

## RESILIENCE

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# Resilience in Development: The Importance of Early Childhood

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### Introduction

Resilience, from the Latin *resilire* (to rebound, recoil, or spring back), is a general concept that can be defined broadly as follows: The capacity of a dynamic system to withstand or recover from significant challenges that threaten its stability, viability, or development.<sup>1-3</sup> This concept is widely applied in ecology, engineering, communications, disaster management, and other fields.<sup>4</sup> In the science of human development, resilience usually refers to pathways or processes leading to positive adaptation or development manifested in the context of adverse experiences.

Although people have been fascinated with stories of resilience for thousands of years, judging from ancient tales of individuals who triumph over adversity, the scientific study of resilience only began in the 1960s and 1970s.<sup>1-3,5</sup> Nonetheless, great strides have been made in the past five decades of research and it is clear that early childhood is an important window of time for understanding and promoting resilience.<sup>6-9</sup> During these years, the roots of competence are established and many of the most important protective systems for human development emerge. These early years hold great promise for interventions to prevent and reduce risk, boost

resources, promote competence and build a strong foundation for future development.

## **Subject**

Understanding naturally occurring resilience provides important clues for policies and practices designed to promote healthier development in children threatened by adversity or disadvantage. It is also necessary to learn how to foster positive change, so that the odds for favourable development can be improved. Prevention and intervention studies are required to test the ideas coming from resilience research, to learn the best goals, methods and developmental timing for interventions, and also to learn which approaches work best for whom.<sup>1,2,10-13</sup>

## **Problems**

To study resilience, one must define and operationalize it. This has proven to be challenging for several key reasons. First, resilience refers to a variety of phenomena, such as recovery after the loss of a parent, normalization of behaviour after a child is adopted from an institution, school success among children growing up in poverty or dangerous neighbourhoods, and mental health in children of mentally ill parents. Second, resilience is an inferential construct that involves human judgments about desirable and undesirable outcomes as well as definitions of threat or risk.<sup>2,3,5,14-16</sup> Investigators must define the criteria for positive adaptation and also the standards and measures of adversity or risk confronting the child. A child who develops well may be viewed as adaptive or competent, but not necessarily as manifesting resilience, unless some explicit or implicit threshold of risk or adversity has been met. It is also clear that there are multiple criteria by which to judge success in life; adaptation (good or bad) is inherently multidimensional and multifaceted in nature. Thus, it is not surprising that definitions and measures have varied, greatly complicating comparisons across studies and the task of building a coherent body of knowledge about resilience in development.

Third, many processes at multiple levels of analysis are likely to be involved in human resilience.<sup>1,4,17,18</sup> To understand resilience, one must understand the complex adaptation and development of living systems in context over time, from “neurons to neighbourhoods”<sup>19</sup> and beyond. Nonetheless, findings from the first generation of resilience research were remarkably consistent, suggesting the influence of powerful but common adaptive processes.<sup>1,15</sup>

## **Research Context**

Systematic research on resilience in childhood emerged from studies of vulnerability and risk in the search for the causes of mental illness.<sup>1,20</sup> Investigators began to study children with elevated risk for problems, often due to mental illness or stress in the family, social disadvantages, or poverty. The goals of pioneering researchers, including Norman Garmezy, Lois Murphy, Michael Rutter, Arnold Sameroff, and Emmy Werner, required integrative perspectives and collaboration among developmental and clinical scientists. Such collaborations forged a new science of resilience in development, while at the same time energizing the rise of developmental psychopathology.<sup>1,15,21</sup> The great insight of these pioneers was recognizing the potential of resilience research to inform practice and policies aimed at better development among high-risk children.

### **Key Research Questions**

Developmental studies of resilience often address the following questions:

- What accounts for positive development or recovery among children who experience hazardous circumstances?
- What are the naturally occurring protective processes for human development?
- What are the most effective intervention strategies for fostering positive development among children with high potential risk for problems?

Although resilience researchers focus on positive outcomes and their causes, they also acknowledge the importance of understanding risks and threats to development and how to reduce or eliminate them.

