Bioecological Model of Economic Disadvantage and Children’s Well-being

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CCFW promotes the positive development and well-being of children, from infancy through adolescence, particularly those experiencing disadvantage and adversity.

- Interdisciplinary research, dissemination and outreach includes about 20 faculty from 6 departments across the UW.
- Critical milestones are attained at every developmental stage throughout childhood.
- Whole-child or “bioecological” approach is needed to make a difference in children’s lives.
Infant
Cognitive and Language
Emotion regulation
Social Engagement

Preschool
Executive Function, Creative Thinking
Social-Emotional Competence
Early Literacy and Numeracy

Grade School
Critical Thinking
Academic Competence
Coping and Problem Solving
Self-esteem and Confidence
Positive Peer Relationships

Adolescence
Academic Achievement
Resistance of Negative Peers
Mental Health
Substance Use
Health Behaviors

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Coping and Problem Solving
Academic Competence
Critical Thinking

Early Literacy and Numeracy
Social-Emotional Competence
Creative Thinking
Executive Function

Cognitive and Language
Emotion regulation
Social Engagement
Opportunity Gap Seen as Early as 6 Months

Exploring Behavior

18 MONTHS: AGE AT WHICH DISPARITIES IN VOCABULARY BEGIN TO APPEAR

Figure 3. Frequency of rotations, by socioeconomic status (SES).

Focused Attention:
6 Toys

Time (in seconds)

Age (in months)

High
Low
Wide spread and long term impact of poverty and adversity on children’s developmental outcomes

Physical Health:
- Low Birth Weight
- Poor health
- Death from Infectious disease
- Asthma
- Obesity

Social/Emotional:
- Higher rate of problems with aggressive, oppositional, anxious, depressed Sx

Cognitive:
1.3x more likely to have developmental delay or learning disability

Academic:
- School Readiness – 1/3 enter kindergarten already behind
- 50% of these will not meet 4th grade reading standards
- 2x rate of grade retention and expulsion
- 6x more likely to drop out in HS

Adolescent/Early Adult:
- 3x rate of Teen Birth
- Teen parents have high school drop out rate
- Children of teens have more mental health problems and drop out
- Economic Inactivity
- Higher rates of depression and substance use
- Increased likelihood of living in poverty as adults

Brooks-Gunn & Duncan, 1997; Evans, 2004; McLoyd, 1998
Bioecological Model

To address the opportunity gap, we need to address the complex contexts in which children are developing.
Co-occurring Risks

**47.6%**
The nation’s poorest kids primarily live in households headed by a single female. Children of single mothers experience poverty at more than 4x the rate that of kids in 2-adult households.

**45%**
The longer a child lives in poverty, the tougher it can be for them to climb out. 45% percent of people who spent at least 1/2 of their childhood in poverty were poor at age 35, compared to 8% for those who spent less than 1/2 of their childhood in poverty.

**Between 13.4 and 16.5 million: 20%**
1 in 5 children are living in poverty. That is higher than any other age group (14% for 18-to 64-year-olds, and 9% for seniors).

**80%** of unmarried teen mothers are on public assistance; only 1/3 complete high school. A child born to a young, single, high school dropout is 9x more likely to live in poverty.

**38.2 percent**
The poverty rate among black children is twice as high as the rate among whites. The poverty rate for Latino children is 32.3%.
Cumulative Risk

Low Income
Single Parent
Adolescent Parent
Lower Education
Residential Instability & Crowding
Negative Life Events
Risky Neighborhoods
Poor Health Care
Parental Mental Health & Substance Use Problems

Cumulative Risk is a more robust predictor of risk for abuse, health and mental health problems than any other single factor.

Children who experience parents’ depression, substance use or domestic violence are at 2-5x the risk for homelessness, neglect, or foster care placement.

