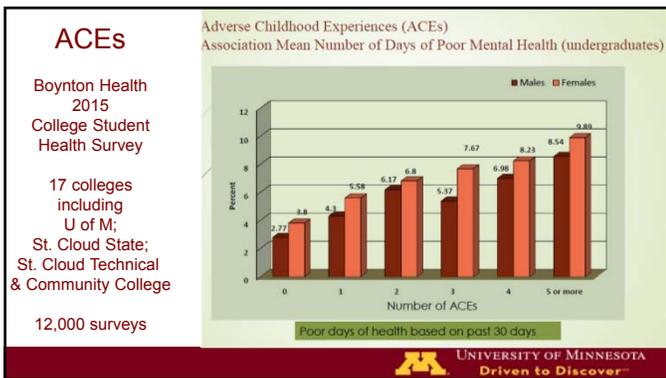
- Recovery of
 - Abused children moved to better homes
 - Children adopted from orphanages
 - Child soldiers who are rescued
 - Refugees who find a safe new homeland

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3 defining questions in research on resilience of individuals

1. What are the challenges?	3. What fosters adaptive success?	2. How is the person doing?
Threats	Promoters/Protections	Adaptive success
Trauma	Neurobiological	Developmental tasks
Neglect	Individual	Mental health
Poverty	Family & relational	Physical health
War	Community	Happiness
Natural disaster	Cultural	School or job achievement
ACEs	Societal	Caregiving

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ACE scores in homeless parents compared with national data

Total ACEs	ACEs in Homeless Sample	ACEs in National Sample
0	15.0%	36.1%
1	17.8%	26.0%
2	12.1%	15.9%
3	7.5%	9.5%
4 or more	43.0%	12.5%

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

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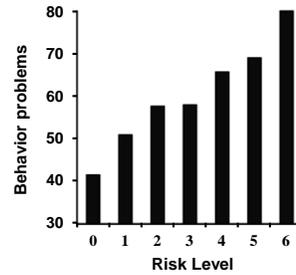
Frequency of specific ACEs in homeless parents vs MN adults

Abuse and Neglect	Homeless Parents	MN Adults
Physical Abuse/Neglect	39%	16%
Sexual Abuse	31%	10%
Emotional Neglect/Verbal Abuse	58%	28%
Household Dysfunction		
Mental Illness	22%	17%
Divorce/Separation	50%	21%
Domestic Violence	29%	14%
Parental Incarceration	17%	7%

MN data from Minnesota Department of Health (2011)

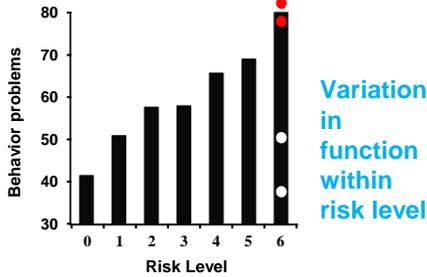


Risk gradient in a sample of homeless children



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

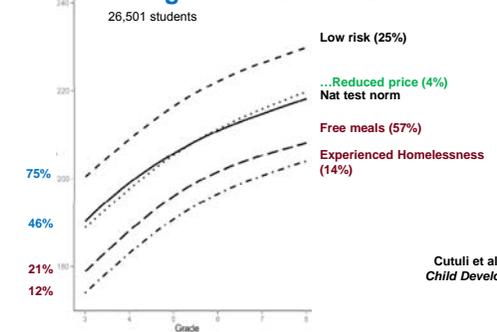
Masten & Sesma 1999



Variation in function within risk level

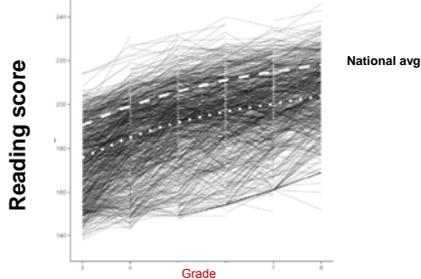


Reading scores 2005 to 2009



Cutuli et al 2013
Child Development

HHM student individual reading scores >3000 students



What makes a difference?

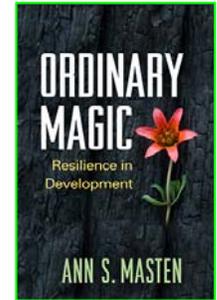


Risk & resilience in children linked to

- 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

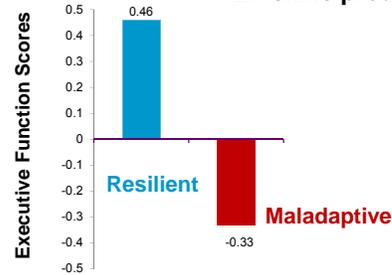
- Capable caregiving
- Other close relationships
- Problem-solving skills
- Self-regulation skills
- Self-efficacy
- Motivation to succeed
- Faith, hope, optimism
- Purpose/belief life has meaning
- Effective schools
- Well-functioning communities



