Family Relationship Influences on Children’s Psychological Development: An Adoption-Based Perspective

Introduction and Orientation to the Rudd Centre for Adoption Research and Practice

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Overview of Presentation

- **Setting the scene**
  - A little background (personal and professional history)
    - Overview of research background/primary research interests

- **Some examples of research and research translation**
  - **Part 1**: An overview of past research examining family relationship influences on children’s psychological development
  - **Part 2**: Some examples of contemporary research examining family relationship influences on children’s psychological development
  - **Part 3**: A summary and synopsis of recent research applications to practice and policy contexts

- **Rudd Centre for Adoption Research and Practice**
  - Overview and orientation
  - Objectives and activities
  - Governance and structure
  - Future opportunities and ambitions
Background

- Origins, Processes and Outcome(s)
  - Dublin, Ireland → Sussex, UK

- Primary Research Interests
  - The role of the family as a context for understanding children’s normal and abnormal psychological development
  - The interplay between genetic and family environmental influences on children’s psychological development
  - Translation and application of research to practice and policy contexts

- Core Research Objectives
  - To illuminate the role of family relationship influences on children’s psychological development (and vice versa) in order to promote positive developmental outcomes for children, parents and families
  - To promote evidence-led practice among professionals working to support children and families (social work, education, child and family welfare)
Family Influences and Child Mental Health

• Domains of mental health
  – Emotional problems
    – Depression, anxiety
  – Behaviour problems
    – Conduct Probs/ASB/ADHD
  – Social competence
    – Peer relationships
  – Academic attainment
    – Performance, behaviour

• Family level influences
  – Economic pressure/poverty
  – Parent mental health
  – Parenting behaviour/practices
  – Inter-parental conflict, domestic violence
  – Parental separation-divorce
  – Genetic factors (gene-environ., interplay)
A Process Model of Family Relationship Influences on Child Mental Health

Economic or Work pressure

Paternal Depression

Interparental Conflict

Maternal Depression

Parent-Child Problems

Child Symptoms

Conger and colleagues 1989-2007
A Neurobiological Model of Childhood Psychopathology

Family Influences

Genetic Factors

Early Childhood Adversity

Early Behaviour Problems

Biological, Cognitive, Emotional Mechanisms

Neurobiological Deficits

Cognitive and Emotional Problems

Behavioural Outputs

Antisocial Behaviour Problems

Age 11 years: Interparental Conflict → Harsh / Rejecting Parenting (R²=.29)

Age 12 years: Harsh / Rejecting Parenting → Aggressive Problems (R²=.48**)

Age 13 years: Aggressive Problems → Low Academic Attainment (R²=.17)

Correlations:
- Child → Interparental Conflict: .54
- Parent → Interparental Conflict: .70
- Aggressive Problems → Perceptions of Self-Blame and Responsibility: .22*
- Harsh / Rejecting Parenting → Perceptions of Self-Blame and Responsibility: .36*
- Low Academic Attainment: English: .77, Math: .92, Science: .97

Sample Size: N=230


Chi-squared: X²₁₇=33.18

Adjusted Goodness of Fit Index: AGFI=.92
Caveats of Past Research

• Salience of the family environment?
  o Predominantly conducted with biologically related parents and children
  o Limited examination of maternal versus paternal parenting practices

• Gene-environment correlation
  o Passive and Evocative rGE (Jaffe & Price, 2007; Ge et al., 1996)

• The challenge of Identifying environmental risks independent of common genetic influences
  o A question of research design
Quantitative Behavioural Genetic Research Designs

- Twin Design
  - MZ vs. DZ twins
  - Twins apart and together

- Adoption Design
  - Biological and adoptive Parents and adoptees
  - Adoptive vs. non-adoptive families

- Sibling Design
  - Siblings who differ in genetic relatedness

- IVF Design
  - Parents who differ in genetic relatedness
Inter-Parental Conflict, Hostile Parenting and Children’s Externalizing Problems

Early Growth and Development Study
(Adoption at Birth Design)

Sample
- 561 sets of adopted children, adoptive parents, and birth parents
  - Sample retention: Adoptive family = 90% Birth parent = 92%
  - Families assessed at child age 9-, 18-, 27-months of age; ongoing assessments at 4.5 years, 6 years, 7 years, 8 years, 9 years
  - Present sample included 341 linked families assessed at 27 months, 4.5 years, and 6 years
- Nationally-representative sample of families who made domestic infant adoption placements in the United States between 2003-2009

