Socio-economic adversity and child development:

Mechanisms and Processes

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Resilience

• positive outcome despite the experience of adversity
• continued positive or effective functioning in adverse circumstances
• recovery after a significant trauma

(Masten, Best & Garmezy, 1990)
Identifying resilience

- Not directly measured
- Inferred on the basis of constellations of exposure to adversity and the manifestation of positive adjustment in the face of that adversity
- Based on two judgements:
  - is the person doing ok?
  - is there now or has there been any significant risk or adversity to be overcome?


Paradigmatic Shifts

- Move from constancy model to dynamic models of development
- From pathogenic to transactive systems models
- From deficit models to asset models
Defining Risk

- Epidemiological research
- Expected probabilities of life chances and adjustment based on earlier or current experiences
- Can encompass genetic, biological, psychological, environmental, or socio-economic factors
Variability of risk exposure

- Focus on single risk factors
- Accumulation of risk effects → multiple risk models
- Statistical versus actual risk
- Plurality of meaning
- Duration and timing of risk effects
Positive adjustment

- Subjective evaluation
- Normative outcomes
- Who decides?

→ Heterogeneity of adjustment:
  * Context dependency
  * Multiple domains of adjustment
Resilience in context

- Multidimensionality
- Developmental perspective
- Processes and mechanisms
- Holistic approach
- Values and meaning

→ A developmental-contextual systems approach

→ based in life course research
A Developmental-Contextual Model of Resilience

Socio-historical context

Institutions

Neighbourhoods

Family

Individual

Adjustment

Risk

Birth

Adulthood

Schoon, 2006
Three National British Birth Cohorts

Age of Cohort Members by Historical Events

<table>
<thead>
<tr>
<th>Era of liberalisation</th>
<th>Oil crisis</th>
<th>Era of recession</th>
<th>Onset of recovery</th>
</tr>
</thead>
<tbody>
<tr>
<td>Revival of Feminist movement</td>
<td>New technologies</td>
<td>Onset of recession</td>
<td>Recession?</td>
</tr>
<tr>
<td>End of baby boom</td>
<td>Collapse of housing market</td>
<td>Second wave of recession</td>
<td></td>
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</tbody>
</table>

1958 National Child Development Study (NCDS): n=17,415
Birth Age 7 Age 11 Age 16 Age 23 Age 33 Age 42 Age 46 Age 50

1970 British Cohort Study (BCS70): n=16,571
Birth Age 5 Age 10 Age 16 Age 26 Age 30 Age 34 Age 38

Millennium Cohort (n=18,819)
9mths Age 3 Age 5
Developmental Focus:
Causation, Selection, and Cumulative Risk Effects
Selection, Causation, and Cumulative Risk Effects: Social risk, academic achievement and adult adjustment 
NCDS/BCS70

Schoon, 2006
Protective Factors and Processes

- Individual attributes
- Characteristics of the family
- Interactions with ‘significant others’
- Aspects of the wider social context
Models of Resilience

- Challenge model
- Cumulative effect model
- Protection effect model
Population versus Person centred approach

- **Population/Variable centred approach:**
  - Main effects
  - Interaction effects

- **Person centred approach:**
  - How do variables combine in individuals
  - Connection between risk and adjustment
## Identification of Resilience
*(example: NCDS at age 7)*

### Socio-economic Adversity

<table>
<thead>
<tr>
<th>Reading at 7</th>
<th>Low (none)</th>
<th>High (4+)</th>
</tr>
</thead>
<tbody>
<tr>
<td>above average</td>
<td>Multiple Advantage</td>
<td>Resilient</td>
</tr>
<tr>
<td>below average</td>
<td>Privileged Low Achievers</td>
<td>Vulnerable</td>
</tr>
</tbody>
</table>

(Schoon, 2006)

- Multiple Advantage: 69%
- Privileged Low Achievers: 31%
- Resilient: 37%
- Vulnerable: 63%

n = 2044  n = 2341
Educational Attainment:
Early childhood to adolescence

(NCDS)

- Age 7 Reading
- Age 11 Reading
- Age 11 Maths
- Age 16 Exams

(z-Score)

(Vulnerable) (Resilient) (Low Achiever) (Multiple Advantage)

(BCS70)

- Age 5 Reading
- Age 10 Reading
- Age 10 Maths
- Age 16 Exams

(Schoon, 2006)
Pathways linking socio-economic adversity and child development

- **Family Stress Model** (Conger et al., 1992, 93; Elder & Caspi, 1988; McLoyd, 1989):
  - Links family economic stress to problematic adolescent development
  - Postulates that economic stress affects adolescent adjustment indirectly through family processes (i.e. through parental mood, relationship difficulties, and parenting)
The Family Stress Model

