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# Children and Disasters: Research over the ages

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August 2022

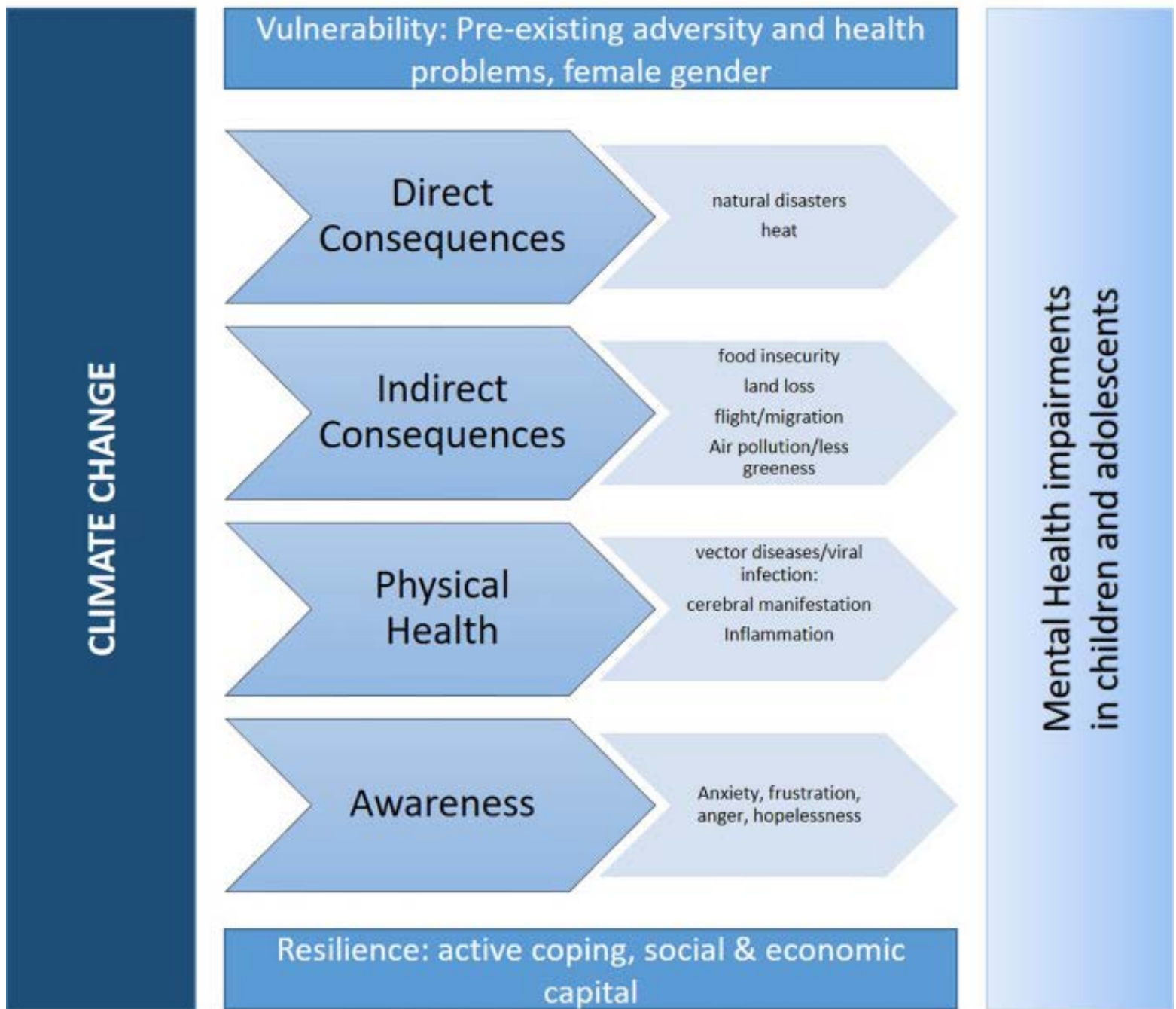


## **Children are a unique population group:**

- 1. Theme 1: Biologically and psychologically they have particular vulnerabilities to toxins and stressors, counter-balanced by adaptive capacities and resilience**
- 2. Theme 2: They have a wide range of capabilities, depending on their developmental stage. The effects of acute stress exposure may be amplified and enduring, depending on developmental stage**
- 3. Theme 3: Children are often wholly dependent on familial, social, and political forces, with limited ability to make their own decisions or buffer stressors. They depend on multiple systems working on their behalf.**



