

Risk and protective factors in child development— is there evidence for investing in early years?

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THE MANNERHEIM LEAGUE
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- Vulnerability , risk, protection and resilience
- What promotes resilience?
- Evidence for investing in early years



The Convention on the Rights of the Child

The Convention on the Rights of the Child is the first legally binding international instrument to incorporate the full range of human rights—civil, cultural, economic, political and social rights.

States parties to the Convention are obliged to develop and undertake all actions and policies in the light of the best interests of the child.

A systemic view on risk and protective factors in child development

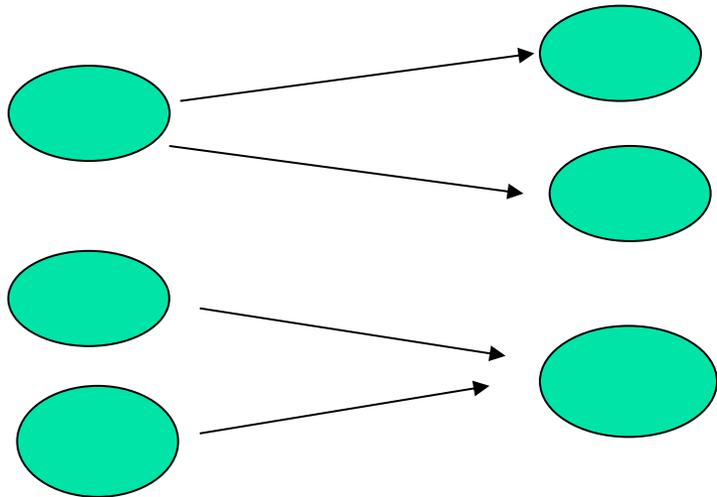
- ***Dynamic*** factors are changeable, for example behavior, relationships
- ***Static*** factors are unchangeable: gender, ethnicity
- Proximal and distal factors
- Major ecological theories (such as Bronfenbrenner) are used both in risk and resilience research

Co-variation, not causality

David Hume: if A then B – not common in human development.

Multifinality: same background, different outcome

Ekvifinality: different background, same outcome



Definitions

Vulnerability – robustness.

Risk: a (characteristic), relationship, trait, behavior, event or circumstance that increases the probability for a certain unfavorable outcome.

We cannot be sure based on research that an identified risk factor is a cause of externalizing or internalizing problems. We can usually only tell that the factor and the outcome in some way co-vary or are correlated.

More definitions

A protective factor: a (characteristic), relationship, trait, behavior, event or circumstance that *decreases* the probability for a certain outcome in the presence of risk.

Thus, the presence of one or several protective factors can make the child more resilient against risk factors, i.e., can make it possible for the individual to develop well despite the presence of risks.

Resilience

- Positive adaptation in the context of childhood adversities
- Positive adaptation? – *“substantially better than what would be expected given the exposure to the risk circumstance being studied”* (Luthar et Zelazo 2003)
- Developmentally appropriate, for example school success for a school-aged child
- To bounce back and to bounce forward

Gene-environment interaction

Michael Rutter: gene-environment interaction (G X E) which refers to genetically influenced differences in individuals' sensitivity to particular environmental factors (robust versus vulnerable)

-individual variation in responses to infections, tobacco, malaria etc.

-adoption- and twin-studies show genetic resistance against environmental (psychosocial) factors

-reduced versus higher genetic risk for alcoholism

Gene-environment correlation

Rutter: Gene-environment correlation (rGE) refers to genetically influenced differences in individuals' liability of exposure to particular environmental factors.

- **passive, active and evocative**
- **for example, musically gifted children are likely to have access to musical stimulation, they attend to music, and they spend more time using their environment to "produce" music**

Epigenetics

- Epigenetic research has begun to explore the way in which traumatic events experienced by parents can leave their mark on their children's genetic make-up and thus affect the characteristics of future generations.

- Interaction between inheritance and environment even more complicated than has been previously understood.

Franklin TB [Russig H](#), [Weiss IC](#), [Gräff J](#), [Linder N](#), [Michalon A](#), [Vizi S](#), [Mansuy IM](#). Epigenetic transmission of the impact of early stress across generations. Biol Psychiatry 2010 Sep 1; 68:408.

Yehuda R & Bierer L (2009). The Relevance of Epigenetics to PTSD: Implications for the DSM-V. Journal of Trauma and Stress 22 (5), 427-434.

“There is no health without mental health”

- **Early onset of problems predicts later problems, in particular, aggressive and destructive behaviors in very early childhood predict later problems (Pihlakoski et al 2006)**
- **Parental practises and parental problems predict child development (Stormshak et al 2000, Middlebrooks & Audage 2008)**

What promotes resilience?

Child-centered resources: for example, perceived competence in solving problems and positive and differentiated future expectations, affective competence and prosocial skills

Family-centered: reducing family/parental stress, promoting parenting skills (for example PMT-O), and promoting emotionally responsive parenting practices

*As early as possible (pregnancy, first-time parents)
or when child displays conduct problems*

Promoting resilience outside the family context

High quality pre-school, day-care:

Sylva, K., Melhuish, E., Sammons, P., Siraj-Blatchford, I. and Taggart, B. (Eds) (2010), Early Childhood Matters: Evidence from the Effective Pre-school and Primary Education project. London: Routledge

But even better when combining: Chicago Longitudinal Study on Child-parent center programme:

Reynolds A J, Temple J A, Robertson D L, Mann E A (2001) Long-term Effects of an Early Childhood Intervention on Educational Achievement and Juvenile Arrest. A 15-Year Follow-up of Low-Income Children in Public Schools. JAMA 285:2339-2346.

Is preventive work cost-effective?

The Nobel Prize winner James Heckman has turned his focus to early education. Heckman's work is devoted to the development of a scientific basis for economic policy evaluation. His career has included developing models to study unemployment, wage growth and skill formation. Heckman's work describes how individual productivity can be fostered by investments in young children.

Heckman, James: Skill Formation and the Economics of Investing in Disadvantaged Children. Science (2006):312, 1900–1902

Economics of interventions

- Investments in early years – returns 6 times the investment
- Investment in supporting parenting – 8 times
- School-based intervention to reduce bullying – 14 times
- School-based intervention to prevent conduct disorder - 84 times

Campion J et al: European Psychiatric Association (EPA) guidance on prevention of mental Disorders. European Psychiatry 27 (2012) 68–80

Thank you!