Material Hardship → Parental Depression → Parenting → Child Adjustment

Conger et al., 1994
Extension of Family Stress Model:

- Application of the model to young infants
- Representative UK sample (the Millennium Cohort)
- Longitudinal perspective
**Millennium Cohort: Indicators of Child Development**

- **Behavioural adjustment**
  - age 9 mths: Child Temperament (9 items from the Carey Infant Temperament Scale: regularity and adaptability)
  - age 3 years: Strength and Difficulties Questionnaire: SDQ (Goodman, 1997)
  - age 5 years: SDQ

- **Cognitive development**
  - age 3 years: Bracken School Readiness Scale; BAS naming vocabulary
  - age 5 years: BAS (verbal and performance subtests: verbal comprehension, naming vocabulary, pattern construction, picture similarities)

- (N=18819 babies born into 18553 families)
## Indicators of Material Hardship

<table>
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<tr>
<th></th>
<th>Age 9mths %</th>
<th>Age 36mths %</th>
</tr>
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<tbody>
<tr>
<td>Home Ownership (no)</td>
<td>33</td>
<td>30</td>
</tr>
<tr>
<td>Overcrowding (yes)</td>
<td>8</td>
<td>7</td>
</tr>
<tr>
<td>Receipt of income support (yes)</td>
<td>14</td>
<td>13</td>
</tr>
<tr>
<td>Low income (9 months &lt;£10,400; 36 months &lt;£11,000)</td>
<td>19</td>
<td>18</td>
</tr>
<tr>
<td>Access to a car / van (no)</td>
<td>13</td>
<td>12</td>
</tr>
</tbody>
</table>
Maternal psychological distress

- Age 9mths: shortened version (9 items) of the Malaise Inventory (Rutter et al., 1970)
- 36 mths: Kessler K6 (Kessler et al, 2002)
- Both tests are:
  - Self completion instruments
  - Good reliability ($\alpha > .80$)
  - Good validity (correlates with previously diagnosed depression and currently treated depression)
Parenting at age 3 years

- Parent-child relationship scale (Pianta, 1994): maternal sensitivity
  - 15 items (warm, affectionate relationship, comfort, praise, anger, discipline, being in tune)
  - maternal report
  - good internal consistency (alpha = .77)
  - summary score
Cognitive Stimulation at age 3 years

- Maternal report on how frequently the child is taught:
  - the alphabet
  - counting
  - songs
- Summary score (alpha = .64)
# Control Variables

- Mother’s age at birth of child/at interview
- Mother’s education (below GCSE; GCSE and above)
- Parental employment (in paid employment or not)
- Mother’s ethnicity (white versus other)
- Sex of child
- Birthweight (< 2500 grams)
- Prematurity (gestation < 37 weeks)
- Total number of siblings living in the household
Family Hardship and Behaviour Problems
Family hardship and problem behaviour at 3 years (time-weighted)

MODEL FIT
CFI=.992
RMSEA=.023

Control Battery

Family Hardship

Maternal distress

Maternal Sensitivity

Behaviour problems

.34 (a)

.24 (b)

.16 (c)

.34

-0.46

-.57
Family Hardship and School Readiness
Family hardship and school readiness at 3 years (time-weighted)

- .38 (a)
- .30 (b)
- .28 (c)

Control Battery

MODEL FIT
CFI=.999
RMSEA=.009
Family Investment Model
Family hardship and school readiness at 3 years (time-weighted)

Model fit:
- CFI = 1.00
- RMSEA = 0.005

Path coefficients:
- Family Hardship to School Readiness: -0.38 (a)
- Family Hardship to Cognitive Stimulation: -0.30 (b)
- Cognitive Stimulation to School Readiness: -0.29 (c)
- Control Battery to Cognitive Stimulation: -0.06
- Child Development Index to Cognitive Stimulation: 0.17
Summary

- The experience of socio-economic hardship:
  - is associated with cognitive and behavioural development
  - can exacerbate maternal distress
  - may undermine effective parenting
- Important to disentangle emotional and cognitive components of parenting and adjustment
- Important to assess specific risk effects
- Important to test for mediating processes
Protective processes

- Reduction of risk impact or sensitivity to risk
- Breaking negative chain reactions or increasing positive chain reactions
- Promoting positive experiences leading to greater self esteem and self-efficacy
- Opening up new opportunities
- Supporting planful competence and orientation to the future

(Rutter, 1990)
What can be done to improve life chances for children and young people

- Improve overall distribution of resources and opportunities
- Support children and their parents
- Invest in education – improve standards for all
- Recognise diversity in adjustment
- Holistic approach
- Developmental perspective
- Sustainability of programs
- Never too early, never to late for interventions
Thank you

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