- 1. Descriptive epidemiology: Norris et al (2002) “60,000 Victims Speak” (distinguishing the clinginess and dependence of younger disaster-exposed children to deviance and delinquency of adolescents)**
- 2. Bothe et al (2016) “Disasters and Children,” a review of pediatric disaster science (noting dose-dependency model, potential long-term mental health consequences, evolving epigenetic research on emerging later-life morbidity after childhood “toxic stress” exposures)**
- 3. Emerging science of the exposome, the cumulative exposure to environmental toxins and stressors. Logan et al (2018) “The importance of the exposome and allostatic load in the planetary health paradigm”**
- 4. The role of resilience in enhancing adaptation or buffering/resisting stressors: Masten and Obradovic (2010). The authors note, “Literature connecting individual resilience to the adaptive functioning of larger social systems and networks, such as neighborhoods or socio-cultural systems, is very scarce.”**
- 5. Clarifying new exposures, such as climate change, and the pathways in which they lead to poor health outcomes**



Clemens, von Hirschhausen, and Fegert (2020). Report of the intergovernmental panel on climate change: implications for the mental health policy of children and adolescents in Europe—a scoping review. *European Child and Adol Psychiatry*. 31:701-713



**Family stress and toxic stress:** first developed by Glen Elder, drawing on data of children of the Great Depression. Economic pressures and stressful life events create psychological distress, including depressive and hostile feelings in parents. McEwen described relationship of stress to increasing allostatic load, leading to biological inflammatory processes. Shonkoff highlights role of “toxic stress,” raises question as to whether a cumulative process or developmental process.

**Resources and investment perspective (Duncan):** child development is “produced” by combination of endowments (genetics, values, preferences) and parental investments (time and money). Highlights developmental stages and advantage of intervening in pre-school phase with injection of income (Earned Income models)

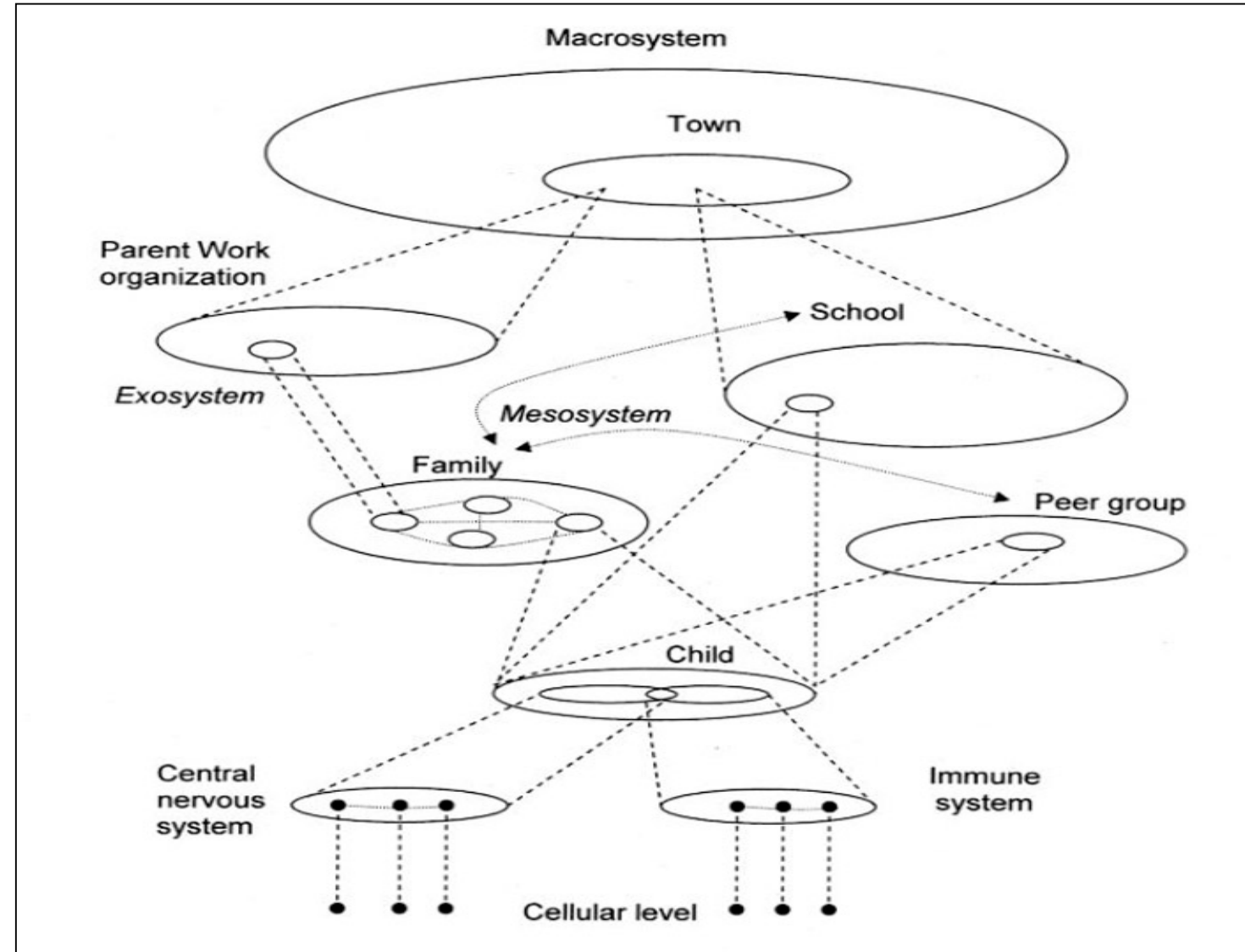
**Socio-cultural arguments (Lareau):** social and cultural norms, behaviors, and practices embedded in economically-stratified segments of society, ultimately influence the way children relate to institutions, authority, etc.