### **Recent Research Results**

There is exciting convergence in developmental research on competence, resilience, behavioural and emotional problems, brain development and prevention science, all underscoring the importance of early childhood for building protections into human development at multiple levels, within the child, the family, the community and their interactions.<sup>6-8,10,18,20,22-24</sup> Problems in learning and self-control often begin in the preschool years and are related to the quality of available parenting.<sup>25-28</sup> Effective preventive intervention programs during infancy and preschool years support parenting in multiple ways and provide enriched learning environments for children.<sup>7,9,29</sup> Early success in school – related to effective care, positive home-school connections and effective

classroom practices – appears to be a key segue to resilience, particularly for very disadvantaged children.<sup>2</sup> Programs or systems of care that focus on building competence and strengths in young children and their families, along with reducing risk and addressing problems early, are yielding promising successes.<sup>2,8,9,12,30,31</sup>

A neurobiology of resilience is also beginning to emerge.<sup>17,18,20,32-34</sup> New insights into brain development and plasticity, how stress interacts with development, and the interplay of genes and experience in shaping development promise to revolutionize the science of resilience and prevention.

## **Conclusion**

Resilience research indicates that during the early childhood years, it is important for children to have good quality of care and opportunities for learning, adequate nutrition, and community support for families, to facilitate positive development of cognitive, social and self-regulation skills. Young children with healthy attachment relationships and good internal adaptive resources are very likely to get off to a good start in life, well equipped with the human and social capital for success as they enter school and society. Such children typically manifest resilience in the face of adversity, as long as their fundamental protective skills and relationships continue to operate and develop. The greatest threats to young children occur when key protective systems for human development are harmed or disrupted. In early childhood, it is particularly important that children have the protections afforded by attachment bonds with competent and loving caregivers, the stimulation and nutrition required for healthy brain development, opportunities to learn and experience the pleasure of mastering new skills, and the limit-setting or structure needed to develop self-control.

## **Implications**

Resilience research, studies of normal development and psychopathology and prevention science all highlight the importance of early childhood for establishing fundamental protections afforded children by positive relationships, healthy brain development, good self-regulation skills, community supports for families and learning opportunities. A resilience framework for practice and systems of care has emerged, with an emphasis on building strengths and competence in children, their families, their relationships, and the communities where they live.<sup>2,35,36</sup> It is clear that many children in modern societies face multiple and accumulating risks that require multiple

protective interventions and comprehensive efforts to prevent or ameliorate risk for children and their families.<sup>2,23</sup> No child is invulnerable and, as risk levels rise, fewer children escape the developmental consequences of adversity. Early childhood is a crucial window of opportunity for families and societies to ensure that children have the resources and protections required to develop the adaptive tools and relationships they will need to engage the future well prepared.

## References

1. Masten AS. Resilience in developing systems: Progress and promise as the fourth wave rises. *Development and Psychopathology* 2007;19:921-930.
2. Masten AS. Resilience in children threatened by extreme adversity: Frameworks for research, practice, and translational synergy. *Development and Psychopathology* 2011;23:141-154.
3. Masten AS. Risk and resilience in development. In: Zelazo PD, ed. *Oxford Handbook of Developmental Psychology. Vol. 2. Self and other*. New York: Oxford University Press; 2013:579-607.
4. Masten AS, Obradović J. Disaster preparation and recovery: Lessons from research on resilience in human development. *Ecology and Society* 2008; 13(1): 9.
5. Luthar SS. Resilience in development: A synthesis of research across five decades. In: Cicchetti D, Cohen DJ, eds. *Developmental psychopathology. Vol. 3, Risk, disorder, and adaptation*. 2<sup>nd</sup> ed. New York, NY: John Wiley and Sons; 2006:739-795.
6. Masten AS, Cicchetti D. Editorial: Developmental Cascades. *Development and Psychopathology* 2010;22:491-495.
7. Masten AS, Gewirtz AH. Vulnerability and resilience in early child development. In: McCartney K, Phillips DA, eds. *Handbook of early childhood development*. Malden, Mass: Blackwell Publishing; 2006: 22-43.
8. Heckman JJ. Skill formation and the economics of investing in disadvantaged children. *Science* 2006;312:1900-1902.
9. Reynolds AJ, Rolnick AJ, Englund MM, Temple JA, eds. *Childhood programs and practices in the first decade of life: A human capital integration*. NY: Cambridge University Press; 2010.
10. Reynolds AJ, Ou SR. Promoting resilience through early childhood intervention. In: Luthar SS, ed. *Resilience and vulnerability: Adaptation in the context of childhood adversities*. New York: Cambridge University Press; 2003:436-459.
11. Cicchetti D, Rappaport J, Sandler I, Weissberg RP, eds. *The promotion of wellness in children and adolescents*. Washington, DC: Child Welfare League of America; 2000.
12. Masten AS, Burt KB, Coatsworth JD. Competence and psychopathology in development. Cicchetti D, Cohen DJ, eds. *Risk, disorder, and adaptation*. New York, NY: John Wiley and Sons; 2006:696-738. *Developmental psychopathology*. 2<sup>nd</sup> ed; vol 3.
13. Luthar SS, Cicchetti D. The construct of resilience: Implications for interventions for interventions and social policies. *Development and Psychopathology* 2000;12:857-885.
14. Masten AS, Coatsworth JD. The development of competence in favorable and unfavorable environments: Lessons from research on successful children. *American Psychologist* 1998;53(2):205-220.
15. Masten AS. Ordinary magic: Resilience processes in development. *American Psychologist* 2001;56(3):227-238.
16. Luthar SS, Cicchetti D, Becker B. The construct of resilience: A critical evaluation and guidelines for future work. *Child Development* 2000;71(3):543-562.
17. Cicchetti D. Resilience under conditions of extreme stress: A multilevel perspective. *World Psychiatry* 2010; 9(3): 145-154.
18. Cicchetti D, Curtis WJ. Special issue: A multilevel approach to resilience. *Development and Psychopathology* 2007;19 (3).