Children born to teen moms are at greater risk for being abused.
# Economic Disadvantage and Cumulative Risk

## 8 Risk Factors

<table>
<thead>
<tr>
<th>Percent of:</th>
<th>Income and CR correlated .61</th>
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<tbody>
<tr>
<td># Risk factors</td>
<td>Whole Sample</td>
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<tr>
<td>0</td>
<td>56</td>
</tr>
<tr>
<td>1</td>
<td>27</td>
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<td>2</td>
<td>10</td>
</tr>
<tr>
<td>3</td>
<td>4</td>
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<td>4+</td>
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Cumulative Risk in Childhood = ACES in Adults

Accumulation of Risk

- Number of Risk Factors During Childhood
- Risk for Childhood Problems

Risk for Childhood Problems

- 1
- 2
- 3
- 4
- 5

Death

Conception

Mechanisms by Which Adverse Childhood Experiences Influence Health and Well-being Throughout the Lifespan

Empirical Gaps

Early Death

Disease, Disability, and Social Problems

Adoption of Health-risk Behaviors

Social, Emotional, and Cognitive Impairment

Disrupted Neurodevelopment

Adverse Childhood Experiences

Center for Child and Family Well-Being

University of Washington | Department of Psychology
Cascading effects of Cumulative Risk on child well-being

**Cumulative Risk**
- Low Income & Poverty
- Single Parent
- Adolescent Parent
- Lower Education
- Residential Instability & Crowding
- Negative Life Events
- Risky Neighborhoods
- Poor Health Care
- Parental Mental Health & Substance Use Problems

**Proximal Influences**
- Parenting
- Risk for Abuse and Neglect
- Family Conflict Violence Exp.
- Chaos/Disorganization
- Quality Childcare/Education

**Child Neurobiological Development**

**Early & Middle Childhood Well-being**
- Academic Achievement
- Social-Emotional Competence
- Mental Health
- Self-esteem

**Adolescent & Young Adult Outcomes**
- Economically Inactive
- Adolescent Parent
- Unlawful Affiliations and Activities
- Mental Health & Substance Use Problems
- Low Life Satisfaction and Self-esteem
Income differences in neurobiological bases of self-regulation

![Graph showing executive control scores and percentage of disrupted cortisol regulation across income levels. The graph includes lines for At/Near Pov, Low Income, Middle Income, and Upper Income (>$100K)Income differences in neurobiological bases of self-regulation

At/Near Pov
Low Income
Middle Income
Upper Income (>100K)

Executive Control Scores

% Disrupted Cortisol Regulation

At/near Poverty
Not in Poverty
Cascade effects of economic disadvantage on child well-being

Low Income/Poverty → Cumulative Risk → Neuroendocrine Regulation (Cortisol) → Executive Control or Delay Ability → Academic Achievement, Social-Emotional Comp, Behavior/Emo Problems

- 3 years old
- 3 to 5.5 years old
- 5.5 years old
Low income and CR predict less effective parenting

Low Income/Poverty → Cumulative Risk

Cumulative Risk → Warmth

Cumulative Risk → Negativity

Cumulative Risk → Consistent Limits

Cumulative Risk → Scaffolding

Warmth: -0.22

Negativity: 0.30

Consistent Limits: -0.24

Scaffolding: -0.30
Cascade effects of economic disadvantage on child well-being

Low Income/Poverty → Cumulative Risk

- Warmth
- Negativity
- Consistent Limits
- Scaffolding

Cumulative Risk → Neuroendocrine Regulation (Cortisol) → Executive Control or Delay Ability

Executive Control or Delay Ability →
- Academic Achievement
- Social-Emotional Comp
- Behavior/Emo Problems

3 years old → 3 to 5.5 years old → 5.5 years old
Effective Parenting is Protective

Warmth x Income → Problems

Warmth is protective, and low warmth exacerbates the effects of low income on adjustment problems.
Implications for Practice and Policy

- Cumulative risk has cascading adverse effects on the family and parenting → disrupt children’s neurobiological systems → snowballing developmental, academic, behavioral and mental health problems.

- It is critical to divert this cascade of adverse effects early in childhood to prevent lifelong consequences and their associated costs.

- Preventive approach – identify children at elevated risk for cumulative risk before they are exposed to those risk factors and address the risk context.

- Support families and parents with comprehensive, integrated, family-centered policies, systems, service delivery, and programs:
  - Economic/housing stability, Mental health/substance use treatment, Self-sufficiency (education, workforce development), Healthcare, Childcare (e.g., Essentials for Childhood & FOI Initiatives)

- Focus on parents, caregivers and families in early and middle childhood.
  - 2-Generation parenting program that supports parent self-regulation and parenting that promotes child self-regulation and SEL
“It may not be obvious yet, but one of these kids is going to change the world.

We just need to make sure she has what she needs.”

- Microsoft ad 2015