**Status perspective (Pearlin):** Early and persistent status discrepancy and discrimination constrain opportunities, particularly health-related ones.

**Behavioral cascade:** Adverse Childhood Experiences (Anda and Felitti) lead to high-risk or poor-health behaviors that result in adult disease, disability, and death.



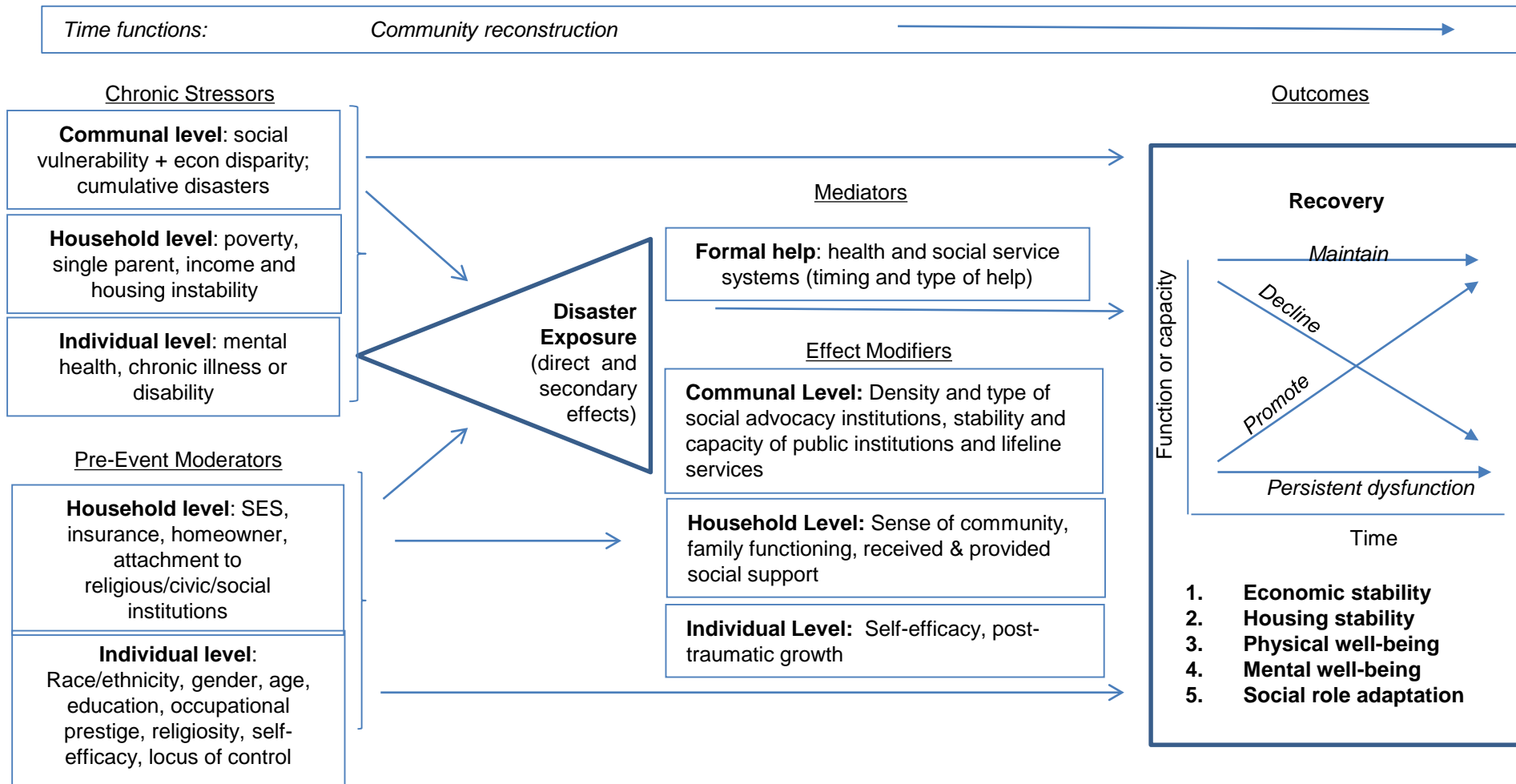
**Master A and J Obradovic (2007).** Disaster Preparation and Recovery: Lessons from Research on Resilience in Human Development. *Ecology and Society* 13(1): 9. The graphic illustrates Urie Bronfrenbrenner's ecological model of human development