19. Shonkoff JP, Phillips DA, eds. *From neurons to neighborhoods: The science of early childhood development*. Washington, DC: National Academy Press; 2000.
20. Sapienza JK, Masten AS. Understanding and promoting resilience in children and youth. *Current Opinion in Psychiatry* 2011;24(4):267-273.
21. Masten AS. Developmental psychopathology: Pathways to the future. *International Journal of Behavioral Development* 2006; 31: 47-54.
22. Lester BM, Masten AS, McEwen B, eds. Resilience in children. *Annals of the New York Academy of Sciences* 2006;1094.
23. Shonkoff JP, Boyce TW, McEwen BS. Neuroscience, Molecular Biology, and Childhood Roots of Health Disparities: Building a New Framework for Health Promotion and Disease Prevention. *The Journal of the American Medical Association* 2009;301(21):2252-2259.
24. Shonkoff JP, Meisels SJ, eds. *Handbook of early childhood intervention*. 2<sup>nd</sup> ed. New York, NY: Cambridge University Press; 2000.
25. Shaw, D, Dishion, TJ, Connell A, Gardner F. The family check-up with high-risk indigent families: Outcomes of positive parenting and problem behavior from ages 2 through 4 years. *Child Development* 2008;79:1395-1414.
26. Bernier A, Carlson SM, Whipple N. From External Regulation to Self-Regulation: Early Parenting Precursors of Young Children's Executive Functioning. *Child Development* 2010;81(1):326-339.
27. Herbers JE, Cutuli JJ, Lafavor TL, Vrieze D, Leibel C, Obradovic J, Masten, AS. Direct and indirect effects of parenting on academic functioning of young homeless children. *Early Education and Development* 2011;22:77-104.
28. Rothbart MK, Bates JE. Temperament. In: Eisenberg N, Damon W, Lerner RM, eds. *Handbook of child psychology: Vol 3, Social, emotional, and personality development* (6th ed). Hoboken, NJ: John Wiley & Sons Inc.; 2006:99-166
29. Bruce J, McDermott JM, Fisher PA, Fox NA. Using Behavioral and Electrophysiological Measure to Assess the Effects of a Preventive Intervention: A Preliminary Study with Preschool-Aged Foster Children. *Preventative Science* 2009;10:129-140.
30. Diamond A, Barnett WS, Thomas J, Munro S. Preschool program improves cognitive control. *Science* 2007; 318(5855):1387-1388.
31. Weissberg RP, Kumpfer KL, Seligman MEP. Prevention that works for children and youth: An introduction. *American Psychologist* 2003;58(6-7):425-432.
32. Feder A, Nestler EJ, Charney DS. Psychobiology and molecular genetics of resilience. *Nature Reviews Neuroscience* 2009;10:446-457.
33. Rutter, M. Implications of resilience concepts for scientific understanding. *Annals of the New York Academy of Sciences* 2006;1094:1-12.
34. Kim-Cohen J, Gold AL. Measured gene-environment interactions and mechanisms promoting resilient development. *Current Directions in Psychological Science* 2009;18:138-142.
35. Akos P, Galassi JP. Special issue: Strengths-Based School Counseling. *Professional School Counseling* 2008; 12.
36. Masten AS. Promoting resilience in development: A general framework for systems of care. In: Flynn RJ, Dudding P, Barber JG, eds. *Promoting resilience in child welfare*. 2<sup>nd</sup> ed; vol 3. Ottawa, Ontario: University of Ottawa Press; 2006: