



UNIVERSITY OF  
CAMBRIDGE

Centre for Family Research

# The psychological wellbeing of ART children

What have we learned from 30 years of research?

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# Disclosure



- Nothing to disclose

# Learning objectives



- Describe the findings of research on the psychological wellbeing of children born through assisted reproduction in families with two heterosexual parents
- Discuss the findings of research on the psychological wellbeing of children born through assisted reproduction to single parents, lesbian couples, and gay couples
- Describe how to provide advice to prospective parents about the implications of openness vs. disclosure about children's biological origins



BRITAIN'S  
BIGGEST  
EVENING  
SALE

# Evening News

LATE  
SPECIAL  
CITY PRICES

LONDON: THURSDAY JULY 27 1978

8p

Meet Louise, the world's  
first test-tube arrival

# SUPERBABE



Wide-eyed Louise Brown pictured in hospital 18 hours after she was born. Today she's doing well. See Page Three



Unknown maker  
*Vacuum desiccator bell jar*  
About 1968-77  
Glass, rubber stopper  
Bourn Hall Clinic

Some of the very first children to be conceived through in vitro fertilisation were created in this glass jar.

40.0 x 30.0 x 30.0 cm

# Concerns



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## IVF

- “Frankenstein children”
- Overprotection of children

## Gamete donation

- Non-genetic parents may not fully accept donor-conceived children as their own children
- Secrecy about child’s genetic origins may harm children’s psychological wellbeing

## Surrogacy

- Children may be distressed by the knowledge that they had been created to be given away to other parents

# Research questions



- What can we learn from empirical research?
  - Does the quality of parenting experienced by children in assisted reproduction families differ from that of children in traditional families?
  - Are children in assisted reproduction families at greater risk for psychological problems than children in traditional families?
  - How do children feel about their conception by assisted reproduction?

# European Study of Assisted Reproduction Families



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- 116 IVF, 111 sperm donation, 115 adoptive & 120 natural conception families
  - Spain, Italy, The Netherlands & United Kingdom
- Children assessed at ages 6, 12 and 18 years
  - Children born around 1985



# Findings



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- ART parents showed greater warmth, emotional involvement and interaction with their child than did natural conception parents
- Children showed high levels of psychological wellbeing

# European Study of Assisted Reproduction Families



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- Not one set of 111 parents had told child about DI by age 6
  - Less than 10% had disclosed by age 12
- In contrast to adoptive families in which all children had been told about their origins

# Reasons for non-disclosure



- Main reason for secrecy was fear that child would no longer love non-genetic parent
- Lack of knowledge about what and when to tell
  - By age 6, many parents felt they had left it too late
- No information about anonymous donor

# Conclusions



- Assisted reproduction parents had good relationships with their children, even in families where father lacked a genetic link with the child
- Children were well-adjusted
- Those conceived by donor insemination were unaware that father was not their genetic parent

# Unanswered questions



- What is the impact of telling children about their donor conception?
- What are the psychological consequences of egg donation?



# UK Longitudinal Study of Assisted Reproduction Families



- Conducted at 15 years later than original study
  - Children born at millennium
- 50 sperm donation, 51 egg donation & 80 natural conception families
- Assessments at ages 1, 2, 3, 7, 10, 14 and 20 years

# Measures



- Multi-method
  - Standardized interviews, observation of parent-child interaction, questionnaires, psychological tests with children
- Multi-informant
  - Mothers, fathers, children, teachers & child psychiatrists

# Findings in preschool years



- Positive parent–child relationships
  - even with non-genetic parent
- Differences reflected more positive parent-child relationships in donor conception families
  - e.g., mothers of donor conception children took greater pleasure in their toddlers than mothers of naturally conceived children as assessed by Parent Development Interview
- High levels of child adjustment

# Disclosure of donor conception



- At age 1, 56% of egg donation and 46% of sperm donation parents *planned* to tell their children about their genetic origins
- By age 7, only 39% of egg donation and 29% of sperm donation parents had done so
  - Not all egg donation parents had fully disclosed

## Findings at age 7



- By age 7, children have developed a more sophisticated understanding of biological inheritance, and of the meaning of the absence of a biological connection to parents.
  - Parents who had disclosed discovered that their fears were unfounded
  - Mothers in disclosing families showed higher levels of emotional wellbeing than mothers in disclosing families
  - Interviews and observational measures revealed more positive mother-child relationships in disclosing than non-disclosing families
  - Children continued to show high levels of psychological adjustment



# Adolescence



- Issues relating to identity and autonomy become salient
- Difficulties between parents and children more likely to arise

# Findings at age 14



- Earlier disclosure of donor conception associated with more positive mother-child relationships
  - as rated by mothers and adolescents
- Most felt unconcerned about their conception
  - *“I don’t think it really affects anything. My dad is still my dad”*
- Many were interested in knowing who their donor was, or to meet their donor
  - But not all were

# Findings at age 20



- Family types did not differ in maternal wellbeing, quality of family relationships, or young adult psychological adjustment
  - Findings reflected positive family relationships and adjustment
- More positive relationships in families where parents disclosed in early childhood

# Thoughts and feelings at age 20



- The young adults felt unconcerned about their origins or felt special
  - *“I like the fact that I’m a bit different, even though it’s weird because I don’t look like my mum. But I don’t see that as an issue as she’s my mum.”*
  - *“When I was first told. I think it started to bother me more as a teenager, but nowadays, I quite like it, it’s different”.*

# Interest in donor conception: age 20



- Almost half had searched for information about donor conception
- Of those not in contact with donor, around half wished to have contact, the others didn't want contact, or were unsure



# Donor Sibling Registry Study



- US-based website founded in 2000 by mother and her DI child
- To facilitate contact between families who share the same donor
- Possible in US since donors have a unique ID number
- Almost 100,000 members and more than 25,000 matches made

# Donor Sibling Registry Study



- Questions:
  - Do I look like him?
  - Is my personality like his?
  - What is his family background?
- Donor-conceived children and young adults were more interested in forming relationships with their donor siblings than their donors.

# Donor Sibling Registry Study



- *“I’ve always been accepting of it because I never knew any different”*
  - Anna, age 13, found out at age 4
  
- *“It was one of the most shocking an upsetting experiences of my life. I felt alone”*
  - Mandy, age 19, found out at age 12

# Clinical Implications



- Parents should begin to talk to their children about their conception at a young age, ideally before they start school
- Some parents find it helpful to talk to their children about their conception before they can understand

# Donor identification



- Due to websites such as AncestryDNA secrecy cannot be guaranteed
- Donor-conceived people are discovering online that they are not genetically related to their parents, and who their genetic parents are
  - Sometimes by accident
- Children of donors are discovering genetic half-siblings in other families



# Study of families with identifiable egg donors



- Representative sample of 73 families formed by egg donation
- All heterosexual two-parent families
- Recruited from 12 clinics

# Pregnancy



- Many mothers were concerned about the non-genetic relationship during pregnancy
  - *“My only concerns were ... how was I going to feel about him when he arrived ... whether I would feel that he was mine”*
  - *“That’s all I thought about before he arrived, I was just like oh, what if we don’t bond?”*
  - *“That was my whole preoccupation... would I bond with this baby, would this baby bond with me? My biggest fear was that this baby would think – who the hell are you?”*

# Age 1



- Most mothers felt that the baby was their own
  - *“I don’t think I could love him more if he was completely my genetic material”*
- A small number struggled with the idea that their child was not genetically related to them
  - *“Biologically they’re not my children, even though I was pregnant with them, and I gave birth to them, and that’s still quite a hard thing for me to square in my own mind”*

# Age 5: Thoughts and feelings about identity release



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- One-third saw identity release as a threat
- One-third accepted identity release
- One-third embraced identity release

# Identity release as threatening



## Child might form stronger bond with genetic mother

- *“I’d be worried that they’d suddenly have this unbelievable connection that perhaps is truer of a biological mother, and perhaps what we’ve got isn’t a true mother-son relationship? I don’t know, it worries me.”*
- *“A fear of mine is that he might really like her and her family, and in future Christmases decide to spend time with her rather than us.”*
- *“That’s probably why I nurture and care for her so much more, because I want her to know that I absolutely adore the ground she walks on. I don’t want her to then say, ‘Well, you were rubbish. I’m going to go and find who’s biologically mine.’”*

# Acceptance of identity release



## Wished to be led by child

- *“I’m just going to take it from my child’s lead and respect whatever he wants to do...It’s his call...all I need to do is support him to do whatever he wants to do.”*
- *“I don’t feel threatened by it, I would be quite happy if she wanted to do so...I’m probably a bit more chilled out about it now than I was.”*