Method
- Videotaped Observation – adoptive families
  - Child temperament, parent-child interactions, marital interactions video recorded in the home during 3-hour home visits at each wave. Coding for these tasks is on-going
- Questionnaire – adoptive parents
  - Couple relationship, parent-child relationship, symptoms of depression and anxiety, family economic conditions, styles of family interaction, parenting style, children’s emotional and behavioural well-being, child sleep problems
- Questionnaire – birth parents
  - Couple relationship, diagnosis and symptoms of psychopathology, drug use, economic conditions, life stress, temperament
Cardiff In Vitro Fertilization Study (An Adoption at Conception Design)

• Children born through *in-vitro* fertilisation (IVF)
  o 20 fertility centres within the UK (1 in US)
    • 888 families
      – Homologous IVF  N = 444
      – Sperm donation  N = 210
      – Egg donation  N = 175
      – Embryo donation N=36
      – Gestational surrogacy N=23
  o Families who had a live birth (1994 – 2002)
    • Children aged between 4 – 10 years (mean = 6.80 yrs, SD=1.23)
    • Demographics (family income, parent education, ethnicity)
    • Present sample included children aged 5-8 years old (m = 6.49, sd = .85)

• Genetically related versus unrelated groups
  o Genetically Related
    • Mothers (N=546): Homologous, sperm donation, surrogacy
    • Fathers (N=531): Homologous, egg donation, surrogacy
  o Genetically Unrelated
    • Mothers (N=160): Egg and embryo donation
    • Fathers (N=173): Sperm and embryo donation
Study Measures (IVF/EGDS)

• Inter-parental Conflict
  o Self report of hostility towards spouse
    • IVF & EGDS: Behavior Affect Rating Scale (mothers, $\alpha=0.89/0.88$; fathers, $\alpha=0.91/0.90$, Melby et al., 1993)

• Parent-Child Relations (Hostile Parenting)
  o Mother & Father report of hostility toward child
    • IVF & EGDS: IYFP Ratings Scales (mother, $\alpha=0.70/0.82$; father, $\alpha=0.75/0.80$, Melby et al., 1993).

• Child Externalizing Behavior
  o Mother & Father report of child externalizing behavior
    • Cardiff IVF: Strengths and Difficulties Questionnaire (mother, $\alpha=0.80$; father, $\alpha=0.78$)
    • EGDS: Externalizing subscale, Child Behavior Check List, (mother, $\alpha=0.88$; father, $\alpha=0.90$)
Theoretical Model (IVF-H/EGDS)

Interparental Conflict

Mother-Child Hostility

Father-Child Hostility

Mother rated Child Externalizing

Father rated Child Externalizing

*p < .05, ** p < .01
Relevance of Genetic Relatedness (IVF Sample)

Interparental Conflict

Mother-Child Hostility

Father rated Child Externalizing

Father-Child Hostility

Mother rated Child Externalizing

* $p < .05$, ** $p < .01$
Summary and Considerations

• Family relationship influences on children
  o Inter-parental conflict affects children’s externalizing problems through disrupted mother-child and father-child relationships
    • Confound of passive rGE controlled
    • Inter-parental conflict as context may have greater disruptive influence on father-child compared to mother-child relationship
  o Implications for intervention (promoting positive maternal and paternal parenting practices in the context of inter-parental conflict)

• Limitations and considerations
  o Cross-sectional analyses
    • Past longitudinal and experimental evidence
  o Role of evocative gene-environment correlation (rGE)
    • Genetically informed attributes in the child may evoke disrupted family relationship behaviours/patterns
Maternal ADHD, Hostile Parenting Practices and Children’s ADHD