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

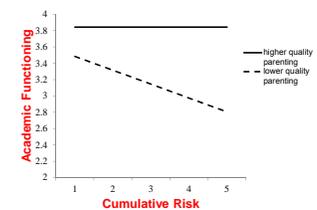


Obradović 2010
Masten et al 2012
Kalstabakken 2016

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

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Schools matter

Nurture resilience	Effective schools
<ul style="list-style-type: none"> Build human capital <ul style="list-style-type: none"> Cognitive and social skills Knowledge and talents Promote positive relationships <ul style="list-style-type: none"> Prosocial peer activities Relationships with competent adults Opportunities for self-efficacy <ul style="list-style-type: none"> Normal routines 	<ul style="list-style-type: none"> Strong leadership Effective teaching Positive school climate Asset rich environments High expectations, support, & structure

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Communities matter

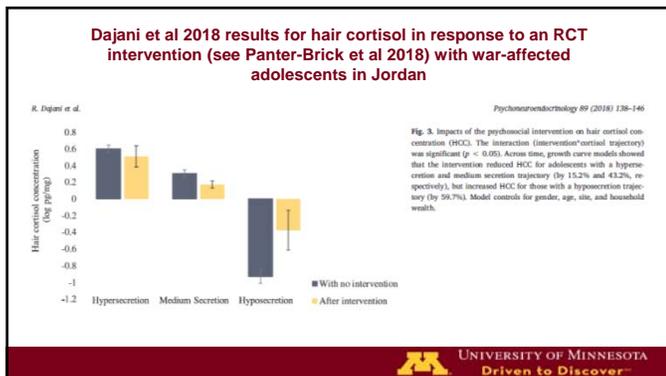
- ❖ Supports for families
- ❖ Supports for education
- ❖ Parks, libraries, recreation
- ❖ Health care
- ❖ Emergency services and disaster preparedness
- ❖ NGO + government services
- ❖ Policies and laws that support children & their families
- ❖ Traditions and rituals for overcoming stress
- ❖ Support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

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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

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Resilience science has transformed practice in many fields

	Shifting the focus
<ul style="list-style-type: none"> Clinical psychology Pediatrics, Psychiatry School psychology Counseling Social work Family social science 	<ul style="list-style-type: none"> Positive outcomes Strength-based Promotive & protective processes Building capacity at multiple levels

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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



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



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?

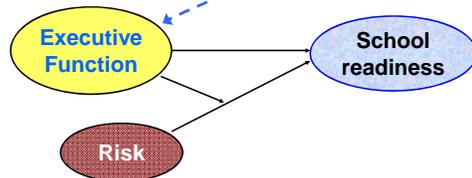
Example

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



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

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



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

Masten, A. S. (2014, paperback ed. 2015). *Ordinary magic: Resilience in development*. New York: Guilford Press. This book summarizes what I learned about resilience over the past 4 decades.

PopTech talk on resilience (18 minutes)

<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>

Video preview of the MOOC - <https://www.class-central.com/mooc/1768/coursera-resilience-in-children-exposed-to-trauma-disaster-and-war-global-perspectives>

EDtalk on resilience in students experiencing homelessness given in Minneapolis Sep 25, 2017

<https://www.achievempls.org/edtalks>

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> (free to download complete topic)

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

Huebner, G., et al. (2016). Beyond survival: The case for investing in young children globally. *NAM Perspectives*. National Academy of Medicine. [free to download]

<https://nam.edu/beyond-survival-the-case-for-investing-in-young-children-globally/>

User friendly succinct article on resilience for educators

Masten, A. S. (2009). Ordinary Magic: Lessons from research on resilience in human development. *Education Canada*, 49(3), 28-32. <https://www.edcan.ca/?s=Ordinary+magic>

Risk and resilience in homeless families

Masten, A. S., Fiat, A. E., & Labella, M. H., & R. Strack (2015). Educating homeless and highly mobile students: Implications of research on risk and resilience. *School Psychology Review*, 44, 315-330.

Children in war and disaster

Masten, A. S., & Narayan, A. J. (2012). Child development in the context of disaster, war and terrorism: Pathways of risk and resilience. *Annual Review of Psychology*, 63, 227-257.

<http://www.annualreviews.org/doi/pdf/10.1146/annurev-psych-120710-100356>

Masten, A. S., Narayan, A. J., Silverman, W. K., & Osofsky, J. D. (2015). Children in war and disaster. In R. M. Lerner (Ed.), M. H. Bornstein and T. Leventhal (vol. Eds.), *Handbook of child psychology and developmental science. Vol. 4. Ecological settings and processes in developmental systems* (7th ed.) (pp. 704-745). New York: Wiley. A more detailed recent review.