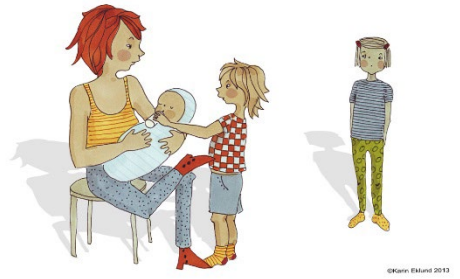
# Embraced identity release



## For their child and themselves

- *“Genetically there’ll always be ....questions they might ask or just information that they want about themselves, and I think it’s important that they have access to that information.”*
- *“I’d be disappointed if my child doesn’t contact the donor, because I can’t make that decision, but I would like to meet the person.”*

# Longitudinal study of surrogacy families



- Are children psychologically harmed by the knowledge that they had been created to be given away to other parents?
  - What if large sums of money had changed hands?
- Who do they see as their “real” mother – the surrogate who gave birth to them or the mother who brought them up?
  - What if the surrogate is their genetic mother?
- If the surrogate remains in contact with the family, does it undermine the relationship between the intended mother and the child?



# Sample



- 42 surrogacy families recruited through ONS
- Ages 1, 2, 3, 7, 10, 14 and 20 years

# Findings



- Parents had warm, sensitive and involved relationships with their children all through the study
- Children showed high levels of psychological wellbeing.
  - Raised levels of adjustment difficulties at age 7
  - Disappeared by age 10
  - By age 14, children flourishing in terms of self-esteem, mental health, and psychological wellbeing
- 60% of families in touch with surrogate 10 years later

# Surrogacy children – 7 & 10 years



- Two-thirds wished to see her more often, the remainder felt that contact was just right, and one child wished to see her less
  - “She was really kind about.... like carrying me in her tummy”
  - “I think she is kind and she’s lovely and funny”
  - “I feel fine. I don’t feel bad or cross in any way. It’s just pretty much nature so I can’t do anything about it. I wouldn’t like to do anything about it”

# Surrogacy children - 14 years



- *“I was talking to someone at school, and they said they were an accident. I know I was really wanted, and it makes me feel special.”*
  - Simon, age 14
- *“I think it’s cool. I quite like talking about it because it’s an interesting fact about me.”*
  - Chris, age 14

# Children's thoughts and feelings at age 20



- *“It’s not a big deal to me. When I was younger, I was curious about how it worked, so I looked it up. It seems clear that they wanted me as a child, as opposed to it being accidental or something like that. So, I’d say it’s a positive thing. I’m happy about it. I’ve always been happy about it.”*
- *“I don’t really see what difference it’s going to make in my life. It’s not changed anything so far. I’m more than happy about it. It’s nothing I really dwell on. I usually have more important things to really care about.”*



# Children's thoughts and feelings at age 20



- *“It’s so normal for me because I’ve known about it ever since I can remember. I know that my mum is my mum, and my birth mum is my auntie, as we all call her auntie. That’s just how it’s always been.”*
- *“I think it’s amazing. I think it shows how much I was wanted. It’s just such an amazing story and such an amazing thing to do for a friend. Such a genuine act of friendship.”*

# Lesbian mother families: Concerns



- Lesbian mothers are less nurturing than heterosexual mothers
- Children will experience psychological problems
- Boys less masculine, and girls less feminine, than boys and girls from heterosexual homes

# Lesbian mother families: Findings



- Lesbian mothers did not differ from heterosexual mothers in quality of parenting
- Children of lesbian mothers did not differ from children of heterosexual mothers in either psychological problems or problems with peers
- Boys no less masculine, and girls no less feminine, in identity and behaviour than boys and girls in heterosexual families



# Planned lesbian mother families



- To the extent that early experience influences later development, it is not possible to generalise earlier findings to children raised in lesbian mother families from birth

# Studies of children born to lesbian mothers by sperm donation



- Studies comparing two-parent lesbian mother families with two-parent families with a mother and father
  - All with a child conceived by sperm donation
- Donor-conceived children raised by lesbian mothers from birth were functioning just as well as donor-conceived children with a mother and a father

# Single Mothers by Choice: Concerns



- Concerns stem from research on children of divorced or unmarried single mothers with unplanned pregnancies
- Children of single mothers by choice do not experience the same risk factors
  - But don't know identity of biological father

# Single Mothers by Choice: Findings



- 51 solo mother families and 52 two-parent families
  - All with DI child aged around 5-6 years
- The children were just as close to their mothers, and just as well adjusted, as those in two-parent families
- As many of the children were too young to fully understand the social significance of not having a father, we followed up the families 4 years later.
  - The children continued to show positive relationships with their mothers and high levels of psychological adjustment.