<table>
<thead>
<tr>
<th>EGDS Sample</th>
<th>IVF Sample</th>
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<tbody>
<tr>
<td><strong>Birth Mother &amp; Adoptive Mother ADHD:</strong> Barkley’s Adult ADHD Scale (Barkley &amp; Murphy, 1998; BM: $\alpha = .90$, AM: 85).</td>
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<td><strong>Child Impulsivity:</strong> Impulsivity scale of Children’s Behavior Questionnaire (Rothbart, Ahadi, Hershey, &amp; Fisher, 2001) ($\alpha = .78$); <strong>Child Activation:</strong> Drive, Reward Responsiveness, and Fun Seeking scales of BIS/BAS (Carver &amp; White, 1994; $\alpha = .81$, .71, .70).</td>
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<tr>
<td><strong>Mother-Child Hostility:</strong> Iowa Family Interaction Scales (Melby, 1995; $\alpha = .91$).</td>
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<td><strong>Child ADHD:</strong> Conner’s Abbreviated Parent Questionnaire (Conners, 1997; $\alpha = .89$).</td>
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<tr>
<td><strong>Mother ADHD:</strong> Barkley’s Adult ADHD Scale (Barkley &amp; Murphy, 1998; $\alpha = .84$).</td>
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<tr>
<td><strong>Mother-Child Hostility:</strong> Iowa Family Interaction Rating Scales (Melby, 1995; $\alpha = .79$).</td>
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<tr>
<td><strong>Child ADHD:</strong> Conner’s Abbreviated Parent Questionnaire (Conners, 1997; $\alpha = .86$).</td>
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Examining Evocative rGE

Genetically Related

Biological Mother - Child Impulsivity/Activation

Genetically Unrelated

Child ADHD symptoms (Father report)

Rearing (Adoptive) Mother-Child Hostility

Child ADHD symptoms

Rearing (Adoptive) Mother ADHD symptoms

- Biological Mother ADHD symptoms
- Child Impulsivity/Activation
- Rearing (Adoptive) Mother-Child Hostility
- Child ADHD symptoms (Father report)

18 mths – 4.5 yrs
4.5 years
6 years
Summary and Implications

• Primary Summary Points/Findings
  o **Passive rGE**: Evidence for environmental effects (adoptive mother ADHD and mother-to-child hostility) on child ADHD replicated across two samples of genetically-unrelated mother-child pairs
  o **Evocative rGE**: Adoptive mother-to-child hostility evoked by genetically informed child impulsivity which predicts child ADHD
  o Continued importance of quantitative behaviour genetic research designs

• Bottom-Line Take-Home Messages/Implications
  o Evidence-based guidance as to intervention focus
    • **Cascade of risk**: Genetic risk for ADHD as risk factor for disrupted family environment (mother-child relationship), mother-child relationship as risk factor for ADHD development
    • Identification of mechanisms, key to intervention (prevention)
Putting Research into Practice

- Targeting the environment to help at-risk children – MTFC Foster care and adolescent depression (Harold, Leve et al., 2013)
- Improving service and practice for children in high-risk contexts (Harold, Pinnell 2009; CAFCASS Cymru)
- Promoting training and translation – research into practice (2014; Policy Press)
The Sussex Rudd Centre

Overview and Orientation

- The Andrew and Virginia Rudd Centre for Adoption Research and Practice is a new interdisciplinary research initiative at the University of Sussex that will focus on promoting knowledge and implementing support for vulnerable children and families in the UK, with an emphasis on the specific challenges faced by adopted children and their families.

- The Centre aims to develop new insights into the social, psychological, and community-based processes that play a role in the development of children and young people across multiple family contexts.

- The Centre will draw on recent advances in psychology, psychiatry, neuroscience, genetics, medicine, social work, law and education to inform our knowledge of how adoption, family separation, foster-care, institutionalisation, maltreatment, neglect and other family-based processes influence children’s development (and vice versa).

- The Centre represents a collaborative partnership between the School of Psychology and the School of Education & Social Work at the University of Sussex.
The Sussex Rudd Centre

- **Present Staff Profile**
  - Appointment of Director and Chair in Psychology (Oct. 2013)
  - Supporting staff: Dr. Darya Gaysina (Lecturer), Kate Arnold (PhD), Carmel Stevenson (Centre Administrator, appointed March 2014)
  - Early discussions with Education and Social Work (collaboration)

- **Governance and Management**
  - Science Advisory Committee (UK, international research scientists)
  - Practice-Policy Advisory Committee (UK and international partners)
  - Centre Governance Committee (University and UK partners)