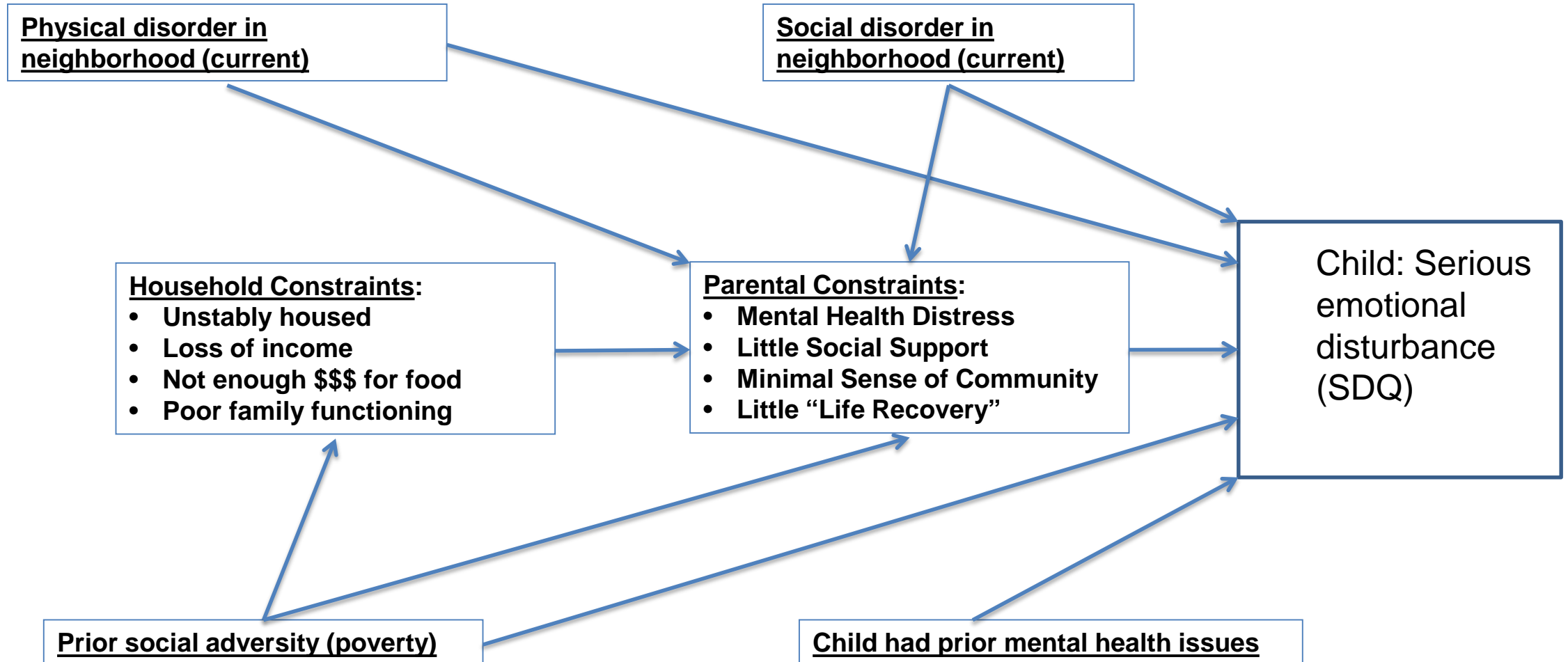
# Socio-ecological framework of disaster recovery