# Significance of donor



- Donor is significant figure for some children of single mothers
  - Children asked about their father from as early as 2-3 years old
  - Children are more likely to view their donor as their father than DI children of lesbian or heterosexual couples
  - Children of single mothers are more likely to search for – and want to meet – their donor than children of lesbian or heterosexual couples

# Gay father families through surrogacy



- Study in US
  - 40 gay father families
  - 55 lesbian mother families
- Children aged 3-9 years

## Gay father families formed through surrogacy



- Children conceived using the egg of a donor, born to a surrogate mother, raised by two fathers, one of whom lacks a genetic connection to the child – and no mother in the family home
- It is generally assumed that men are less suited to parenting than women

# Findings



- No difference in quality of parenting between gay father and lesbian mother families
- Low levels of behavioural and emotional problems in children
  - Standardized questionnaires
  - Child psychiatrist ratings
- Lower emotional problems in children of gay fathers



## Findings: Ratings by child psychiatrist



- No difference in child disorder between family types
  - 2 children (5%) in gay father families showed a psychological disorder
  - 2 children (9%) in lesbian mother families showed a psychological disorder

## Contact with surrogate and egg donor



- Fathers were more likely to maintain contact with surrogate (85%) than egg donor (31%)
- In year preceding the study, 53% of parents had seen the surrogate whereas 8% had seen egg donor



## Quality of relationship with surrogate



- “We have a great relationship, she is like a relative to us. ...we’re very close to her husband. It was a real bonding experience for us, I think they’re probably some of the closest people to us really”
- “She’ll always be special in our lives, she will always have a place there, we will always remain in contact if she wants to...”
- “The type of relationship we wanted to have was one of someone who is almost like a family member, but more of like a distant cousin.... it’s more of a sort of distant family member who comes into their lives from time to time.”

# Future families



- Shared biological motherhood (ROPA)
- In vitro-derived gametes (IVG)

# What matters most for children in new family forms?



- Family structure – number, gender, sexual orientation and genetic relatedness of parents – matters less for children than the quality of family relationships
- Parents' openness with their children about their origins

# Conclusions



- The findings of empirical studies of ART families point to positive family relationships and well-adjusted children
  - Just because people become parents in non-conventional ways does not make them less capable parents or love their children less
  - It seems the opposite is true – those who have struggled against the odds to have children become particularly involved and committed parents.

Alice, 7



- *“I’ve got two parents who love me. It doesn’t matter if they’re a boy or a girl.”*

# References

- Golombok, S., Jones, C., Hall, P., Foley, S., Imrie, S., & Jadva, V. (2023). A longitudinal study of families formed through third-party assisted reproduction: Mother-child relationships and child adjustment from infancy to adulthood. *Developmental Psychology*. <https://doi.org/10.1037/dev0001526>
- Golombok, S., Shaw, K., McConnachie, A., Jadva, V., Foley, S., Macklon, N., & Ahuja, K. (2023). Relationships between mothers and children in families formed by shared biological motherhood. *Human Reproduction*, *38* (5), 917-926. doi:10.1093/humrep/dead047
- Golombok, S. (2021). Love and truth: What really matters for children born through third-party assisted reproduction. *Child Development Perspectives*, *15*(2), 103-109. [doi.org/10.1111/cdep.12406](https://doi.org/10.1111/cdep.12406)
- Golombok, S. (2020). The psychological wellbeing of ART children: What have we learned from 40 years of research? *Reproductive BioMedicine Online*, *41*(4), 743-746. [doi.org/10.1016/j.rbmo.2020.08.012](https://doi.org/10.1016/j.rbmo.2020.08.012)
- Imrie, S., & Golombok, S. (2020). Impact of new family forms on parenting and child development. *Annual Review of Developmental Psychology*, *2*, 295-316. [Doi.org/10.1146/annurev-devpsych-070220-122704](https://doi.org/10.1146/annurev-devpsych-070220-122704).