- **Engagement and Implementation**
  - International, national and regional portal for research-practice guidance, information, and support-based resources
  - Seminars, training, web-based materials etc.
The Sussex Rudd Centre

Activities Implementation Model

Scientific Research

Practice Applications

Family Impacts

Children

Current

Future

Impacts

Training

Policy Influences

Policy Influences
The Sussex Rudd Centre

- To carry out a programme of research that will look at the major challenges facing children and families in transition as well as specific challenges faced by adopted children and their families
  - Partnerships and Resources linked to the Sussex Rudd Centre
    - Early Growth and Development Study (N>500 children, ongoing longitudinal adoption study)
    - Cardiff IVF Study (N>800 children across conception groups)
    - Early Prediction of Adolescent Depression Project (N>500 adolescents, high-risk depression sample)
    - Christchurch Health and Development Study (NZ; N>900 individuals followed from 0-38 years+)
    - Oregon Juvenile Justice-Welfare Project (N>250 adolescent girls, intervention, institutionalisation/juvenile justice)
    - Russian School Twin Registry (N>100,000 twin pairs, age 7-18 years)
    - Beijing Twin Study (N>1000 twin pairs, age 11-19 years)
The Sussex Rudd Centre

• Utilise and develop advances in the fields psychology, psychiatry, neuroscience, genetics, medicine, social work, law and education in order to understand the interplay between family processes and children’s neurobiological, cognitive, emotional, social and behavioural development.

  o Active Partnerships linked to the Sussex Rudd Centre
    • MRC Centre for Neuropsychiatric Genetics and Genomics, Child and Adolescent Psychiatry, Cardiff University
    • MRC Social, Genetic and Developmental Psychiatry Centre, Institute of Psychiatry, Kings College London
    • International Network for Biosocial Research in Child Development, Tomsk State University, Russia.
    • Institute of Psychology, Chinese Academy of Sciences
    • Prevention Science Institute, University of Oregon
    • Rudd Adoption Research Programme (UMass, Amherst)
The Sussex Rudd Centre

• To facilitate the translation of research into policy and practice that can support the development and well-being of children and families in transition with a focus on adoption
  o Active Partnerships and Resources linked to the Sussex Rudd Centre
    • British Association for Adoption and Fostering (BAAF)
    • Children and Family Court Advisory Support Service (CAFCASS Cymru)
    • Tavistock Centre for Couple Relationships (TCCR)
    • RELATE Science Advisory Committee
    • Early Intervention Foundation (EIF; Science Advisory Panel)

• To develop undergraduate-postgraduate teaching within the collaborating schools that promotes the above objectives
  o Active Partnerships and Resources linked to the Sussex Rudd Centre
    • Education and Social Work at Sussex (#1 ranked in the UK)
    • Interdisciplinary model of training for child and family welfare professionals and practitioners
    • Example: Working with social work professionals
      o CAFCASS in Wales: Practitioner training and child welfare assessment accreditation
The Sussex Rudd Centre

• To promote the development of a broad research programme (external funding, publications, engagement)
  o Research grant applications (since October 2013)
    • 4 research grant applications submitted focusing on adoption research/science, adolescent alcohol abuse and long-term brain damage, supporting child witnesses of domestic abuse, implementing a parent support programme for adoptive parents and children
      o The Economic and Social Research Council, The Medical Research Council, The Big Lottery in Wales, The Nuffield Foundation
  o Scientific manuscripts published/in press/submitted
    • 10 papers covering adoption and family process, foster care intervention, child and adolescent psychopathology, genetics, neurobiological processes, practice and policy implementation
  o Conference/Keynote Presentations
    • 5 conference and Keynote Presentations
      o BAAF, Welsh Government/Children’s Services (2), University and Research Groups (UK, USA)
The Sussex Rudd Centre

• Scientific Research
  o Advancing understanding of the interplay between family processes and child development (adoption/transition)
  o International and national resources
  o New and innovative projects

• Practice Applications
  o Implementation of evidence-guided practice and training
  o Evidencing efficacy of intervention and prevention programmes
  o Development of interdisciplinary training and development programmes

• Family Impacts
  o Improving child and family outcomes today
  o Promoting positive child and family outcomes and impacts tomorrow (future)
  o Application of an evidence-based science and practice implementation model
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