Abramson et al (2010) "Measuring Individual Disaster Recovery: A socioecological framework." *Disaster Medicine and Public Health Preparedness*. 4(Supp1): S46-S54, 2010

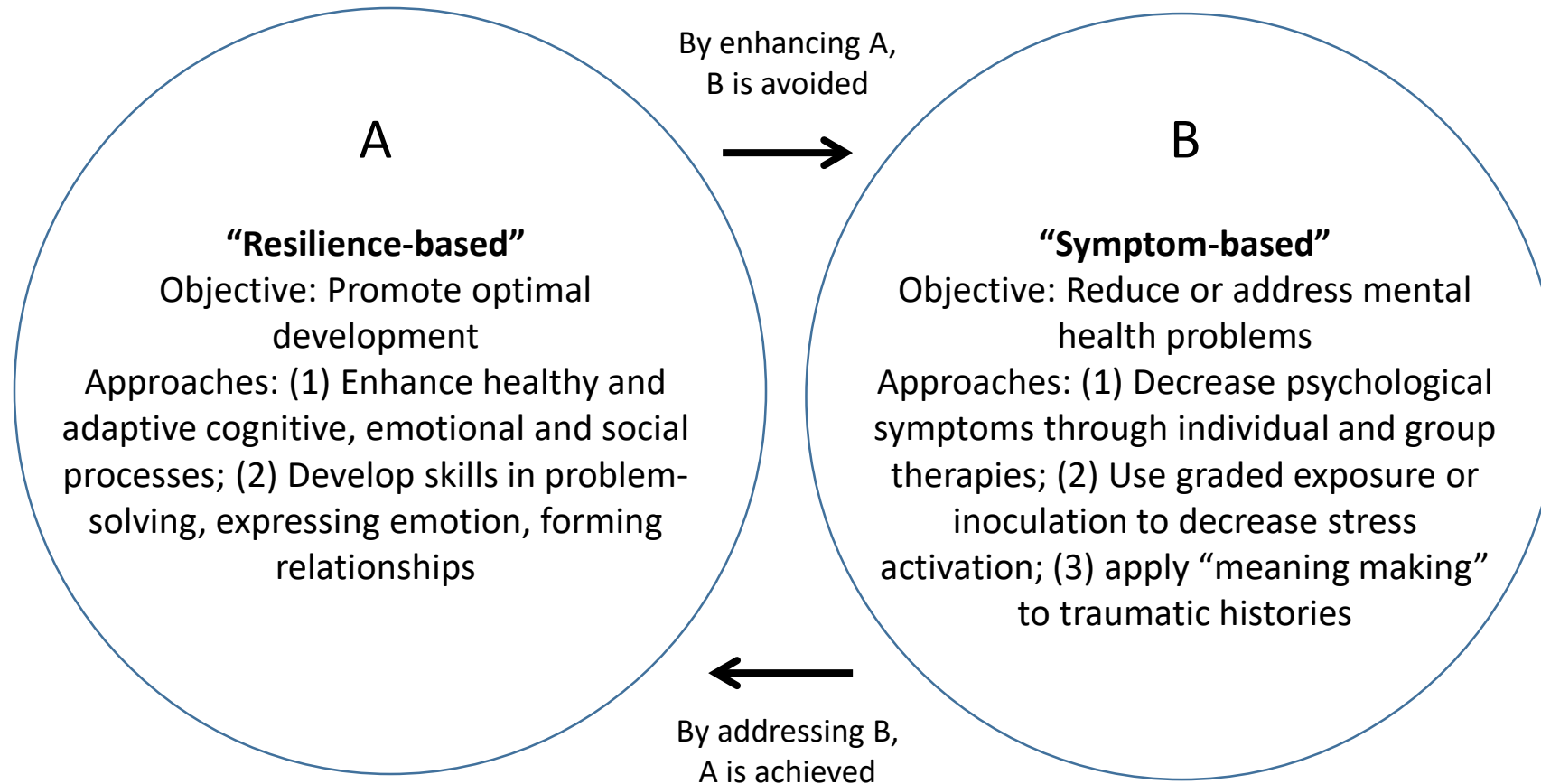


# Children as Bellwether of Recovery framework





# Intervention strategies: Promote and/or Protect



*Adapted from K Peltonen and E Palosaari (2013). Evidence-based resilience enhancing intervention methods for children affected by armed conflict. In Handbook of Resilience in Children and War, C Fernando and M Ferrari, eds. Springer Publishing: New York.*